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Role of ICT on Educational Adjustment & study habits of Secondary school students: An Analytical Study in the context of NEP: 2020

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Abstract

In the digital era, Information and Communication Technology (ICT) has emerged as a transformative tool in reshaping the educational experiences of secondary school students.(UNESCO. 2022)This analytical study investigates the impact of ICT on educational adjustment and study habits of students at the secondary level, within the framework of the National Education Policy (NEP) 2020. Educational adjustment is examined across academic, emotional, and social domains, while study habits are analyzed in terms of students' learning strategies, time management, motivation, and self-regulated learning behaviors.(Anderson, J.2010) The ICT tools—such as smart classrooms, e-learning platforms, educational apps, and online assessments—not only enhance student engagement and access to knowledge but also significantly contribute to improved academic adjustment and the development of effective study routines. However, the digital divide, lack of training, and limited infrastructural resources pose ongoing challenges. The study concludes by recommending inclusive digital policies, teacher capacity building, and infrastructural development to fully leverage ICT's potential in line with NEP 2020's vision of equitable and technology-driven education. This abstract focus on Impact of ICT on Educational Adjustment & study habits of Secondary school students: An Analytical Study in the context of NEP: 2020

Keywords: ICT, Educational Adjustment, Study Habits, Secondary School Students, NEP 2020, Digital Learning, Educational Transformation

Introduction

In the digital world we live in today, technology has taken center stage in influencing many aspects of life, including education. UNESCO.(2020). The advancement of technology has transformed traditional learning environments, providing students with unprecedented access to information, flexibility in learning, and enhanced opportunities for academic collaboration. Particularly secondary school students are at the forefront of this technological shift, navigating a dynamic landscape where digital platforms and online resources are increasingly embedded into their academic practices.(Livingstone,S.2012). Students frequently pursue advanced and specialized coursework that requires entrance to higher education institutions, such as medical and engineering schools, as well as other scientific and humanities fields. They may now use digital resources including online databases, e-libraries, and collaboration platforms thanks to technological improvements. (Khan & Kaur, 2018; Tan & Lo, 2016) that enable efficient information retrieval and foster global academic interactions. These innovations have not only transformed how students gather and process knowledge but have also influenced their study habits, learning strategies, and academic performance.(**Taneja,A.,Fiore,V.,&Fischer,B.2015).**This research aims to investigate how technological advancements influence the study habits of secondary school students By examining a varied group of students across different disciplines, this study intends to offer a thorough understanding of the integration of digital tools and resources into

the academic experiences of school students, as well as the effects of these tools on their academic achievements. The results of this research will not only emphasize the positive aspects of technological integration but also reveal the potential challenges that students encounter in diverse environments, providing insights for educational institutions and policymakers on how to better support secondary school students in a swiftly changing digital landscape. Through a detailed analysis, this study will illuminate how technology can be utilized to improve study habits, boost academic performance, and foster a more inclusive learning atmosphere in school education.

Educational Adjustment-

Educational adjustment represents a complex, dynamic, and multidimensional process through which learners align themselves with the academic, emotional, and social demands inherent in educational settings. This adaptive mechanism becomes particularly salient during key transitional periods—such as the progression from primary to secondary education or the transition from school to university—where shifts in institutional expectations, cognitive demands, and peer group structures can exert significant influence on students' academic trajectories and psychological well-being (Pekrun, Goetz, Titz, & Perry, 2002). Successful educational adjustment not only undergirds academic achievement but also cultivates emotional resilience and fosters social integration, both of which are pivotal to sustained educational engagement and long-term developmental outcomes.

At its essence, educational adjustment encompasses the dynamic process through which learners establish congruence with the structural, pedagogical, and sociocultural dimensions of the educational environment. This alignment extends beyond mere academic proficiency to include emotional well-being and social integration, thereby positioning educational adjustment as a multidimensional construct comprising three interrelated domains: academic, emotional, and social (Chadha, 1993).

Academic adjustment, in particular, pertains to a student's capacity to effectively navigate curricular demands, instructional methodologies, assessment regimes, and institutional workload (Baker & Siryk, 1984). It involves the cultivation of adaptive study strategies, time management skills, cognitive engagement, and the ability to fulfill academic expectations. Learners who demonstrate high levels of academic adjustment typically exhibit sustained academic motivation, consistent performance, and resilience in the face of educational challenges.

Emotional adjustment, on the other hand, concerns the learner's ability to manage stress, anxiety, and emotional responses triggered by academic pressures or personal challenges. (Gerdes, H., & Mallinckrodt, B. 1994). For many students, especially in competitive or unfamiliar educational contexts, emotional regulation plays a key role in their overall adjustment. High levels of emotional distress may impair concentration, memory, and even attendance, ultimately affecting academic outcomes. (Gerdes, H., & Mallinckrodt, B. (1994).

Social adjustment- Social adjustment refers to a student's capacity to develop and sustain positive interpersonal relationships with peers, educators, and members of the broader educational community (Rienties & Nolan, 2014). This dimension encompasses a range of socio-emotional competencies, including effective communication, active participation in group activities, conflict resolution, and the development of a sense of belonging within academic environments. Students who exhibit strong social adjustment are more likely to engage in collaborative learning experiences and benefit from both emotional and academic peer support (Walton & Cohen, 2011).

Educational adjustment, in general, is shaped by a multitude of interrelated factors—including family background, socioeconomic status, cultural context, personality characteristics, and the presence of institutional support mechanisms. Learners from marginalized or disadvantaged backgrounds may encounter additional challenges in adapting to mainstream educational systems due to language barriers, cultural unfamiliarity, or limited academic resources at home (Bronfenbrenner, 1979).

Contemporary educational psychology highlights the importance of self-regulated learning, resilience, and a growth mindset as critical enablers of effective adjustment. Supportive institutional practices—such as access to counseling services, teacher mentorship, and inclusive pedagogy—can significantly enhance students' adaptive capacity and promote positive developmental trajectories (Linnenbrink-Garcia & Pekrun, 2011).**Ultimately, educational adjustment is best understood not as a fixed achievement but as a dynamic, developmental process.** It involves the continuous interaction of cognitive, emotional, and social competencies, reinforced by a supportive learning environment. Fostering comprehensive educational adjustment is essential for cultivating resilient, self-directed, and socially competent learners capable of thriving both academically and beyond the classroom.

ICT & Educational adjustment-

From a **cognitive and academic perspective**, ICT implementation compels stu The integration of **Information and Communication Technology (ICT)** within educational frameworks signifies a paradigmatic shift in both pedagogical delivery and learner engagement. The present discourse interprets this transition as necessitating multidimensional **educational adjustment,** encompassing academic, emotional, and social domains.

dents to move beyond passive modes of instruction toward **self-regulated learning practices**. The emergence of digital learning tools—such as Learning Management Systems (LMS), interactive simulations, and AI-based feedback systems—requires learners to acquire competencies in **digital literacy, goal-setting, time management,** and **critical information evaluation.** This transition indicates that academic adjustment in the ICT-mediated environment is not merely procedural but also **strategically metacognitive.** However, disparities in digital fluency can produce uneven levels of adjustment, manifesting in increased academic anxiety or disengagement among technologically underprepared learners.

The **emotional dimension** of educational adjustment in ICT-integrated environments is equally significant. While online and personalised learning modalities may foster autonomy and reduce certain stressors (e.g., time constraints, commuting), they simultaneously introduce **psychosocial challenges** such as screen fatigue, diminished face-to-face support, and social isolation. These factors necessitate heightened **emotional regulation**, resilience, and **digital well-being** as part of students' adaptive responses. Consequently, emotional adjustment is understood here as the student's capacity to navigate the psychological demands imposed by virtual and hybrid learning environments.

With regard to **social adjustment**, ICT has redefined traditional interpersonal dynamics. The shift toward virtual collaboration and communication platforms has transformed the mechanisms through which students form and maintain relationships with peers and educators. To succeed in this new social milieu, learners must develop **new interactional literacies**, such as netiquette, online collaboration skills, and cross-cultural communication abilities. Notably, **students from socioeconomically marginalised or geographically remote backgrounds** may face additional barriers due to inadequate access to technology, unfamiliarity with digital discourse norms, or language

constraints. These disparities underscore the need for **inclusive technological infrastructures** and culturally responsive pedagogy.

Furthermore, the interpretation highlights the critical role of **institutional scaffolding**. The presence of effective counselling services, digital orientation programs, and inclusive teaching strategies emerges as an enabling factor in the educational adjustment process. Institutions that proactively foster **digital equity, emotional support systems**, and **adaptive learning resources** enhance the likelihood of successful adjustment among diverse student populations.

In summation, this interpretation elucidates that ICT is not a neutral technological intervention but a transformative force that reconfigures the entire landscape of educational adaptation. The capacity of students to adjust academically, emotionally, and socially in ICT-rich environments is influenced by individual learner variables, institutional policies, and broader socio-cultural factors. Educational adjustment, therefore, becomes a dynamic and systemic construct, requiring **synergistic efforts** between stakeholders to ensure that ICT integration leads to equitable, effective, and sustainable learning outcomes.

ICT & Study habits-

The incorporation of **Information and Communication Technology (ICT)** into educational settings has significantly redefined conventional **study habits** among learners. Study habits—broadly conceptualised as a set of cognitive, behavioural, and attitudinal strategies employed by students to organise and optimise their academic learning—are increasingly mediated by digital technologies. This transformation necessitates a re-examination of how ICT tools interact with, influence, and potentially reshape students' approaches to independent study, time management, motivation, and self-regulated learning.

ICT facilitates a shift from traditional, linear study methods—such as rote memorisation and textbook reading—to more **interactive, personalised, and self-paced learning** strategies. Through access to e-learning platforms, digital libraries, video tutorials, mobile learning applications, and cloud-based collaborative tools, students now engage in **multimodal learning experiences** that cater to diverse learning styles. These tools promote **active engagement**, reinforce **conceptual understanding**, and enable **flexibility in time and place of study**, thus supporting more adaptive and autonomous study practices.

A critical dimension of this shift is the rise of **self-regulated learning (SRL),** a construct closely linked to effective study habits in ICT-enriched environments. Self-regulated learners make deliberate use of metacognitive strategies (e.g., goal setting, planning, self-monitoring), which are facilitated by technological tools such as interactive quizzes, online progress trackers, and personalised feedback systems. As a result, ICT not only supports **content acquisition** but also fosters the development of strategic and reflective learning behaviours.

Moreover, ICT has a notable impact on **time management and academic discipline**—two key indicators of study habit quality. Digital calendars, reminder apps, and productivity trackers help students allocate study time efficiently and maintain consistency. However, the same technologies can present **significant distractions**. The ubiquitous presence of social media, online entertainment, and non-academic content can fragment attention and disrupt study routines, especially in the absence of digital self-control mechanisms. Thus, ICT introduces both **enablers and barriers** to productive study behaviour, depending on the learner's digital discipline and environmental factors.

Additionally, the motivational landscape of study habits has evolved with ICT. Gamified learning platforms, immediate feedback loops, and peer recognition in online forums contribute to **increased intrinsic motivation** and sustained academic engagement. However, over-reliance on extrinsic motivators or passive consumption of content can lead to **surface learning approaches** rather than deep, meaningful engagement.

Socioeconomic and contextual variables further mediate the impact of ICT on study habits. While students from well-resourced backgrounds can leverage ICT for efficient study routines, those from underserved regions may lack consistent access to devices, connectivity, or digital literacy, thereby exacerbating disparities in academic preparedness and study efficacy.

In conclusion, the interface between ICT and study habits is both complex and dynamic. ICT has the potential to significantly **enhance students' study behaviours**, provided that learners are equipped with the necessary **self-regulatory skills, digital competencies**, and **supportive learning environments.** Future research must continue to investigate the nuanced ways in which digital tools influence the formation, maintenance, and transformation of study habits across diverse educational contexts.

ICT includes tools and platforms that process, store, and disseminate information. Examples: Smart boards, LMS (Learning Management Systems), video conferencing, AI tutoring, and digital content.

Role of ICT on Educational Adjustment and Study Habits in the Context of NEP-2020

The National Education Policy (NEP) 2020, introduced by the Government of India, marks a transformative shift in the country's educational landscape. One of its core pillars is the integration of Information and Communication Technology (ICT) across all levels of education to promote equity, accessibility, quality, and lifelong learning. In alignment with NEP-2020's digital vision, the educational ecosystem is undergoing significant transformation—reshaping both students' educational adjustment processes and their study habits in the digital age.

ICT and Educational Adjustment under NEP-2020

Educational adjustment, broadly conceptualised as a learner's capacity to align with the academic, emotional, and social expectations of the schooling environment, is being redefined under the digital paradigm envisioned by NEP-2020. The policy advocates for blended learning models, digital content delivery through platforms like DIKSHA, SWAYAM, and the establishment of Virtual Labs and Digital Infrastructure for Knowledge Sharing (DIKSHA), thereby necessitating new forms of cognitive and behavioural adaptation among students.

From an academic perspective, students are expected to transition from rote learning to conceptual understanding, supported by ICT-based pedagogies such as experiential learning, online simulations, and digital assessments. This requires learners to develop new digital literacies, as well as the capacity to navigate self-paced, modular courses, which demand higher levels of self-discipline and intrinsic motivation. Thus, NEP's digital push calls for academic adjustment strategies centered around autonomy, adaptability, and digital problem-solving.

On the emotional front, the increasing use of online education—especially highlighted during the COVID-19 pandemic—has resulted in both opportunities and stressors. While flexibility and remote access reduce physical and psychological barriers for many students, challenges such as screen fatigue, lack of peer interaction, and increased academic isolation may hinder emotional well-being. NEP-2020 recognizes this concern and proposes counselling

support systems and socio-emotional learning (SEL) modules to address emotional adjustment in tech-enabled learning environments.

Socially, the digital shift brings changes to classroom dynamics and peer collaboration. Virtual classrooms and e-discussion forums require students to develop new social communication skills, including netiquette, asynchronous dialogue, and online teamwork. For learners from rural, tribal, or economically weaker sections—priority target groups under NEP-2020-digital access disparities may hinder smooth social integration within virtual education spaces, necessitating focused inclusive policies and bridging programs.

ICT and Study Habits in the NEP-2020 Era

NEP-2020 promotes a student-centric, multidisciplinary, and inquiry-based learning approach, where ICT plays a key enabler's role. This paradigm shift influences students' study habits, encouraging the development of self-regulated learning behaviours such as goal setting, digital time management, and critical thinking.**(Kumar, V., & Kaur, A. (2019).** Digital tools such as mobile learning apps, online video tutorials, interactive e-books, and AI-based personalized learning platforms are increasingly becoming part of students' daily academic routines. These tools promote flexibility, repetition, and mastery learning, fostering better comprehension and retention. Study habits under this framework are no longer confined to physical libraries or fixed timetables but are instead fluid, technology-driven, and learner-led.

However, this shift also brings challenges. Digital distractions, overexposure to screens, and superficial content consumption may result in reduced attention spans and fragmented learning patterns. NEP-2020 addresses this by recommending teacher capacity building for digital pedagogy, integration of Digital Wellness modules, and creation of regulated digital environments that cultivate discipline and deep learning. *(National Education Policy 2020.)*

Recommendations-

Based on the findings and analysis of the impact of Information and Communication Technology (ICT) on educational adjustment and study habits within the framework of the National Education Policy (NEP) 2020, the following recommendations are proposed to ensure effective, inclusive, and sustainable implementation:

1. Enhance Digital Infrastructure and Access

To minimise the digital divide, especially among rural and marginalized students, the government and educational institutions should prioritize:

- Provision of affordable and reliable internet connectivity.
- Distribution of ICT devices such as tablets, laptops, and smartboards to underserved schools.
- Expansion of public digital learning spaces in community centers and libraries.

2. Integrate ICT Training in Teacher Education

Effective integration of ICT into classroom pedagogy demands systematic training for teachers:

- Incorporate digital pedagogy modules in pre-service and in-service teacher training programs.
- Conduct continuous professional development (CPD) workshops focused on blended learning, digital assessment, and emotional support in online environments.
- Encourage teachers to model and promote self-regulated and responsible digital learning behaviors.

3. Develop Culturally Inclusive and Localized Digital Content

To foster better adjustment and study engagement among diverse learners:

- Create multilingual, culturally contextualised digital content aligned with NEP-2020's emphasis on mother tongue/local language instruction.
- Promote interactive, inquiry-based resources that match local learning needs, especially in tribal and rural regions.

4. Embed Digital Literacy and Study Skills in Curriculum

Educational adjustment and study habits in digital environments can be strengthened through:

- Inclusion of **digital literacy, information management, and time management** skills as part of the formal curriculum.
- Implementation of **study skill enhancement programs**, especially targeting learners transitioning from traditional to ICT-based modes of learning.

Support Socio-Emotional Adjustment through Institutional Mechanisms

Recognizing the emotional and psychological challenges posed by ICT-driven education:

- Establish school-based counselling units with a focus on digital wellness and emotional resilience.
- Integrate Socio-Emotional Learning (SEL) frameworks in online and hybrid instruction, as recommended by NEP-2020.

Monitor and Evaluate ICT Integration Outcomes

To ensure accountability and impact-driven implementation:

- Design and implement monitoring and evaluation (M&E) frameworks that assess how ICT affects students' academic adjustment and study behaviors.
- Encourage action research at the institutional level to refine ICT-based interventions based on real-time student feedback and performance metrics.

Promote Balanced and Healthy Use of Technology

To prevent overdependence and screen-related issues:

- Educate students on digital wellness and ethical ICT usage through structured modules and awareness campaigns.
- Establish guidelines for screen time, digital conduct, and healthy online study routines.

Conclusion

In the context of NEP-2020, ICT emerges not merely as a tool for content delivery but as a strategic catalyst for reshaping how students adjust to their educational environments and manage their study behaviours. The success of this transformation hinges upon the equitable distribution of digital resources, capacity building of stakeholders, and the creation of emotionally and socially inclusive learning ecosystems. As NEP-2020 is progressively implemented, continued research and policy refinement will be critical to ensuring that ICT integration leads to sustainable, adaptive, and student-centered education across India.S

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Online Resources-

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