International Journal of Recent Development in Engineering and Technology
Website: www.ijrdet.com (ISSN 2347-6435(Online) Volume 15, Issue 01, January 2026)

Modernisation: Influence of Technology on Youth with Growing Trends in Artificial Intelligence

Aaron Kunal Tatpati[1], Dr V. Basil Hans[2]
[1,2]*Research Scholar, Research Professor, Srinivas University, Mangaluru, India*

***Abstract*--** **Human intelligence considered to be the sovereign of all, is radically being replaced by Artificial Intelligence and the impact of it is relevant in the fast gowing technological era. The huge impact of intelligence and the dominance of technology is a problem faced by the multitude of youth in the global scenario. The purpose of this paper emphasises the role of educators at different levels, incorporate teaching-learning strategies with rapid growth of Artificial Intelligence and its influence in the Education sector gaining a upper hand in the recent times. The best approach which is desirable in achieving the desired results is action research and the role of academies and the high ranking officers to sustain the quality index of curriculum for better results. The curriculum designed in accordance of creativity, critical thinking, logical, analytical and practical orientation of the concepts is the need of the hour. The paper concludes based on findings at the secondary level and the impact of future course of learning among the student community, with emphasis on value based education at institutional level to achieve a higher order learning in terms of cognitive and over-all growth of personality in the society.**

***Keywords*--Action Research, Artificial Intelligence, Cognitive, Human Intelligence, Technological era, Teaching-Learning Strategies**

I. INTRODUCTION

Today's youth has lived in a technological environment since birth and they have never experienced a world where information and communication technologies were not prevalent. Traditionally youth would fully develop physical, cognitive, and emotional maturity before the onset of external societal influences. The digital environment has now emerged to accelerate the socialisation process—building youthful identity and influencing behaviour at an earlier age. Early youth engagement with artificial intelligence (AI) begins with augmented or virtual reality (AR/VR) entertainment and moves to product and school work presentations via cloud-based services. An elevated digital lifestyle elevates a young individual's engagement with AI. Expansion of the digital environment in ICT curriculums standardises different AI content for diverse youth adaptability during formal schooling. AI-generated content continues to apply different creative styles for future consideration upon early engagement.

Artificial Intelligence (AI), a ground-breaking field of technology, has been revolutionizing industries worldwide. India, with its distinctive amalgamation of ancient customs and modern technological expertise, finds itself at a fascinating intersection of this transition. India is making efforts to utilize the potential of Artificial Intelligence (AI) for its large and diversified population, leveraging its strong foundations in mathematics and computing as well as modern governmental policies (Hans, 2025).

Today's youth are termed 'digital natives' and it is evident that they adopt modern technology at the earliest commencement time. The common communications and research patterns within the school, home, and peer interface remain the same. Globalisation of modern technology has modified the stage of normal education and changes continuously. Early youth, previously defined as 0–4 years' old, should also be entitled to early childhood education under personal care. At this early stage, family-connected centre resources based on Audio Video Lingual training, Multi-Languages Symbol, Phonic Training, and Mathematics Qixing Guide are more suitable for consideration worldwide. Prior to primary school entrance parents must have sufficient time to send observations for selection.

Over the past three decades, there have been major developments of communication and information devices for today's youth. Youth now possess reasonably powerful devices, including, but not limited to, desktop computers, laptop computers, integrated computers, and multi-function mobile phones that have full-coverage of family, private, and social connections. The introduction of computers emerged to raise the standard of living to drive today's modern technology (Muema Kalungu & W. Thinguri, 2017).

II. THEORETICAL FRAMEWORK

Technological advances brought about by modernisation entail the capacity to coordinate diverse activities of human life and to govern the processes of socialisation — family, education, demographic processes, cultural production, and the formation of public moral codes, patterns of recreational activity and consumer behaviour.

International Journal of Recent Development in Engineering and Technology
Website: www.ijrdet.com (ISSN 2347-6435(Online) Volume 15, Issue 01, January 2026)

A great deal of scientific work has attempted to show how modernisation influences interlinked social, economic, demographic, political, cultural and technological transformation, and what consequences ensue.

Modernisation helps to explain the very fabric of societies around the globe today — not in a simplistic, reductionist way, but in detail. Modernity offers lenses through which to discern current shifts in human identity, subjectivity and agency through new social practices, technologies and environments brought about by artificial intelligence.

It is possible to see suddenly visible, widely diffusing and economically impactful artificial intelligence as a key driver of social change. Thus, artificial-intelligence considerations would show vividly how by using social media platforms, young people today form, restore or, as the case may be, fracture their social identity. Careful tracking of patterns in the use of digital technologies and of the forms and contents of the self on communication channels used by youth today holds promise for detecting big shifts in identity or other dimensions of agency. Young people tend to be among the first adopters of new technologies since new forms of learning, skill development and leisure activity coalesce at critical junctions of their development (Muema Kalungu & W. Thinguri, 2017).

2.1. Modernisation Theory in Contemporary Technological Contexts:

Digital communication technologies occupy a prominent position in the daily life of young people, influencing major life domains and amplifying existing social trends. These systems are widely adopted across the globe, affecting youth in various ways, and their development takes different trajectories and assumes distinct forms in diverse settings. An increasingly central type of communication technology is artificial intelligence, which structures many digitally mediated interactions. The growing penetration of artefacts through which youth encounter artificial intelligence and the surrounding socio-technological environments warrant investigation. The spread of artificial intelligence systems—including search engines, recommendation engines, chatbots, and generative systems such as text-to-image software and conversational agents—is transforming social life across the globe.

Insights into this social change can be drawn from modernisation theory, which highlights the fundamental determinants of social transformations as well as the mechanisms through which these transformations unfold, and contemporary accounts of modernisation that discuss its dynamics and implications in the context of digital technologies, especially artificial intelligence (Muema Kalungu & W. Thinguri, 2017).

Modernisation theory provides a conceptualisation of comprehensive and far-reaching societal transformations known as modernisation. Initially developed to explain the social change associated with the industrial revolution and the subsequent transition to modernity in Europe and the Americas, modernisation theory remains relevant for understanding the contemporary digital age, especially the impact of artificial intelligence on the development of youth. A triple system of causation constitutes the theoretical specification of modernisation theory: an overarching change in the modes of socialisation, an encompassing structural change in the educational system, and a metamorphosis in the social and symbolic construction of identity from a categorical system based on ascribed social positions to a system of self-identification characterised by imagined versus inscribed identity. The current period of social change is characterised as post-socialisation, coinciding with the transition between structural change from the industrial age to the digital age and the ongoing emergence of an artificial-intelligence-based regime of social interaction.

2.2. Artificial Intelligence as a Driver of Social Change:

Artificial Intelligence (AI) is a major catalyst of social change, with the potential to fundamentally affect a range of human behaviours. AI can be defined as computer systems that exhibit characteristics associated with human intelligence (Varghese et al., 2022). Such attributes include comprehending spoken language, recognizing faces, making predictions, and performing automated or self-learning functions.

When considering the impact of AI on social behaviours, both macro-level effects upon institutions and micro-level effects upon individuals must be taken into account. Macro-level impacts include the way AI shapes the conduct of social and institutional affairs such as education, healthcare, and finance, thereby influencing the relationships people have with one another and the institutions in which they engage.

International Journal of Recent Development in Engineering and Technology
Website: www.ijrdet.com (ISSN 2347-6435(Online) Volume 15, Issue 01, January 2026)

These relationships, both human and with institutions, are generally considered to comprise the larger concept of identity. The potential of AI to reshape institutional functions and human–institutional interactions creates opportunities for fresh forms of identity to emerge. Micro-level AI impacts can be defined as change in activities or behavioural patterns in face-to-face and online social interaction and communication. Changes may affect the nature and frequency of social contact, societal norms governing interaction, the presentation of self and construction of identity, and the way in which individuals form or modify beliefs. Relevance to such fundamental aspects of social development enhances both the importance and scope of AI as a driver of social change (Xu, 2024).

III. Technology Adoption Among Youth

Technology adoption is most prevalent among the youth. (Muema Kalungu & W. Thinguri, 2017) found that students in Kenyan secondary schools are aware of the various technological devices such as mobile phones, laptops, and tablets, and they utilise them for entertainment, communication, and a wide range of other social activities. It was evident that students coordinate social events using technology as they often utilise Google Calendar and social media to plan, schedule, and remind each other of upcoming activities. Technology also seems to have enabled collaborative learning in schools. Students were found to be using services like Google Drive and Evernote, which allow them to share notes, collaborate on group projects, and access resource material anytime and from anywhere. Social media platforms like WhatsApp, Twitter, Instagram, and Telegram also provide avenues for connecting students with learning communities, experts, and other branches of knowledge, broadening their educational environments. Generally, students seem to fit the digital natives. definition as they exhibit great attitudes towards technology, viewing it as useful in enabling personal and the overall day-to-day activities. Many factors, including confidence, experience, parental support and involvement, peer pressure, and social influences, have some influence on their attitudes. Even older generations have also increased their use of modern technology in everyday living, professional work, and many other activities.

A. Ives (2013) undertakes a study on how pervasive digital technology has become among teenagers and some consequences of the widespread adoption.

He notes that the teenagers of today have more freedom to explore their identity than did their predecessors, which can have both positive and negative results on personal development. Undoubtedly, digital technology has had a significant, positive impact on education, making learning vastly more accessible and beginning to bridge some of the educational gaps across social and economic groups. Learning now includes new modes of accessing content and new modes of creating educational projects. Many schools have joined the whole process, adopting digital projects and public-facing platforms such as blogs and social media to enhance learning and foster skills like written expression, project management, creativity, and persuasion. Digital textbooks and educational apps are now equally available support diverse learners including students with disabilities. Teenagers also use social media to connect with peers from whom they need help on homework and help on group projects, signalling that online activity tends to mirror offline social changes.

3.1. Digital Natives and Skill Acquisition:

Adapting to the modern-day technology landscape has made a sizeable impact on the development of youth; this includes broadening the horizon of skill acquisition, attention span, and professional credibility. By being exposed extensively to technological interfaces, children develop their learning, problem-solving, and competency-acquiring through skill sets comparable to that of being literate. The solution is the adaptive learning pattern and connectivity that drives learning and helps to solve problems (Muchsini & Siswandari, 2018). The youth being born in the digital era, namely the Digital Natives, are exposed to gadgets from the early ages of 0 to 8, thus acquiring the necessary skills to up-level their expertise in the early ages of 8 to 10 (Cirilli & Nicolini, 2019).

The ubiquity of digital technologies and their continuous adoption has provided opportunities that open new avenues to learn in previously unrivaled ways. Children born from the 1990s into the 2010s grew up with digital screen from an early age. Technology exposure, which iterates as a form of education, can impact physical and socio-emotional health in positive and negative ways. Children who have early access to education such as reading programs tend to perform well at an older stage compared to children who do not. The early onset of digital media exposure thus has significant impacts that need to be examined.

International Journal of Recent Development in Engineering and Technology
Website: www.ijrdet.com (ISSN 2347-6435(Online) Volume 15, Issue 01, January 2026)

3.2. Access, Inequality, and Digital Divide:

Youth access to technology is unevenly distributed, and the gap is widening even as access improves. According to data from 2018 and 2019, youth aged 14 to 24 possess high rates of smartphone ownership—96% of youth in Ontario and 89% in BC—yet an estimated 400,000 children and youth remained without a home computer or tablet at the start of the pandemic, many of whom were in marginalized groups (Orta, 2019). Recent reports by L'Observatoire des tout-petits (2022) and Impact Canada (2020) reinforce the importance of making available educational resources related to the digital economy. Children living in lower-income households, single-parent families, or rural communities also lag behind on both access and ability to use online resources designed to promote early development. Disability status further exacerbates access inequities. Similarly, Statistics Canada (2020) found that 10% of youth in Canada were unable to go online because of lack of necessary equipment. Gaps in device access, fast broadband, digital skills, and information literacy related to device purchase and use persist along socio-economic lines. Such variations limit youth opportunities as well as educational and employment prospects, and they reinforce the importance of policy attention to whether young people can, should, or want to engage with these technologies.

Differences in access and skill acquisition were evident at the onset of the Covid-19 pandemic, when access to digital devices and high-speed internet was necessary to transition to virtual work or school. Gaps have persisted in certain groups, particularly those on the mainstream edge spectrum. Those on the mainstream edge spectrum strongly participate in online engagement platforms for dissemination and broadcasting while also facing work-life balance difficulties (Horan & Tu, 2023). Because they are not well integrated into technology use from younger developmental levels, those falling into the digitally disadvantaged spectrum, such as older youth, working adults looking for re-skilling, and seniors, are more likely to remain excluded from online content production or capable of engaging with all the digital economy has to offer.

Disparities that persist in the platform economy underscore the importance of sector-wide reforms that facilitate greater access to content production platforms. Increasing access to content production at the institutional and individual levels could mitigate the severity of such disparities. Digital participation, discipline acquisition, and workplace demands continue to intensify, and the impact of Covid-19 has merely accelerated the shift towards online-based content creation that was already taking place.

The digitally disadvantaged spectrum remains uninformed of the associated trends, and the aforementioned circumstances heighten the urgency of bridging that gap.

IV. Artificial Intelligence: Trends And Implications

The term Artificial Intelligence (AI) encapsulates technologies that replicate or emulate human traits. In the contemporary scenario, an intricate approach to understanding AI is paramount, as it evolves significantly. There is no unanimous scholarly consensus on defining AI. However, several definitions exhibit notable commonalities. Broadly construed, AI encompasses "autonomous technologies that can predict solve problems, and draw conclusions at a superhuman capacity" (Velarde, 2020). AI can be viewed as an expansive collection of specific approaches and enabling technologies, including machine Learning (ML), Natural Language Processing (NLP), and computer Vision. Such specifics create a complex landscape. Governance indicators suggest that progress in AI is accelerating, with enhanced government focus on AI-related processes and projects at local, national, and global levels (Varghese et al., 2022).

Countless phenomena fall broadly under the label of AI. These center around specific services or tools that engage users. While capabilities change and the landscape evolves continuously, certain patterns maintain relevance. A small selection of widely available AI tools and applications featured prominently in public discourse as yet. Three areas emerged as domains in which substantial developments, applications, and debate concerning youth take place. Education has experienced rapid growth in AI-supported solutions addressing large segments of the population. Solutions intended to ease communication and social interaction constitute another area of particular interest, especially for young populations. Finally, evolving patterns shape the labour market and career guidance for the upcoming generation.

4.1. AI in Education and Learning Analytics:

Adaptive Artificial Intelligence (AI) technologies used in education remain in their infancy (Luan et al., 2020). Educational adaptations A, B, and C are not distinct phases in a continuum but rather categories of simultaneous usage, with varied emphasis, that reflect pedagogical paradigms being enacted.

AI approaches have been developed to assist teachers, providing timely feedback concerning learners and enhancing educational intervention efforts (R. Kshirsagar et al., 2022).

International Journal of Recent Development in Engineering and Technology
Website: www.ijrdet.com (ISSN 2347-6435(Online) Volume 15, Issue 01, January 2026)

Recommendations about learning pacing, self-regulated learning, learning styles, and concept mastery, including detection of large knowledge gaps and erroneous preconceptions, are included. Interventions might include learning strategy suggestions relevant to both group and individual characteristics.

4.2. AI in Communication, Social Interaction, and Identity:

Online communication services such as Facebook Messenger, Tumblr, and Snapchat offer people platforms to exchange messages across different modalities, including texts, images, and video clips. Commercial social media services such as Instagram, Twitter, TikTok, and YouTube have attracted large youth audiences, particularly among adolescents and adults. Youth use these platforms for expression and self-presentation. In addition to personal content sharing, there is a growing emphasis on engagement with and conversation around popular content posted by others. Peer-to-peer content sharing, responsive co-creation, and the remix culture, which encourages and celebrates the use of popular cultural objects in the making of new artifacts, are characteristics of social media. Young people use repurposed popular material as a means of engaging with peers and as an entry point for self-expression.

As an ever-present yet often invisible aspect of these platforms, algorithms guide what people are exposed to; content sharing and conversation are often shaped not just by personal choices but by algorithmic selection, sequencing, and framing. The automated recommendation and ranking systems governing what content appears next in feeds on platforms range from image curation in social-network services to automatic hashtags on multimedia messages to video previews and chapter segmentation in video or streaming applications. The fine-grained nature of the power these algorithms exert is superseded only by their sheer volume. For youth today, people's interactions, and even identity questions, are shaped profoundly by algorithmic infrastructure. Algorithms fine-tune exposure to content and participation in public conversation; how youth engage and what they bring to those interactions, as well as how they understand themselves in relation to the various materials they produce and the activities in which they participate, is partly dependent not just on their friends and the platforms themselves but on algorithms. (Young et al., 2024)

4.3. Labor Market Outlook and Career Navigation:

The urgency of the problem of youth employment and career direction cannot be overstated. On a day-to-day basis, most youths tend to look through job available advertisements in the newspaper, online and listen to parents, teachers and peers to help navigate them. Job advertisements in this regard often give the youth some information concerning the skills and knowledge needed to take up new job. Government and private institutions offering career guidance is therefore a common practice in many society. The arrival of artificial intelligence has made research material and job information more widely available to campus graduates (Georgieff & Hyee, 2022). It also provide students necessary sign of which knowledge, skills or ability (KSA) is necessary or emphasized in the job-desk advertisement. It helps youth identify personal competencies and development skills at a younger stage to help focus in the future. The AI also helps with the educational content concerning youth interest accordingly (Glebova et al., 2024).

V. Psychological And Developmental Impacts

Accessing, evaluating, and manipulating information constitutes a critical capability in modern societies (Muema Kalungu & W. Thinguri, 2017). The expansion of the digital environment, particularly through digital gaming, has allowed youth to gather information, devise solutions, and scrutinize shortcomings in detail and within various contexts. Through active engagement with digital technologies, youth acquire literacy, numeracy, and technical proficiencies alongside 21st-century skills, including access, evaluation, and ethical use of digital content; social networking; and design and programming (M Capiro et al., 2019). Online communities also facilitate participation in global discourses, providing opportunities for collaborative decision-making that advance social competence and literacy while reaffirming socio-cultural identity. Digital technologies assist youth in managing their lives and shifting from local to global perspectives. Online settings closer to home permit participation in social and civic responsibilities and engagement with local history, literature, and media. Altogether, active and holistic participation supports social, emotional, and cognitive competence and suggests potential for socio-political and cultural change.

Concerns regarding the effects of technology have proved persistent throughout history; an early example is Plato's critique of the written word. In exploring the developmental implications of today's saturated digital environment, both risks and opportunities come into view. As youth engage with information more intensely than previous generations, attention distribution warrants examination. Competing demands arise from attention economies structured around capturing viewer time, ubiquitous access to screens, and multimedia formats. A broad understanding of attention guides the analysis: attention distribution among individuals, ideas, promises, and tasks; distribution among self-regulation, attunement, session duration, and intra-session switching; and the ability to manage attention itself. Cognitive overload emerges as an additional consideration. Attempts to assimilate an excessive quantity of information within limited time seriously constrain processing capacity. Cognitive load similarly warrants scrutiny. Content typologies, stylistic variations, and message architectures significantly influence load and have changed markedly in recent years.

The emergence of AI is becoming a key driver of social change by expanding and deepening technology adoption through its substantial capacity to generate text, images, music, and other high-quality outputs. AI access capabilities render the technology amenable to varied forms of diffusion. AI enables shifts in individual behavior and institutional practice at both micro-level and macro-level, which further influence youth identity and development. Potential micro-level scenarios that affect individual youth extend to inquiry, creativity, study habits, and continued engagement with human-generated content. Macro-level pathways of institutional influence encompass education, care, and media contexts that are crucial for youth.

5.1. Cognitive Effects and Attention Economies:

Frequent technology use can compromise attention allocation and promote cognitive overload, undermining self-regulation and subjective well-being during the formative youth years. Early exposure and ongoing engagement with AI-delivered digital services amplify these risks. Studies indicate a high propensity for information-seeking on multiple screens; engagement in media multitasking; and exposure to AI-curated feeds comprising ephemeral, fast-paced content with limited depth. When content demands exceed attentional capacity, the brain "selects" what it can process and the remainder is left behind, potentially compromising comprehension, performance, retention, and long-term internalization of the information ((A. Ives, 2013)).

Reconfiguring environmental conditions to capture needed attention poses additional challenges not encountered in circumstances involving the rapid absorption of material ((E. Beaudoin et al., 2024)). Furthermore, an inverse relationship exists between screen time and performance in numeracy, literacy, and cognitive activities, especially among children with poor executive-control skills. Since comprehension, absorption, and internalization of input require the investment of attention and cognitive effort, the matrix of technology use exerting a negative impact on formal learning during youth underscores the criticality of addressing AI-driven information overload.

AI is reshaping attention economies. The prevailing model of attention within societies is oriented toward the acquisition of knowledge, competence, and understanding, and the formation of corresponding cognitive and intellectual capacities and skills translates into capital both on macro (social, economic, political) and micro (personal, job, and career) levels. Instead of directing attention comparatively broadly to know more, AI technology now favors narrow attention to become densely acquainted with selected subjects, themes, or domains (thematic categorization) at the expense of cultivating expansive competence, capacity, and capability. Shifting opportunities toward specialized practice at the expense of wide-ranging learning and capacity-building, therefore, constitutes a transition from knowledge to hyper-specialized "hard" data. AI expands the intentions behind attention, seeking information, and practical interest to circumscribed sub-areas over limited knowledge.

5.2. Privacy, Autonomy, and Behavioral Conditioning:

Growing demands, especially those triggered by new educational methods and the introduction of artificial intelligence, have subjected young people to increased attention from governments, non-governmental organizations, stakeholders from all sectors of the economy, and civil society in modern society. The detrimental impact of technology on mankind, especially on youth, has attracted social and public concern (Latham & Goltz, 2019). Young people and technology, especially artificial intelligence, have a connection with a high preparatory attitude. Technological platforms and digital games provide positive reinforcement of learning. However, young people place a high burden on the use of technology.

International Journal of Recent Development in Engineering and Technology
Website: www.ijrdet.com (ISSN 2347-6435(Online) Volume 15, Issue 01, January 2026)

The widespread incorporation of technology into daily life and the rapid development of artificial intelligence are accompanied by privacy violations, restrictions on autonomous choice, and the shaping of behavior through information (Grafanaki, 2017). As Darien B. Lwamba points out, immediate and easy access to knowledge, instant messaging, online gaming, and new opportunities to interact with individuals from different cultures are major factors leading to inevitable attention. These changes are gradually conditioning and shaping behavior and thinking.

VI. Policy, Ethics, And Governance

The youth-developing population of a nation determines the future of that nation. As potential leaders in various fields, their nurture, guidance, and security are paramount. With the growing trend of AI, supplementing and improving youths' lives is now possible. Various forms of AI applications are being widely used and are continuing to grow globally and it appears that these technologies will penetrate many areas of human endeavor deeply. However, governance is essential to oversee and regulate the AI technologies that shape youth development. Key frameworks must be applied to future AI technologies to protect youth, enable youth to embrace AI smoothly and allow it to be seen as a supporting and enhancing tool. Well-defined policy development is crucial to plan and govern AI applications influencing and shaping youth experiences and upbringing (C. Müller, 2020). Compared to smart pedagogy which relies more heavily on international cooperation, socio-economic penetration is more appropriate for youth development stretching across the globe.

6.1. Regulation of AI Technologies for Youth:

Nearly 80 per cent of Internet users aged 15 to 25 stay online continuously when awake; among younger cohorts, a third check feed updates weekly or more often (Xu, 2024). A comprehensive Russian survey spanning urban centres to rural outposts reported that nearly two-thirds of 12- to 18-year-olds employ graphical AI, focusing on domestic art generation and style modification. Over a decade, youth employment of digital technology—spanning social media, skill acquisition, cloud storage, and gaming—has levelled off nationally. Even so, youth employment and non-use of smartphones varies considerably by region due to residual barriers. Despite exposure to educational resources, students in areas with subpar Internet access aspire to enter notably different professions than their metropolitan counterparts.

Typically, 95 per cent or more of Russian youth colonise most communication and entertainment platforms in big cities, yet national indicators reveal significant disparities in continuous engagement across educational settings.

6.2. Education Policy and Digital Literacy:

Successful integration of digital tools into teaching and learning requires redesigning curricula, enhancing teacher education, and conducting materials development, access, and equipment research (Xu, 2024). It also necessitates investing in policy initiatives that provide all teachers with equal opportunities to develop the necessary skills and knowledge for teaching and using digital technologies. A more equitable education could be achieved by introducing new educational policies targeting poor areas at a regional level. Overall, education systems' level of digital literacy policy preparedness could be assessed by levels of curriculum development, teacher training, access to digital resources, and the establishment of policy initiatives aimed stipulating AI literacy in education.

VII. Case Studies and Comparative Perspectives

Growing awareness of the significance of artificial Intelligence enabled technologies has led to increased interest from governments, multilateral organisations and private-sector stakeholders in understanding their impact on youth. A recent global study analysed trends and examined how policy, social and cultural factors shape the way these technologies affect the lives and experiences of young people (Buehler et al., 2012). The findings were based on case studies in Hungary, India, Kenya, Colombia, Morocco, South Africa and Sweden, involving focus-group discussions with youth aged between 13 and 19 years (Ivanov, 2020). A second broad-based initiative documented youth perspectives and the implications of policies, practices and programmes governing these technologies in over 30 countries (Muema Kalungu & W. Thinguri, 2017). The objectives were to share insights from various ongoing initiatives around the world and to identify differences between contexts and approaches that could offer valuable lessons.

Artificial Intelligence may be defined as a subfield of computer science that enables systems to simulate human cognitive functions such as perception, reasoning, learning and decision-making. It describes a wide variety of digital problems, technologies and systems that are relevant to present-day youth. Young people are proficient in navigating multiple technological environments, yet they often lack a fundamental understanding of software and hardware, which hampers their ability to fully grasp how technologies operate and to adapt when changes are made.

International Journal of Recent Development in Engineering and Technology
Website: www.ijrdet.com (ISSN 2347-6435(Online) Volume 15, Issue 01, January 2026)

7.1. Regional Variations in AI Adoption and Youth Outcomes:

Urban centres offer youth significantly more opportunities for artificial intelligence (AI) adoption than rural environments across economically advanced countries. Economically disadvantaged urban locations also remain attractive for AI adoption despite constraints on devices and connectivity, given youth access to affordable Wi-Fi in public libraries and cafés, widespread mobile data plans, and availability of public-use computers in schools, community centres, and youth service offices. By contrast, economically disadvantaged rural regions typically afford youth few opportunities to adopt or explore AI, which can reduce timely exposure to key social development opportunities. Similar patterns may occur cross-nationally when lower- and middle-income countries adopt technological infrastructures substantially different from higher-income settings (Xu, 2024).

7.2. Cross-Country Lessons and Best Practices:

Many governments, organisations, and universities worldwide have attempted to introduce young people to artificial intelligence in various ways. Interest in the field has risen due to the many new applications now available, the hyped media coverage of AI technologies, and the improved accessibility of computer programming and machine-learning software compared to past decades. This section covers AI teaching initiatives targeting teenagers since these initiatives may make it easier to gather evidence about the youth-engagement problem, which has become more pressing with recent AI developments. Existing reports highlight promising curricula, training techniques, and education-technology tools developed in various countries that could also inspire the formulation of comparable initiatives or models (Macar et al., 2023).

A notable example consists of a two-day AI boot camp at Universiti Sains Malaysia during which approximately forty teenagers were introduced to core concepts of AI and machine learning: programming with Python, Google Colab as a coding interface, and AI applications for music and text. Supplementing training on technical skills, the course covered awareness of ethical concerns surrounding AI and machine learning. Feedback indicated that the teenagers engaged actively with fellow participants and instructors and expressed interest in future sessions for more advanced topics or other related fields. Reports summarising the boot camp findings documented the broad interest in AI among teenagers and confirmed that they could grasp concepts that were formerly considered too advanced.

VIII. Methodological Considerations In Studying Technology And Youth

Research on the relationship between technology and youth advocates an understanding of how interactions with tools, content, and devices shape individuals and influence their skills, opportunities, behaviours, developmental trajectories, and identities. Different research questions and approaches emerge from this field. Some focus on how youth engage with a set of technologies and what this means for various aspects of youth life; some focus on youth's responses to the dynamic of tech adoption and its implications. Three major design-related considerations are noted in the literature. First, scholars must clarify the particular aspects they wish to study, methods for how to measure these empirically, and establish relevant comparisons and correlations (Buehler et al., 2012). Second, there are numerous options for capturing technology use among youth, including surveys, interviews, periodic sampling, diaries or snapshots of particular periods of life, and so on (Xu, 2024). Third, ethical considerations are crucial when youth are the subjects. Ensuring respect for their privacy, informed participation, and suitable practices enhances the fields robustness.

8.1. Research Designs, Data Sources, and Ethical Considerations:

In investigating the interplay between technology and youth, mixed-methods designs integrating cross-sectional surveys, longitudinal tracking, qualitative studies, and experiments are gaining prominence. Quantitative analyses draw on diverse administrative, proprietary, and publicly shared datasets, expanding access to indicators of exposure, behaviour, and outcome in real-world settings. Ethical safeguards—encompassing bias mitigation, privacy protection, and minimising harm—are increasingly critical in overseeing educational technology research, including artificial intelligence. Frameworks further elucidate equity and technology design criteria, engaging stakeholders in specifying ethical and procedural requirements (Xu, 2024).

Technological advancements such as artificial intelligence (AI) hold the potential to reshape social and cultural dynamics. For instance, large language models—capable of generating contextually relevant text and engaging in closed-loop interactions—enhance individuals' writing, creative output, and engagement with learning resources. In other sectors, AI use is similarly proliferating and value-generating through improved efficiency, enhanced human input, and expanded access.

International Journal of Recent Development in Engineering and Technology
Website: www.ijrdet.com (ISSN 2347-6435(Online) Volume 15, Issue 01, January 2026)

The extraordinary momentum behind technology adoption is perhaps most apparent when schools, education systems, and national policies permit or prohibit specific tools. The urgency of understanding technology's use and impact across settings underlines the sociocultural and substantive relevance of research focused explicitly on contemporary classroom technology. Indeed, a lack of information concerning increasingly prevalent education-sector technologies limits efforts to harness the benefits of promising approaches, avoid undesirable detours, and prevent system-wide adoption of tools that fail to enhance teaching and learning.

IX. Synthesis Of Evidence And Emerging Trends

Digital technology continues to permeate young people's lives, providing both new opportunities and new challenges. As the influence of artificial intelligence grows, clarifying opportunities, challenges, and actionable responses is essential to support healthy youth development.

Technological modernisation reshapes contexts and conditions of life for youth. Among the available technologies, artificial intelligence is becoming increasingly pervasive and influential. The interactive nature of contemporary AI gives young people agency, fostering creativity, experimentation, and exploration. At the same time, AI-based tools have the potential to influence youth behaviour in ways that shape personal development and social norms. Outside school, platforms and applications that leverage artificial intelligence play a central role in youth exchange and identity formation. Thus, the substance and regulation of these services, as well as young people's interactions with them, require careful consideration and ongoing monitoring (Xu, 2024).

Greater availability and sophistication of artificial intelligence will shift the kinds of tools, platforms, and services available to youth. Adaptation to these changes, as well as their consequences, will shape immediate and future youth experiences. Continuous attention to the nature and direction of these shifts, and to their implications for youth, will therefore remain vital.

X. Conclusion

During the past decade, modernisation theory has gained considerable traction within scholarly and policy circles (Muema Kalungu & W. Thinguri, 2017). First articulated as a way to explain the relationship between industrialisation and societal transformation, the approach remains relevant for analysing the impact of contemporary technology on society.

In conjunction with accumulated experience concerning the consequences of digital technology for young people, modernisation theory provides a robust framework for assessing the effects of artificial intelligence (AI) on youth behaviours and identities across multiple contexts. The insights articulated in the foregoing pages confirm the continuing validity of the theoretical lens and underscore the necessity for further empirical and conceptual exploration.

Digital technologies, and social media in particular, are shaping youth identity formation through peer socialisation, feedback and recognition mechanisms, and the establishment of cultural norms. Domestic and school environments, access to resources, and the regulatory capacities of states and market actors modulate the intensity and direction of influence. These variables function within the overarching national framework of effects that modernisation theory delineates (Buehler et al., 2012). AI-enabled technologies and services are poised to revolutionise personal and professional landscapes; models delineate the prospective trajectory of labour supply and demand in the forthcoming decade. Without any action to counteract the new drivers, a large number of future jobs—more than we thought—could be at risk.

The overall effect could be any of a number of things. The rapid changes in society and technology make it even more important for both national and international organisations to create resilient, adaptable, and lifelong learners who are aware of how things are changing. Paying attention to these ideas, combined with (A. Ives, 2013), will help you comprehend more, move faster, and respond quickly and effectively to new situations. Other methodologies, such as the capability approach, remain unexplored in terms of both foundational theory and empirical observations. There isn't much research that shows how young people are involved in the development of new technologies. Closing these gaps will help people learn more about and see how artificial intelligence affects many areas of life, including youth development, society, culture, and the economy as a whole.

REFERENCES

[1] Hans VB (2025) An Analysis of Artificial Intelligence in India. Global J Eng Des Technol. 14:244.

[2] Muema Kalungu, J. & W. Thinguri, R., 2017. CRITICAL ANALYSIS OF THE IMPACT OF MODERN TECHNOLOGY ON STUDENTS SOCIAL RELATIONSHIPS IN KENYAN SCHOOLS. European Journal of Education Studies Vol 3, Issue 10. Pages 750–764

[3] Varghese, M., Raj, S., & Venkatesh, V., 2022. Influence of AI in human lives. https://arxiv.org/

[4] Xu, Y. '., 2024. The Double-Edged Sword of AI Writing Tools. osf.io

[5] Muchsini, B. & Siswandari, S., 2018. Digital Natives' Behaviours and Preferences: Pre-Service Teachers Studying Accounting. IJPTE International Journal of Pedagogy and Teacher Education 2(2):355 DOI:10.20961/ijpte.v2i2.24088

[6] Cirilli, E. & Nicolini, P., 2019. Digital skills and profile of each generation: a review. Revista INFAD de Psicología. International Journal of Developmental and …, 2019•revista.infad.eu

[7] Orta, N., 2019. Becoming College and Career Ready: Combating The New Digital Divide – A Literature Review. https://files.core.ac.uk/

[8] Horan, T. & Tu, H., 2023. Digital Literacy, Ability and Vulnerability: Education and Income Variations in the Platform Economy. osf.io

[9] Velarde, G., 2020. Artificial Intelligence and its impact on the Fourth Industrial Revolution: A Review. arXiv preprint arXiv:2011.03044, 2020•arxiv.org

[10] Luan, H., Geczy, P., Lai, H., Gobert, J., J. H. Yang, S., Ogata, H., Baltes, J., Guerra, R., Li, P., & Tsai, C. C., 2020. Challenges and Future Directions of Big Data and Artificial Intelligence in Education. ncbi.nlm.nih.gov

[11] R. Kshirsagar, P., B. V. Jagannadham, D., Alqahtani, H., Noorulhasan Naveed, Q., Islam, S., Thangamani, M., & Dejene, M., 2022. Human Intelligence Analysis through Perception of AI in Teaching and Learning. ncbi.nlm.nih.gov

[12] Young, J., M Jawara, L., N Nguyen, D., Daly, B., Huh-Yoo, J., & Razi, A., 2024. The Role of AI in Peer Support for Young People: A Study of Preferences for Human- and AI-Generated Responses. CHI '24: Proceedings of the 2024 CHI Conference on Human Factors in Computing Systems Article No.: 1006, Pages 1 – 18 https://doi.org/10.1145/3613904.3642574

[13] Georgieff, A. & Hyee, R., 2022. Artificial Intelligence and Employment: New Cross-Country Evidence. ncbi.nlm.nih.gov

[14] Glebova, E., Øivind Madsen, D., Mihaľová, P., Géczi, G., Mittelman, A., & Jorgič, B., 2024. Artificial intelligence development and dissemination impact on the sports industry labor market. ncbi.nlm.nih.gov

[15] Capiro, N. M., Gleason, A. L., & Powers, S. (2019). The Impact of a Neuroeducation-based Wellness Curriculum on Generation Z: Implementing Mind-Body Connection [Doctoral dissertation, Lynn University]. SPIRAL. https://spiral.lynn.edu/etds/344

[16] Ives, Eugenia A., "iGeneration: The Social Cognitive Effects of Digital Technology on Teenagers" (2013). Graduate Master's Theses, Capstones, and Culminating Projects. 92. https://doi.org/10.33015/dominican.edu/2013.edu.09

[17] E. Beaudoin, M., M. Jones, K., Jerome, B., Martinez, D., George, T., & B. Pandža, N., 2024. Systematic research is needed on the potential effects of lifelong technology experience on cognition: a mini-review and recommendations. ncbi.nlm.nih.gov

[18] Latham, A. & Goltz, S., 2019. A Survey of the General Public's Views on the Ethics of using AI in Education. Lecture Notes in Computer Science DOI:10.1007/978-3-030-23204-7_17 In book: Artificial Intelligence in Education (pp.194-206)

[19] Sofia Grafanaki, Autonomy Challenges in the Age of Big Data, 27 Fordham Intell. Prop. Media & Ent. L.J. 803 (2017).Available at: https://ir.lawnet.fordham.edu/iplj/vol27/iss4/3

[20] C. Müller, V., 2020. Ethics of Artificial Intelligence and Robotics. https://plato.stanford.edu/

[21] Buehler, E., Alayed, F., Komlodi, A., & Epstein, S., 2012. "It is Magic": A Global Perspective on what Technology Means to Youth. https://files.core.ac.uk/

[22] Macar, U., Castleman, B., Mauchly, N., Jiang, M., Aouissi, A., Aouissi, S., Maayah, X., Erdem, K., Ravindranath, R., Clark-Sevilla, A., & Salleb-Aouissi, A., 2023. Teenagers and Artificial Intelligence: Bootcamp Experience and Lessons Learned. https://arxiv.org/