

Reimagining Motivation in the Digital Age: New Perspectives on Human Drive and Achievement

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Abstract. *The motivation is being reshaped in the digital age, where technology influences the ways individuals think, work, learn, and pursue achievement. Traditional theories of motivation focused on needs, rewards, goals, and self-determination, but contemporary digital environments introduce new dynamics such as constant connectivity, social media validation, gamification, algorithmic influence, and virtual collaboration. These factors both enhance and complicate human drive by creating new opportunities for engagement, creativity, and self-expression, while also increasing distraction, comparison, anxiety, and dependence on external approval. The study reimagines motivation as a fluid and context-dependent process shaped by digital culture, technological systems, and changing human aspirations. It argues that achievement in the digital era must be understood not only through productivity and success but also through well-being, meaning, adaptability, and ethical use of technology. Thus, motivation today demands a broader, more human-centered perspective in rapidly evolving social and technological contexts.*

Key words: *Digital motivation, Human drive, Achievement, Technology, Self-determination.*

1. Introduction

Motivation has always been central to human life because it gives direction to desire, energy to effort, and meaning to achievement. It is more than a simple wish to succeed; rather, it is the psychological force that helps individuals choose goals, sustain action, respond to failure, and continue moving toward growth. In this sense, motivation shapes everyday life at a deeply personal level, influences academic engagement and learning, and plays a decisive role in professional commitment and performance (Bandura, 1977; Dweck, 1986; Eccles & Wigfield, 2002). However, the meaning and experience of motivation are no longer confined to traditional social settings. In the digital age, human aspiration is increasingly shaped by smartphones, social media, online learning platforms, digital workplaces, and algorithm-driven environments that constantly guide attention, reward behavior, and redefine standards of success (Peters et al., 2018; Ryan & Deci, 2020). These technological conditions have transformed motivation into a more complex and fluid process in which autonomy, competence, recognition, comparison, and visibility operate simultaneously. Digital tools can widen opportunity, creativity, connection, and self-expression, yet they can also produce distraction, compulsive habits, emotional dependency, and pressure for continuous performance (Anderson & Wood, 2023; Ansari et al., 2024; Ryan et al., 2006). Therefore, motivation in contemporary society must be reimagined not only as an internal drive or an external reward system, but as a dynamic interaction between the individual and the digital environment. The rationale of this paper lies in understanding this transformation and its implications for human achievement. Accordingly, the paper seeks to examine the meaning and importance of motivation in personal, academic, and professional life, to explore the

changing nature of motivation in the digital era, and to analyze how technology influences behavior, aspiration, and performance. Its scope is conceptual and interdisciplinary, covering foundational theories of motivation alongside recent digital-age perspectives.

2. Conceptual Understanding of Motivation

2.1 Definition and meaning of motivation

Motivation may be understood as the inner and outer force that moves a person toward action, gives direction to behavior, and sustains effort over time. In psychology, motivation is not simply about desire; it is about why a person begins an activity, how intensely that activity is pursued, and how long the person continues despite difficulty. In this sense, motivation connects thought, emotion, purpose, and behavior. Eccles and Wigfield (2002) show that motivation is closely tied to beliefs, values, and goals, while Ryan and Deci (2000, 2020) explain that motivation ranges from deeply self-endorsed engagement to behavior controlled by outside demands. Thus, motivation is best seen as the process that turns intention into action and potential into performance. In everyday life, it is the difference between merely wanting success and persistently working toward it.

A humanized understanding of motivation also reminds us that people are not machines responding automatically to reward. They are meaning-making beings. What motivates one person may leave another untouched because motivation is shaped by personal interest, lived experience, social expectation, and perceived purpose. A student may study hard for marks, but another may study because learning itself feels meaningful. A professional may work for salary, while also being driven by mastery, recognition, or a sense of contribution. Therefore, motivation is not a single force; it is a layered condition of human striving in which needs, values, identity, and context all play a role (Maslow, 1970; Ryan & Deci, 2020).

2.2 Intrinsic and extrinsic motivation

One of the most influential distinctions in motivation research is between intrinsic and extrinsic motivation. Intrinsic motivation refers to engaging in an activity because it is interesting, enjoyable, or personally satisfying. A learner who reads out of curiosity, an artist who paints for pleasure, or a researcher who works out of intellectual excitement demonstrates intrinsic motivation. Extrinsic motivation, by contrast, refers to doing something for an external outcome such as reward, approval, status, grades, money, or avoidance of punishment. Ryan and Deci (2000, 2020) argue that this distinction is central because the quality of motivation matters as much as its quantity. People may be equally active under both forms of motivation, but the psychological experience and long-term consequences are often different.

Classic studies showed that rewards can sometimes weaken intrinsic interest when individuals begin to feel controlled rather than self-directed. Deci (1971) found that externally mediated rewards could reduce intrinsic motivation under certain conditions, and Lepper et al. (1973) demonstrated how expected rewards could undermine children's spontaneous interest in an activity. At the same time, later self-determination theory clarified that not all extrinsic motivation is shallow or harmful. Some external motives become internalized when people accept them as personally meaningful. Howard et al. (2021), in a large meta-analysis, further showed that intrinsic motivation and identified regulation are strongly associated with better student adjustment and persistence, whereas more controlled forms of motivation are less beneficial for well-being. This means that the real educational and social challenge is not simply to replace extrinsic motivation with intrinsic motivation, but to transform external demands into personally valued commitments.

2.3 Human drive, ambition, and achievement

Human drive, ambition, and achievement are closely connected to motivation because they express how individuals imagine a better version of themselves and strive toward it. Maslow (1970) linked human striving to a hierarchy of needs, suggesting that people move from basic survival concerns toward higher needs such as esteem, growth, and self-actualization. McClelland (1987) similarly emphasized learned motives such as the need for achievement, affiliation, and power, arguing that achievement-oriented people are often energized by challenge, responsibility, and standards of

excellence. These perspectives help explain why ambition is not merely greed or competition; it can also be a disciplined desire to develop one's capacities and accomplish meaningful goals.

Achievement, however, is not produced by ambition alone. It also depends on how individuals interpret their own ability, effort, setbacks, and future chances. Bandura (1977) showed that self-efficacy, or belief in one's capability to act successfully, strongly influences whether effort begins and whether it continues under pressure. Weiner (1985) demonstrated that people's explanations for success and failure matter deeply: those who attribute outcomes to controllable factors such as effort are often more resilient than those who see failure as fixed inability. Dweck (2006) later popularized this insight by showing how a growth-oriented view of ability supports persistence and openness to learning. In this way, human drive is not only emotional energy; it is also cognitive interpretation. Ambition becomes productive when individuals believe improvement is possible, effort has value, and setbacks are part of development rather than evidence of permanent inadequacy.

2.4 Motivation as a psychological and social process

Motivation is often described as a psychological process, and rightly so, because it involves needs, cognition, emotion, expectancy, interest, value, and self-regulation. Yet it is equally a social process. People do not develop motives in isolation. They are shaped by families, peers, teachers, institutions, workplaces, cultures, and now digital communities. Deci and Ryan (1985) and Ryan and Deci (2020) make this clear by arguing that autonomy, competence, and relatedness are basic psychological needs that grow or weaken depending on social conditions. Motivation flourishes when people feel capable, connected, and respected as agents; it declines when they feel controlled, excluded, or helpless. Eccles and Wigfield (2002) also show that motivational beliefs and values are socially formed through developmental and educational experiences.

This social dimension becomes even clearer when we consider goal pursuit in real life. Fishbach et al. (2016) explain that motivation is coordinated with others: people pursue personal goals in response to comparison, collaboration, approval, and shared purpose. In contemporary classrooms, for example, teacher support has been shown to shape students' intrinsic motivation and sense of competence in technology-rich environments, including AI-supported learning (Chiu et al., 2024). Motivation, then, is never purely "inside" the person. It is produced in the interaction between the self and the surrounding world. A learner becomes more motivated not only because of an inner wish to succeed but because someone believed in them, a task felt worthwhile, a group offered belonging, or a context made success feel possible. That is why motivation should be understood as both personal energy and relational experience.

2.5 Traditional understanding of motivation versus digital-age motivation

Traditionally, motivation was often understood through relatively stable categories: drives, needs, rewards, goals, achievement expectations, and reinforcement. Much of twentieth-century theory focused on what happens inside the person or between the person and immediate social surroundings such as family, classroom, or workplace. While these frameworks remain valuable, digital-era learning and living have complicated the picture. Research on online learning shows that motivation in digital environments is highly situational, shaped by course design, perceived support, autonomy, competence, interaction, and the learner's ability to regulate attention and persistence (Chen & Jang, 2010; Hartnett et al., 2011; Hartnett, 2016). In other words, digital motivation cannot be understood simply as an internal trait. It is deeply affected by the architecture of the environment itself.

In the digital age, motivation is increasingly mediated by immediacy, visibility, personalization, and algorithmic feedback. Gamified systems can boost interest and participation when designed thoughtfully, but they can also reduce motivation to point-scoring if they rely too heavily on external stimulation (Jaramillo-Mediavilla et al., 2024). AI-supported learning environments may enhance autonomy, competence, and self-regulated learning when they are designed in needs-supportive ways (Xia et al., 2022; Chiu, 2024; Wang et al., 2024). At the same time, broader digital culture can fragment attention, intensify comparison, and create cycles of novelty-seeking and compulsive engagement, as recent reviews of digital technology and cognition suggest (Shanmugasundaram &

Tamilarasu, 2023). Thus, digital-age motivation is more fluid, more interactive, and more vulnerable to design than traditional theories once assumed.

The key difference, therefore, is not that old theories have become useless, but that motivation today must be reimagined as a dynamic relationship among human needs, social structures, and digital systems. Traditional theories asked what drives a person. Digital-age motivation asks an additional question: what kinds of environments are constantly shaping, capturing, supporting, or exhausting that drive? A contemporary understanding of motivation must therefore preserve the depth of classical psychological theory while also recognizing the power of platforms, AI tools, social media, and interactive learning systems to influence attention, identity, aspiration, and achievement. In the digital age, motivation is still human at its core, but it is increasingly negotiated within technological ecologies that can either deepen purpose or distract from it.

3. Classical Theories of Motivation

3.1 Maslow's Hierarchy of Needs

Maslow's hierarchy of needs remains one of the most recognizable approaches to motivation because it begins with a simple human truth: people are not equally ready for achievement at every moment. When basic needs such as security, stability, and belonging remain unsettled, higher aspirations such as esteem and self-actualization often become harder to pursue with consistency. In this sense, Maslow reminds us that motivation is never purely about ambition; it is also about whether a person feels safe enough, valued enough, and supported enough to invest energy in growth (Maslow, 1970).

In the digital age, Maslow's insight still feels deeply relevant. A student in an online course may have the intellectual ability to succeed, yet low motivation can emerge from isolation, weak interaction, or lack of meaningful support. Likewise, an employee in a hybrid or digitally managed workplace may struggle to aim for excellence if flexibility, trust, belonging, and psychological security are missing. Digital tools can expand opportunity, but they do not eliminate human needs; in many cases, they simply relocate those needs into virtual classrooms, online communities, and hybrid work systems (Bloom et al., 2024; Guaña-Moya et al., 2024; Ryan & Deci, 2020).

At the same time, Maslow's theory has important limitations. Research reviews have long questioned whether needs unfold in a rigid, universal sequence for all people. In real life, individuals often pursue belonging, esteem, security, and self-development at the same time, and their priorities shift across context, culture, and life stage. For this reason, Maslow's hierarchy is best treated as a broad interpretive framework rather than a precise scientific ladder of motivation (Wahba & Bridwell, 1976; Latham & Pinder, 2005).

3.2 Herzberg's Two-Factor Theory

Herzberg's Two-Factor Theory distinguishes between hygiene factors and motivators. Hygiene factors, such as working conditions, policies, pay, and security, do not necessarily create enthusiasm, but their absence causes dissatisfaction. Motivators, by contrast, such as achievement, recognition, responsibility, growth, and meaningful work, generate deeper satisfaction and stronger internal commitment. Herzberg's core contribution is the reminder that removing frustration is not the same as creating inspiration (Herzberg, 1976).

This distinction becomes especially meaningful in digital environments. In a remote or platform-based setting, hygiene factors may include reliable technology, fair workload distribution, reasonable digital monitoring, data privacy, and clarity of expectations. These conditions help people function without irritation or anxiety. Yet genuine motivation usually comes from something richer: trust, autonomy, recognition, growth opportunities, and a sense that one's work matters. Hybrid work research, for example, suggests that flexibility can improve satisfaction and retention, but sustainable motivation still depends on how work is designed and experienced by human beings (Bloom et al., 2024; Cui et al., 2024).

Herzberg's theory is valuable, but it has also been criticized for oversimplifying the relationship between satisfaction and dissatisfaction. Later evaluations argued that the evidence for a clean

separation between hygiene factors and motivators was weaker than often assumed. In the digital era, the line becomes even blurrier: a factor like flexibility, feedback, or algorithmic support can act as a hygiene factor in one context and a motivator in another. This makes Herzberg highly useful for reflection and organizational diagnosis, but less reliable as a universal rule (King, 1970; Zayid et al., 2024).

3.3 McClelland's Need Theory

McClelland's Need Theory takes a more individualized view of motivation by focusing on three learned needs: achievement, affiliation, and power. According to this perspective, people differ not simply in how much motivation they have, but in what kind of motivational pattern drives them most strongly. Some are energized by challenge, mastery, and accomplishment; others are drawn by belonging, cooperation, and warm relationships; still others are motivated by influence, leadership, and impact (McClelland, 1987).

This theory feels especially modern because digital life makes these needs highly visible. A high-achievement person may thrive on rapid feedback, visible progress, or challenging online goals. A high-affiliation person may be most energized by collaborative communities, peer interaction, and social connection. A high-power individual may be motivated by leadership visibility, influence over networks, or strategic control in organizations. McClelland helps us see that motivation is not one-size-fits-all; people do not only need energy, they need the right channel for that energy (McClelland, 1987; Latham & Pinder, 2005).

Still, McClelland's model also has limits. It explains differences in personal motive patterns, but it says less about structural inequalities, technological constraints, emotional exhaustion, or the broader systems that shape modern motivation. In digitally managed contexts, personal needs matter greatly, but so do algorithmic rules, platform design, surveillance, and access to meaningful human support. Thus, the theory remains insightful for understanding individual differences, yet incomplete when used alone to explain motivation in technologically dense environments (Latham & Pinder, 2005; Cui et al., 2024; Zayid et al., 2024).

3.4 Self-Determination Theory

Self-Determination Theory (SDT) is one of the strongest bridges between classical motivation theory and contemporary life. Deci and Ryan argued that human beings are most deeply motivated when three psychological needs are supported: autonomy, competence, and relatedness. People are more likely to sustain effort when they feel choice in their actions, confidence in their abilities, and connection with others (Deci & Ryan, 1985, 2000; Ryan & Deci, 2020).

What makes SDT especially powerful in the digital age is that it explains why some technologies energize people while others drain them. Interactive learning tools, gamified environments, and adaptive platforms can increase motivation when they support mastery, meaningful participation, and social connection. But the same digital systems can become demotivating when they feel controlling, overly monitored, or emotionally empty. In other words, technology does not automatically motivate; it motivates only when it supports human psychological needs rather than suppressing them (Gagné & Deci, 2005; Jaramillo-Mediavilla et al., 2024; Guña-Moya et al., 2024; Ryan & Deci, 2020).

SDT is often more adaptable than earlier theories in explaining motivation in online learning, hybrid work, and AI-supported systems. Yet even SDT must be applied carefully. A platform may appear autonomy-supportive while quietly narrowing choice through algorithmic nudges, or it may provide feedback without fostering belonging. The theory remains highly relevant, but its practical use depends on whether institutions genuinely design for human flourishing rather than mere compliance (Ryan & Deci, 2020; Zayid et al., 2024; Cui et al., 2024).

3.5 Expectancy Theory

Expectancy Theory explains motivation as a matter of judgment and belief. People are motivated when they believe that effort will lead to performance, performance will lead to outcomes, and those outcomes are valuable. This makes motivation less mysterious and more cognitive: individuals ask

themselves whether trying is worth it, whether success is realistically possible, and whether the reward has personal meaning (Van Eerde & Thierry, 1996).

This theory is highly relevant in digital systems because online platforms constantly signal expectations, performance, and rewards. Dashboards, analytics, badges, ratings, and algorithmic feedback can strengthen motivation when they make progress transparent and fair. But they can also weaken motivation when performance criteria feel opaque, arbitrary, or beyond the person's control. In digitally managed workplaces, reduced autonomy, constant monitoring, and perceived threat can undermine the belief that effort will be fairly recognized, which is exactly the kind of breakdown Expectancy Theory helps explain (Van Eerde & Thierry, 1996; Zayid et al., 2024).

The limitation of Expectancy Theory is that it can sometimes make motivation appear too rational and calculation-based. Human beings do not always act after careful mental equations; they are also influenced by identity, emotion, fatigue, relationships, and meaning. In the digital era, this limitation becomes clearer because people may disengage not only because rewards are unclear, but because they feel isolated, overexposed, creatively restricted, or psychologically depleted. Thus, the theory remains analytically strong, but not emotionally complete (Latham & Pinder, 2005; Brucks & Levav, 2022).

3.6 Goal-Setting Theory

Goal-Setting Theory argues that specific and challenging goals, when accepted and supported by feedback, improve performance more effectively than vague intentions. Locke and Latham showed that clear goals direct attention, increase effort, support persistence, and encourage strategy development. The theory remains one of the most empirically influential frameworks in motivation research because it translates motivation into purposeful action (Locke & Latham, 2002).

In the digital age, goal-setting has become almost inseparable from daily life. Learning platforms track milestones, fitness apps count streaks, project tools measure progress, and organizations use dashboards to monitor targets in real time. These systems can strengthen motivation because they make goals visible, immediate, and measurable. They can also support persistence by offering rapid feedback and progress cues. Research on online learning and gamification suggests that well-designed digital tools can improve motivation and engagement when they are paired with meaningful participation rather than empty point-scoring (Jaramillo-Mediavilla et al., 2024; Guaña-Moya et al., 2024; Locke & Latham, 2002).

Yet Goal-Setting Theory also has limits, particularly in highly creative or collaborative contexts. Overemphasis on measurable targets can narrow attention, encourage short-term performance, and reduce openness to exploration. In digital communication environments, creativity itself may suffer under certain conditions; for example, videoconferencing has been shown to inhibit idea generation relative to in-person interaction. This suggests that motivation in the digital age must balance goals with cognitive space, reflection, and human interaction (Brucks & Levav, 2022; Locke & Latham, 2002).

3.7 Relevance and Limitations of Classical Theories in the Digital Era

Classical theories of motivation remain highly relevant because the basic questions they ask are still the right ones. People still need security and belonging, still seek recognition and growth, still differ in personal motive patterns, still respond to autonomy and competence, still weigh effort against outcomes, and still benefit from meaningful goals. In that sense, the digital age has not replaced classical motivation theory; it has made its core concerns more visible across new settings such as online education, hybrid work, platform labor, and AI-mediated management (Latham & Pinder, 2005; Ryan & Deci, 2020).

The digital era also exposes the limitations of these classical models. Many were developed before algorithmic management, constant connectivity, gamified interfaces, hybrid work, and large-scale virtual collaboration. As a result, they often understate issues such as surveillance, digital fatigue, social isolation, opaque evaluation, unequal access, and the tension between efficiency and humanity. Recent research shows both sides clearly: hybrid flexibility can improve satisfaction and retention,

interactive technologies can raise motivation, but algorithmic control and virtual communication can also undermine well-being, autonomy, and creativity (Bloom et al., 2024; Brucks & Levav, 2022; Cui et al., 2024; Guña-Moya et al., 2024; Zayid et al., 2024).

Therefore, the best contemporary approach is not to discard classical theories, but to reinterpret them in a more human-centered and digitally informed way. Classical theories still offer a valuable foundation, but they work best when combined with an understanding of design, technology, context, emotion, and human dignity. Motivation in the digital age is no longer just about what drives performance; it is about how people remain purposeful, connected, and psychologically alive in increasingly mediated environments (Ryan & Deci, 2020; Cui et al., 2024; Latham & Pinder, 2005).

4. The Digital Age and Human Life

4.1 Meaning and features of the digital age

The digital age refers to a historical period in which daily life is increasingly shaped by internet connectivity, data flows, digital platforms, and networked communication. Its major features include speed, constant access to information, real-time interaction, algorithmic mediation, portability through mobile devices, and the blending of online and offline experience. In this age, human activity is not only assisted by technology; it is organized, recorded, and interpreted through digital systems that influence how people work, learn, communicate, and even imagine themselves in society (Castells, 2000; Greenhow et al., 2009).

4.2 Growth of internet, smartphones, and social media

The spread of the internet, mobile services, and social media has transformed digital technology from a specialized tool into an everyday necessity. Global connectivity has expanded to billions of people, and mobile internet has become a primary gateway through which many users access education, news, entertainment, and social interaction. Social networking sites, once novel, are now embedded in ordinary routines, shaping how people build relationships, consume information, and participate in public and private life (ITU, 2024; GSMA, 2024; boyd & Ellison, 2007).

4.3 Digital communication and virtual interaction

Digital communication has altered the form and rhythm of human interaction. E-mails, instant messages, video calls, livestreams, and social media posts allow people to communicate across distance with great speed and convenience. At the same time, virtual interaction often reduces many of the embodied cues present in face-to-face conversation, such as tone, pauses, gesture, and shared physical presence. As a result, digital communication can increase reach and connectivity while also producing emotional ambiguity, performative expression, and a feeling of being connected without always feeling deeply understood (boyd, 2014; Turkle, 2011).

4.4 Transformation of work, education, and lifestyle

The digital age has reshaped work, education, and everyday living by making flexibility and connectivity central to modern life. Work has become more platform-based, mobile, remote, and skill-driven; education has expanded through online platforms, blended learning, and digital resources; and lifestyle habits increasingly involve streaming, online shopping, app-based services, and screen-mediated routines. These changes have widened access and convenience, but they have also blurred the boundaries between work and rest, study and leisure, public life and private time (OECD, 2023; Global Education Monitoring Report Team, 2023; Greenhow et al., 2009).

4.5 Rise of digital identities and online presence

In digital environments, identity is no longer expressed only through direct social interaction; it is also constructed through profiles, posts, images, comments, and traces of activity. Individuals now maintain online presences that can be curated, measured, and interpreted by others. This has made identity more visible, searchable, and continuously editable. The online self often becomes a project of presentation, where belonging, self-expression, and reputation are negotiated through platform norms and audience feedback (Nadkarni & Hofmann, 2012; boyd, 2014; Turkle, 2011).

4.6 Opportunities and challenges created by digital environments

Digital environments create significant opportunities for learning, creativity, collaboration, access to knowledge, and participation in wider communities. They can amplify voice, support marginalized learners, and make information more widely available than ever before. Yet these same environments also generate serious challenges, including distraction, surveillance, misinformation, cyberbullying, emotional overload, and unequal access to devices, connectivity, and digital skills. Thus, the digital age is best understood not as purely liberating or harmful, but as a complex condition that expands human possibility while also introducing new forms of pressure and inequality (Global Education Monitoring Report Team, 2023; van Dijk, 2020; Sala et al., 2024).

5. Reimagining Motivation in the Digital Age

5.1 Shift from survival-based motivation to identity-based motivation

In earlier social settings, motivation was often tied more visibly to security, livelihood, status, and institutional advancement. In the digital age, these needs still matter, but motivation is increasingly connected with identity, self-expression, belonging, and personal meaning. People are often driven not only by the desire to survive or succeed materially, but also by the wish to be seen, recognized, and aligned with a valued sense of self. Identity-based motivation helps explain why digital behavior is often tied to who people believe they are, or want to become, in the eyes of themselves and others (Oyserman, 2009; Deci & Ryan, 2000; Ryan & Deci, 2000).

5.2 Rise of instant gratification and short attention cycles

Digital platforms frequently reward immediacy. Notifications, autoplay, scrolling feeds, and fast feedback loops can encourage users to seek rapid stimulation rather than sustained effort. This does not mean digital media automatically destroy attention, but it does mean that many digital environments are designed around quick response, novelty, and frequent interruption. As a result, motivation may become more fragmented, with people finding it harder to tolerate delay, boredom, or long periods of concentrated effort without external stimulation (Wilmer et al., 2017; Twenge, 2019; da Silva Pinho et al., 2024).

5.3 Motivation shaped by visibility, recognition, and online validation

In networked spaces, motivation is often shaped by measurable signs of social approval, such as likes, comments, shares, views, and followers. These visible metrics can turn recognition into a motivational currency. People may feel encouraged to create, perform, and participate because feedback is immediate and public. At the same time, when approval becomes central, motivation may shift from internally valued goals toward external validation. In this sense, digital environments can intensify the motivational power of being noticed, endorsed, or ignored (Sherman et al., 2016; Nesi & Prinstein, 2015; da Silva Pinho et al., 2024).

5.4 Digital platforms as sources of encouragement and distraction

Digital platforms are motivationally double-edged. They can inspire people through tutorials, communities, mentorship, peer support, and access to information that was once hard to obtain. They can also divide attention through alerts, comparison triggers, entertainment loops, and constant switching between tasks. Thus, the same platform that helps a learner discover a new skill may also weaken persistence through interruption and overload. Motivation in the digital age is therefore not located only inside the individual; it is also shaped by the design and demands of the platform environment (Ellison et al., 2007; Greenhow et al., 2009; Wilmer et al., 2017).

5.5 Achievement linked with innovation, adaptability, and digital competence

Achievement today is increasingly associated with the ability to adapt, learn continuously, solve problems in digital environments, and use technology critically and creatively. Digital competence now includes more than technical skill; it involves communication, information evaluation, content creation, collaboration, and strategic problem-solving. For this reason, motivation in the digital age is often tied to adaptability itself: the capacity to update one's skills, work across platforms, and

remain relevant in changing environments. Success increasingly belongs to those who can learn, unlearn, and relearn in digitally mediated contexts (Ferrari, 2013; van Laar et al., 2017; OECD, 2023).

5.6 New meaning of success in a connected world

In a connected world, success is no longer defined only by stable occupation, formal rank, or material possession. It is also associated with visibility, creativity, reach, influence, flexibility, personal voice, and the ability to build a meaningful digital presence. For many, achievement now includes being discoverable, building communities, sharing expertise, and managing a public identity. This redefinition does not erase traditional ambitions, but it broadens them. The meaning of success has become more networked, performative, and identity-centered than in many earlier social contexts (Castells, 2000; Duffy & Hund, 2015; Duffy & Wissinger, 2017).

6. Digital Media and the Transformation of Human Drive

6.1 Role of social media in shaping aspiration

Social media powerfully shapes aspiration by exposing users to lifestyles, careers, bodies, talents, and achievements that become models for imitation or competition. Individuals no longer compare themselves only with people in their immediate environment; they compare themselves with vast networks of peers, influencers, creators, and professionals. This broad exposure can expand ambition by making new possibilities visible, but it can also create restless striving by turning aspiration into continuous observation of others' curated accomplishments (boyd, 2014; Duffy & Hund, 2015; Sala et al., 2024).

6.2 Influence of likes, shares, comments, and followers on motivation

Likes, shares, comments, and follower counts function as quantified social signals. Because they are visible and immediate, they can shape what people post, how often they post, and how they evaluate their own worth or performance. These signals can motivate creativity, persistence, and engagement, especially when people feel supported. However, they can also narrow motivation by making behavior overly dependent on audience response. The desire for social endorsement may gradually become more important than the intrinsic value of the activity itself (Sherman et al., 2016; da Silva Pinho et al., 2024).

6.3 Comparison culture and competitive self-presentation

Digital media intensify social comparison because users often encounter highly selective and polished versions of other people's lives. This encourages competitive self-presentation, where individuals feel pressure to appear happy, productive, attractive, or successful. Upward comparison can sometimes inspire effort, but it can also produce dissatisfaction, anxiety, and reduced self-esteem when people measure themselves against unrealistic standards. Human drive, in such settings, becomes entangled with impression management and the fear of falling behind in public view (Verduyn et al., 2020; de Vries et al., 2018; Nesi & Prinstein, 2015).

6.4 Personal branding and self-promotion as motivational forces

Digital culture has normalized the idea that individuals should market themselves as recognizable brands. Students, professionals, artists, and creators are encouraged to package their personality, achievements, and style into a coherent online identity. This can motivate disciplined self-development, communication skill, and entrepreneurial energy. Yet it can also turn selfhood into a project of continuous promotion, where value is measured by visibility, consistency, and audience growth. Motivation then becomes closely tied to self-brand maintenance rather than only to inward conviction or social contribution (Duffy & Hund, 2015; Duffy & Wissinger, 2017; Nadkarni & Hofmann, 2012).

6.5 Digital storytelling and inspiration through online communities

Not all digital motivation is driven by competition. Online communities can also motivate through storytelling, solidarity, and shared purpose. Participatory digital culture allows people to learn by observing others' journeys, exchanging resources, and narrating struggles and achievements in

relatable ways. This can be especially powerful for learners or creators who may not have such support in their immediate environment. When people feel that their voice matters and that they belong to a responsive community, motivation becomes more relational, collaborative, and sustainable (Jenkins, 2006; Ellison et al., 2007; Greenhow et al., 2009).

6.6 Emotional effects of constant connectivity on human drive

Constant connectivity affects motivation emotionally as well as cognitively. Being always available, always reachable, and always exposed to updates can create pressure, fatigue, and a sense that one must never stop performing or responding. At the same time, digital connection can reduce loneliness and support belonging in meaningful ways. The emotional impact is therefore mixed, but one clear change is that human drive is now frequently negotiated under conditions of uninterrupted stimulation, social evaluation, and platform dependence. This can energize action, but it can also weaken reflection, rest, and emotional balance (Turkle, 2011; Valkenburg et al., 2022; Crone & Konijn, 2018).

7. Motivation in Digital Learning Environments

7.1 Online education and learner motivation

Online education makes motivation especially important because learners often work with greater independence and fewer immediate social structures than in face-to-face classrooms. Without physical routines, direct monitoring, and continuous classroom energy, learners must sustain engagement through self-regulation, purpose, and perceived relevance. Research on online learning shows that motivation depends not only on learner traits but also on course design, feedback, interaction, and the extent to which the environment supports autonomy, competence, and relatedness (Hartnett et al., 2011; Hartnett, 2016; Chen & Jang, 2010).

7.2 Self-paced learning and autonomy

One major strength of digital learning is that it can support self-paced study, giving learners greater control over time, sequence, and repetition. This can strengthen motivation because autonomy is a central condition of self-determined engagement. However, self-paced learning does not automatically motivate everyone. It is most effective when learners also feel competent, supported, and connected to meaningful goals. Without these supports, flexibility can easily become delay, confusion, or disengagement (Ryan & Deci, 2000; Chen & Jang, 2010; Hsu et al., 2019).

7.3 Role of gamification in academic engagement

Gamification has become an important strategy in digital learning because it introduces challenge, progression, immediate feedback, and visible goals into educational tasks. When used thoughtfully, it can increase participation and make learning activities feel more engaging and goal-oriented. Yet the value of gamification lies not simply in adding game elements, but in aligning those elements with meaningful learning outcomes. Gamification works best when it supports curiosity, mastery, and active involvement rather than mere point collection (Hamari et al., 2014).

7.4 Use of digital rewards, badges, and leaderboards

Badges and leaderboards can motivate some learners by making progress visible and rewarding achievement. They may create momentum, recognition, and a sense of competition or accomplishment. At the same time, their effects are not universally positive. Some studies show that students view them favorably, while evidence on performance gains is mixed and highly dependent on design. If overused, these tools may shift attention from learning itself to ranking and external reward. Thus, digital rewards should be used carefully and pedagogically, not mechanically (Balci et al., 2022; Li et al., 2024).

7.5 Motivation through interactive content and multimedia learning

Interactive content, video, animation, simulation, and multimedia can make learning more vivid and mentally engaging when they are well designed. Such materials can sustain attention, clarify difficult ideas, and support different modes of understanding. Digital learning becomes more motivating when

learners can see, hear, manipulate, and apply information rather than passively receive it. However, interactivity must serve cognition, not overwhelm it. Multimedia is most effective when it is purposeful, coherent, and connected to active learning rather than sensory excess (Mayer, 2009; Greenhow et al., 2009).

7.6 Challenges of distraction, burnout, and reduced concentration

Digital learning environments also introduce motivational obstacles. Learners may study in spaces filled with notifications, multiple tabs, entertainment temptations, and little external accountability. Prolonged screen exposure and constant multitasking can contribute to fatigue and reduced concentration, while the isolation of online learning may weaken persistence for some students. In this context, burnout is not simply a personal weakness; it often reflects the cognitive and emotional demands of learning within digitally saturated environments that require continuous self-management (Wilmer et al., 2017; Twenge, 2019; Hartnett, 2016).

7.7 Digital divide and unequal motivational opportunities

Motivation in digital learning cannot be separated from inequality. Learners who have reliable internet, supportive homes, updated devices, and strong digital skills enter online education with major advantages. Those without such resources may struggle not because they lack ability or desire, but because the environment itself makes participation difficult. The digital divide therefore affects not only access, but also confidence, continuity, and the willingness to remain engaged. Equal motivational opportunity in the digital age requires both technological access and the social conditions needed to use technology meaningfully (van Dijk, 2020; Global Education Monitoring Report Team, 2023; ITU, 2024; GSMA, 2024).

8. Motivation in the Digital Workplace

8.1 Transformation of work culture through technology

In the digital age, work is no longer confined to a fixed office, a fixed schedule, or even a fixed role. Digital platforms, dashboards, cloud systems, and communication apps have reshaped workplace culture into something faster, more fluid, and more visible. As a result, motivation is influenced not only by salary or supervision, but also by interface design, data feedback, speed of response, and the feeling of being constantly connected to work processes (Leonardi et al., 2024; Mazmanian et al., 2013; Zuboff, 2019).

8.2 Remote work and flexible work arrangements

Remote work has changed the meaning of motivation by giving many workers greater flexibility, control over time, and freedom from daily commuting. At the same time, it has also blurred the boundary between professional and personal life, making self-discipline, self-regulation, and emotional balance much more important than before. In this sense, digital work offers freedom, but it also asks workers to become their own organizers, motivators, and boundary managers (Allen et al., 2015; Eurofound & International Labour Office, 2017; Leonardi et al., 2024).

8.3 Digital productivity tools and performance monitoring

Digital productivity tools can increase efficiency, coordination, and transparency, but they also change how workers experience motivation. When every click, response time, and output can be tracked, motivation may shift from meaningful engagement to constant performance display. In such environments, people may feel encouraged by feedback and measurable progress, yet they may also experience stress, pressure, and the sense that they are always being watched (Kalischko & Riedl, 2021; Kayas, 2023; Zayid et al., 2024).

8.4 Motivation through innovation, autonomy, and collaboration

The digital workplace can be highly motivating when it supports autonomy, creativity, and collaborative learning. Workers are often more energized when they feel trusted, when they can solve problems in new ways, and when they see their work contributing to a shared purpose. Research grounded in self-determination and engagement theory suggests that meaningful work, competence,

autonomy, and relatedness remain central even in technologically advanced work settings (Gagné & Deci, 2005; Kahn, 1990; Bakker, 2022; McAnally & Hagger, 2024).

8.5 Gig economy and entrepreneurial motivation

The gig economy has introduced a new motivational structure based on flexibility, independence, platform access, and self-branding. Many gig workers are motivated by autonomy and the chance to shape their own work lives, yet this independence often exists alongside uncertainty, fragmented identity, and income instability. In digital labour markets, motivation is therefore tied to both opportunity and precarity (Jabagi et al., 2019; Alvarez De La Vega et al., 2023).

8.6 Pressure of constant availability and digital fatigue

One of the deepest tensions of digital work is the pressure to remain reachable, responsive, and productive at all times. Constant notifications, after-hours communication, and the expectation of quick replies can gradually exhaust workers, creating technostress, fatigue, and emotional depletion. What looks like flexibility on the surface can become a hidden burden when recovery time disappears (Eurofound & International Labour Office, 2017; Mazmanian et al., 2013; Ragu-Nathan et al., 2008; Kalischko & Riedl, 2021).

8.7 Redefining achievement in virtual professional spaces

In virtual work environments, achievement is increasingly measured through visibility, responsiveness, platform reputation, and digital presence. Professional success is no longer judged only by long-term contribution or organizational loyalty; it is also assessed through online responsiveness, personal branding, and one's ability to remain relevant in networked spaces. This has redefined achievement as something more public, more measurable, and sometimes more performative than before (Leonardi et al., 2024; Zuboff, 2019; McAnally & Hagger, 2024).

9. Role of Technology in Enhancing Motivation

9.1 Artificial intelligence and personalized motivation

Artificial intelligence has opened new possibilities for personalized motivation by adapting content, pace, feedback, and support to individual needs. Instead of treating all learners or workers the same way, AI systems can create more tailored experiences that strengthen competence and sustained engagement. When used thoughtfully, AI can support motivation by helping people feel seen, guided, and appropriately challenged (Wang et al., 2024; Chiu, 2022).

9.2 Apps for goal-setting, habit tracking, and self-improvement

Goal-setting apps, habit trackers, and self-improvement tools make motivation more visible in everyday life. They allow users to monitor progress, build routines, receive reminders, and translate abstract goals into repeated action. Their motivational power is strongest when they support self-monitoring and meaningful choice rather than reducing the user to points, streaks, or external rewards alone (Ryan & Deci, 2000; Villalobos-Zúñiga & Cherubini, 2020; Zhu et al., 2024).

9.3 Digital mentoring and coaching platforms

Digital mentoring and coaching platforms have made guidance more accessible across distance, time, and social barriers. These platforms can nurture motivation by providing encouragement, role modelling, emotional support, and practical advice in ways that feel immediate and personal. In many contexts, online mentoring has expanded participation and opened pathways for those who might otherwise remain unsupported (Chen et al., 2020; Hennig et al., 2024; Lindsay et al., 2018).

9.4 Online communities as motivational support systems

Online communities often function as spaces of encouragement, belonging, and shared accountability. People stay motivated when they feel that others understand their struggles, celebrate their progress, and make their goals feel socially meaningful. In digital spaces, community can become a strong motivational resource, especially when it builds support rather than comparison or hostility (Rayland & Andrews, 2023; Oksanen et al., 2024).

9.5 Virtual learning and professional growth opportunities

Technology has greatly expanded opportunities for lifelong learning, reskilling, and professional development. Virtual courses, webinars, online certifications, and collaborative learning spaces give people new reasons to remain ambitious and future-oriented. Motivation grows when learning becomes flexible, relevant, and connected to real aspirations for work and self-development (Chiu, 2022; Wang et al., 2024; Syed et al., 2024).

9.6 Technology as an enabler of creativity and self-expression

Technology can also motivate by giving individuals tools to create, share, design, publish, and express themselves more easily than ever before. Digital media allows people to turn ideas into visible products, whether through writing, video, design, teaching, entrepreneurship, or collaborative content-making. This capacity for self-expression often strengthens intrinsic motivation because it links effort with identity, imagination, and personal meaning (Gulzar et al., 2022; Levin & Mamlok, 2021).

10. Psychological Dimensions of Motivation in the Digital Era

10.1 Attention economy and fragmented focus

In an information-rich world, attention becomes the scarce resource. Digital platforms compete relentlessly for human focus, which makes sustained concentration harder and encourages scattered engagement across multiple streams of input. Under such conditions, motivation can become shallow and unstable because the mind is constantly pulled outward rather than directed inward toward depth and continuity (Simon, 1971; Vedeckina & Borgonovi, 2021).

10.2 Dopamine-driven behavior and instant rewards

Digital platforms often rely on rapid feedback, novelty, and intermittent rewards, which can make motivation more reactive than reflective. Likes, alerts, streaks, and instant recognition encourage short motivational bursts that feel intense but are often difficult to sustain. Over time, individuals may begin to prefer stimulation over effortful growth, and immediacy over patience (Przybylski et al., 2013; Jabeen et al., 2023; Montag et al., 2024).

10.3 Anxiety, stress, and digital overload

Digital overload can create a persistent sense of cognitive pressure. When people are exposed to too much information, too many messages, and too many expectations of responsiveness, motivation can weaken under the weight of mental fatigue and anxiety. In such situations, the problem is not a lack of ambition, but a lack of mental space in which motivation can breathe and organize itself (Ragunathan et al., 2008; Kalischko & Riedl, 2021; Jabeen et al., 2023).

10.4 Fear of missing out and motivational instability

Fear of missing out makes people feel that somewhere else, something better is always happening. This feeling can destabilize motivation because attention is repeatedly pulled away from present goals toward imagined alternatives, opportunities, or social updates. Instead of commitment, the result is restless comparison and difficulty staying with one meaningful path (Przybylski et al., 2013; Jabeen et al., 2023).

10.5 Self-esteem and online comparison

In digital spaces, self-worth can become tied to visibility, approval, and comparison with carefully curated versions of other people's lives. When self-esteem becomes dependent on online response and upward comparison, motivation can turn anxious, defensive, or perfectionistic. People may continue striving, but the striving is often driven by insecurity rather than healthy growth (Martinez et al., 2024; Tian et al., 2024).

10.6 Mental resilience and emotional regulation in digital spaces

The digital era makes emotional resilience an essential part of motivation. To remain purpose-driven, individuals must learn how to manage distraction, regulate emotional reactions, recover from

comparison, and resist the pressure of permanent exposure. In this sense, strong motivation today depends not only on desire or discipline, but also on the ability to protect one's psychological balance (Ryan & Deci, 2000; McAnally & Hagger, 2024; Rayland & Andrews, 2023).

10.7 Balance between digital stimulation and inner purpose

Digital stimulation can energize action, but it cannot fully replace inner purpose. Sustainable motivation emerges when external tools are aligned with deeper values, personal meaning, and self-chosen direction. Without that inner anchor, digital motivation becomes highly active but emotionally hollow (Deci & Ryan, 2000; Ryan & Deci, 2000; Simon, 1971).

11. Social and Cultural Dimensions of Digital Motivation

11.1 Influence of digital culture on values and goals

Digital culture shapes not only what people do, but also what they come to value. It influences ideas about speed, visibility, success, relevance, and self-presentation, often encouraging individuals to see life as something to be optimized, displayed, and continuously updated. Motivation in the digital age therefore develops within a cultural environment that prizes connection, novelty, and constant movement (Levin & Mamlok, 2021).

11.2 Consumerism, aspiration, and lifestyle motivation

Online platforms constantly expose individuals to idealized lifestyles, products, and aspirational identities. This can generate motivation in the form of consumption-driven desire, where achievement becomes associated with appearance, ownership, influence, and symbolic status. As a result, human drive may become increasingly entangled with market culture and digitally amplified aspiration (Engel et al., 2024; Jabeen et al., 2023; Zuboff, 2019).

11.3 Role of peer networks and online communities

Peer networks remain powerful sources of motivation, but digital media has expanded their reach and intensity. Online communities can inspire participation, persistence, and learning by making people feel recognized and connected, yet they can also magnify judgment and exclusion. Thus, social motivation in digital culture is both strengthened and made more emotionally complex (Oksanen et al., 2024; Rayland & Andrews, 2023; Gulzar et al., 2022).

11.4 Globalization of dreams and ambitions through digital exposure

Digital exposure allows young people and adults alike to imagine futures beyond their immediate environment. It globalizes aspiration by showing new careers, identities, lifestyles, and opportunities that were once inaccessible or invisible. This broadening of possibility can be highly motivating, especially in education and entrepreneurship, though it may also create unrealistic expectations if social context is ignored (Levin & Mamlok, 2021; Engel et al., 2024; Syed et al., 2024).

11.5 Changing meaning of recognition, prestige, and success

Recognition in digital society has become more immediate, public, and quantifiable. Prestige is often signaled through followers, engagement, ratings, influence, and algorithmic visibility rather than through slower forms of social respect or institutional acknowledgment. Consequently, success is increasingly experienced as something that must be seen and validated in public digital space (Zuboff, 2019; Oksanen et al., 2024).

11.6 Cultural differences in digital motivational patterns

Although digital platforms are global, motivation remains culturally shaped. The importance attached to visibility, autonomy, collective belonging, risk-taking, or public self-expression differs across educational, social, and national contexts. It is therefore reasonable to infer that digital motivation follows shared technological patterns, but not identical cultural meanings everywhere (Levin & Mamlok, 2021; Oksanen et al., 2024).

12. Youth Motivation in the Digital Age

12.1 Digital natives and changing expectations

Today's youth have grown up in environments where information is fast, interactive, and permanently available. As digital natives, they often expect learning, work, and social life to be immediate, flexible, and participatory. This does not mean they are less motivated; rather, their motivational patterns are shaped by different assumptions about access, speed, and relevance (Levin & Mamlok, 2021; Engel et al., 2024).

12.2 Youth aspiration shaped by influencers and online role models

Influencers and online role models play a strong part in shaping how young people imagine success, identity, and achievement. For many youth, these figures serve as visible examples of confidence, creativity, lifestyle, and self-made success. Yet such models may also intensify comparison and produce aspirations built more on appearance and visibility than on process, struggle, or substance (Engel et al., 2024; Tian et al., 2024; Martinez et al., 2024).

12.3 Motivation for skill development and digital entrepreneurship

The digital age has created new motivational pathways for youth through coding, content design, freelancing, social enterprise, and platform-based entrepreneurship. Many young people are motivated not only to get jobs, but to build digital careers, launch ventures, or turn skills into visible value. This shift reflects a growing connection between learning, digital literacy, and entrepreneurial imagination (Syed et al., 2024; Herani & Pranandari, 2024).

12.4 Creativity, content creation, and self-employment

Content creation has become a major motivational field for youth because it combines creativity, identity, audience, and income potential. Young people increasingly see digital expression not merely as leisure, but as a route to recognition, influence, and self-employment. In this way, the creative act itself becomes tied to livelihood and social visibility (Gulzar et al., 2022; Herani & Pranandari, 2024).

12.5 Risks of distraction, dependency, and unrealistic success models

At the same time, youth motivation is vulnerable to distraction, compulsive use, and unrealistic models of instant success. Constant social comparison, platform dependency, and highly curated representations of achievement can weaken resilience and distort the meaning of effort. When the process of growth is hidden, young people may admire outcomes without understanding the discipline behind them (Montag et al., 2024; Jabeen et al., 2023; Tian et al., 2024).

12.6 Need for guidance in building meaningful motivation

For this reason, youth in the digital age need guidance that helps them distinguish between temporary excitement and enduring purpose. Mentoring, supportive teaching, reflective learning, and value-based goal setting are essential in helping young people build motivation that is both ambitious and grounded. The challenge is not to suppress digital aspiration, but to give it ethical direction and emotional depth (Hennig et al., 2024; Chiu, 2022; Deci & Ryan, 2000).

13. Human Achievement in a Digitally Mediated World

13.1 Redefining achievement beyond conventional success

Human achievement in the digital era can no longer be defined only in traditional terms such as rank, salary, or formal position. Increasingly, achievement includes learning agility, creative contribution, digital influence, personal fulfillment, and the ability to adapt meaningfully in changing environments. This broader understanding reflects a move from purely external markers toward a more layered view of success (Deci & Ryan, 2000; Ryan & Deci, 2000; McAnally & Hagger, 2024).

13.2 Achievement through innovation, collaboration, and visibility

Digital environments reward innovation, networked collaboration, and the capacity to make one's work visible. Achievement today often depends on how well individuals can contribute ideas, build

relationships, and participate meaningfully in distributed communities of work and learning. Success is therefore less isolated and more relational than in many earlier models of achievement (Oksanen et al., 2024; Gulzar et al., 2022; Herani & Pranandari, 2024).

13.3 New markers of success in digital society

The digital age has introduced new markers of success: online reach, platform reputation, audience engagement, adaptability, and personal brand. These indicators can create new opportunities for recognition, but they may also narrow achievement into what is visible, trackable, and marketable. The risk is that metrics begin to stand in for meaning (Zuboff, 2019; Levin & Mamlok, 2021).

13.4 Individual achievement and public recognition online

Online spaces make achievement more public than ever before. Personal milestones, creative outputs, and professional accomplishments can be instantly displayed, circulated, and socially validated. While this public visibility can motivate effort, it can also make individuals feel that achievement matters only when it is seen, liked, and shared (Oksanen et al., 2024; Zuboff, 2019).

13.5 Personal fulfillment versus performative achievement

A major tension of digital life lies between fulfillment and performance. People may appear highly successful online while privately feeling depleted, uncertain, or disconnected from their deeper values. In such cases, achievement becomes performative: outwardly impressive, but inwardly fragile. Sustainable achievement requires that success remain connected to autonomy, self-respect, and psychological need satisfaction rather than public validation alone (Ryan & Deci, 2000; Martinez et al., 2024; Jabeen et al., 2023).

13.6 Sustainable achievement in the age of constant connectivity

Sustainable achievement in digital society depends on balance. It requires productivity without exhaustion, visibility without self-loss, and ambition without permanent overexposure. Long-term achievement becomes truly meaningful only when people can grow, contribute, and remain mentally whole at the same time (Bakker & Demerouti, 2007; McAnally & Hagger, 2024; Simon, 1971).

14. Challenges to Motivation in the Digital Age

14.1 Information overload

Information overload is one of the defining challenges of the digital era. When people are surrounded by more content, more alerts, and more options than they can meaningfully process, motivation can weaken through confusion, indecision, and fatigue. Abundance of information does not automatically produce clarity of action (Simon, 1971; Vedeckina & Borgonovi, 2021).

14.2 Digital distraction and declining concentration

Digital systems are often built to interrupt attention rather than protect it. Frequent switching between tasks, tabs, messages, and feeds reduces the depth of concentration required for sustained learning, careful reflection, and meaningful effort. As concentration declines, motivation may remain active in short bursts but become weaker in depth and endurance (Vedeckina & Borgonovi, 2021; Simon, 1971).

14.3 Superficial engagement and reduced depth of effort

A major danger of digital culture is that engagement may become constant but superficial. People may interact with many things quickly without committing deeply to any of them, which can reduce patience, persistence, and the willingness to struggle through difficult but rewarding work. In this sense, hyperactivity can coexist with motivational shallowness (Simon, 1971; Levin & Mamlok, 2021).

14.4 Addiction to screens and digital dependency

Screen dependency can gradually weaken self-regulation and make motivation more externally driven. When people become habituated to continuous stimulation, they may find slower and effortful

tasks less appealing, even when those tasks are important for growth. Problematic digital use thus becomes not only a behavioral issue, but also a motivational one (Montag et al., 2024; Jabeen et al., 2023).

14.5 Pressure of comparison and perfectionism

Digital comparison encourages many people to measure themselves against idealized images of success, beauty, productivity, and happiness. This can produce perfectionistic striving, chronic dissatisfaction, and fragile motivation grounded in fear of not being enough. Comparison may push achievement temporarily, but it rarely supports emotional well-being in the long run (Martinez et al., 2024; Tian et al., 2024; Engel et al., 2024).

14.6 Emotional exhaustion and burnout

When technology increases pressure rather than support, motivation can collapse into burnout. Technostress, surveillance, constant connectivity, and digital performance demands all contribute to emotional exhaustion and reduced well-being. In such conditions, the problem is not laziness or lack of ambition, but the unsustainable structure of digitally intensified demands (Ragu-Nathan et al., 2008; Kalischko & Riedl, 2021; Zayid et al., 2024).

14.7 Loss of intrinsic motivation due to overexposure to rewards

When digital environments rely too heavily on badges, likes, streaks, or rewards, the meaning of action can shift from genuine interest to reward-seeking behavior. Over time, intrinsic motivation may weaken because the activity is no longer experienced as personally meaningful, but as something performed for external reinforcement. This is one of the most subtle dangers of digitally mediated motivation (Ryan & Deci, 2000; Villalobos-Zúñiga & Cherubini, 2020).

15. New Perspectives on Human Drive

15.1 Motivation as dynamic and context-dependent

Motivation in the digital age should be understood as dynamic, relational, and context-sensitive. It changes across platforms, settings, roles, and emotional states, rather than remaining fixed inside the individual. Human drive today emerges through the interaction between inner needs and digitally structured environments (Deci & Ryan, 2000; Gagné & Deci, 2005; Leonardi et al., 2024).

15.2 Integration of emotional intelligence and digital intelligence

A new perspective on motivation must combine emotional intelligence with digital intelligence. It is no longer enough to know what one wants; one must also know how platforms shape attention, how algorithms influence behavior, and how emotions are triggered in online settings. Inference from current research suggests that motivated functioning now depends on understanding both oneself and the digital systems one inhabits (Levin & Mamlok, 2021; Wang et al., 2024; Zuboff, 2019).

15.3 Importance of purpose-driven motivation

Purpose-driven motivation has become more important than ever in a world full of distraction and external stimulation. When individuals are guided by meaningful values and self-chosen goals, they are less likely to be controlled by fleeting trends, shallow rewards, or unstable approval. Purpose acts as a stabilizing force in the noisy environment of digital life (Deci & Ryan, 2000; Ryan & Deci, 2000).

15.4 Balance between external recognition and internal satisfaction

Digital life has made external recognition more immediate, but inner satisfaction remains the deeper source of sustainable motivation. A mature motivational framework must therefore balance public acknowledgment with private meaning. Recognition can encourage effort, but internal satisfaction is what allows achievement to remain healthy and humane (McAnally & Hagger, 2024; Martinez et al., 2024).

15.5 Community-based and collaborative motivation

One of the most promising new perspectives is the move from isolated motivation to community-based motivation. People are often most energized when they create, learn, solve, and grow with others. Digital communities, peer support, shared learning, and collective projects show that motivation can be social, supportive, and collaborative rather than purely competitive (Oksanen et al., 2024; Rayland & Andrews, 2023; Chen et al., 2020).

15.6 Mindful and ethical use of digital tools

The future of motivation depends not only on stronger tools, but on wiser use of tools. Mindful and ethical digital practice means designing and using technology in ways that protect autonomy, dignity, attention, and well-being. Motivation should be supported by technology, not manipulated by it (Simon, 1971; Kalischko & Riedl, 2021; Zuboff, 2019).

15.7 From competition to growth-oriented achievement

A final new perspective is the shift from comparison-based competition to growth-oriented achievement. In the digital age, the most meaningful form of motivation is not simply to outshine others, but to develop one's abilities, contribute creatively, and remain grounded in purpose and learning. This view rehumanizes achievement by placing growth, contribution, and sustainability above spectacle and rivalry (Ryan & Deci, 2000; Bakker, 2022; Herani & Pranandari, 2024).

16. Strategies for Healthy and Sustainable Motivation

In the digital age, motivation can no longer be understood only as a matter of personal willpower or ambition. It is increasingly shaped by online environments, algorithmic feedback, social comparison, endless connectivity, and the pressure to remain constantly productive. For this reason, healthy and sustainable motivation requires more than short bursts of enthusiasm. It must be rooted in self-awareness, meaningful purpose, emotional balance, and the ability to regulate one's behavior in complex digital contexts. Sustainable motivation is not about doing more at all times; rather, it is about developing the inner and outer conditions that allow individuals to pursue goals with energy, clarity, and well-being over the long term (Deci & Ryan, 1985; Ryan & Deci, 2000; Zimmerman, 2002).

16.1 Developing self-awareness in digital use

One of the most important strategies for healthy motivation today is developing self-awareness in digital use. In online environments, people often confuse stimulation with genuine motivation. Notifications, likes, streaks, recommendations, and constant updates can create an illusion of engagement while actually fragmenting attention. Self-awareness helps individuals notice when they are acting with purpose and when they are merely reacting to digital triggers. This awareness includes recognizing emotional states, attention patterns, comparison habits, and the influence of platform design on daily behavior. Such reflective monitoring is central to self-regulated learning and healthy functioning because individuals are more likely to make thoughtful choices when they understand how their own motivation is being shaped (Orben & Przybylski, 2019; UNESCO, 2023; Zimmerman, 2002).

16.2 Setting meaningful and realistic goals

Sustainable motivation also depends on setting goals that are both meaningful and realistic. Goal-setting theory shows that specific and appropriately challenging goals improve effort, persistence, and performance more effectively than vague intentions. However, in the digital age, where people are frequently exposed to curated images of instant success, unrealistic goals can quickly generate frustration, self-doubt, and burnout. Meaningful goals connect effort to values, identity, and long-term direction, while realistic goals make progress manageable and visible. When individuals believe that their goals are worthwhile and achievable, they are more likely to remain committed even when progress is slow. Thus, motivation becomes steadier when aspiration is balanced by clarity, patience, and self-efficacy (Bandura, 1997; Locke & Latham, 2002).

16.3 Encouraging intrinsic motivation and purpose

Another essential strategy is encouraging intrinsic motivation and purpose. In many digital spaces, motivation is driven by external rewards such as visibility, approval, performance metrics, badges, or rankings. Although such rewards may increase activity for a short time, they do not always produce deep satisfaction or sustained commitment. Self-determination theory suggests that stronger and healthier motivation develops when individuals feel autonomous, competent, and meaningfully connected to others. When people engage in learning or work because they find it valuable, interesting, or personally significant, motivation becomes more resilient and less dependent on external validation. In this sense, purpose acts as a stabilizing force that protects motivation from the volatility of digital attention economies (Deci & Ryan, 1985; Ryan & Deci, 2000).

16.4 Practicing digital discipline and time management

Healthy motivation in the digital era also requires digital discipline and time management. Digital technologies offer remarkable opportunities for learning, creativity, and collaboration, but they also multiply distractions. Without deliberate boundaries, people may drift into multitasking, procrastination, and cognitive fatigue. Research on online learning shows that time management, effort regulation, and help-seeking are closely related to better academic achievement. This suggests that motivation flourishes in digital settings when individuals learn how to protect attention, organize tasks, manage interruptions, and create routines for focused effort. Digital discipline should not be seen as harsh self-control alone; rather, it is a practical way of preserving mental space for what truly matters (Broadbent & Poon, 2015; OECD, 2021; Zimmerman, 2002).

16.5 Creating supportive online and offline environments

Motivation is not produced by the individual alone; it is shaped by the environment in which the individual lives, studies, and works. Therefore, creating supportive online and offline environments is a major strategy for sustainable motivation. People are more likely to persist when they experience respect, encouragement, meaningful feedback, and a sense of belonging. Supportive environments reduce isolation and help individuals recover when they struggle. In digital settings especially, healthy motivation depends on the quality of interaction, the tone of communication, and the design of learning or work platforms. Environments that support autonomy, competence, and relatedness are more likely to promote meaningful engagement than environments based primarily on surveillance, pressure, or comparison (Ryan & Deci, 2000; OECD, 2021; UNESCO, 2023).

16.6 Promoting resilience, reflection, and self-regulation

In the digital age, where feedback is immediate and public and comparison is often relentless, resilience has become a vital part of motivation. People need the ability to respond constructively to failure, delay, criticism, and uncertainty. A growth-oriented understanding of ability helps individuals view setbacks not as fixed proof of inadequacy but as opportunities for learning and adjustment. At the same time, grit and self-regulation support sustained effort across long periods of challenge. Reflection strengthens this process by helping individuals examine what worked, what failed, and what needs to change. Motivation becomes healthier when it is combined with the capacity to pause, learn, and begin again rather than collapse under pressure (Duckworth et al., 2007; Dweck, 2006; Zimmerman, 2002).

16.7 Encouraging lifelong learning and adaptive growth

Healthy motivation in the digital era must be linked with lifelong learning and adaptive growth. Contemporary life is marked by rapid technological change, shifting career demands, and evolving forms of knowledge. Under such conditions, motivation should not be limited to short-term achievement alone; it should support continuous learning, flexibility, and renewal. Individuals who see learning as an ongoing process are better able to adapt to change without feeling defeated by it. Digital technologies can support lifelong learning by expanding access to knowledge, professional development, and global learning communities, but these opportunities are meaningful only when learners possess the motivation and self-regulatory capacity to use them wisely. Sustainable

motivation, therefore, is inseparable from the ability to grow with change rather than fear it (Dweck, 2006; Milligan & Littlejohn, 2017; OECD, 2021).

17. Educational and Policy Implications

The transformation of motivation in the digital age has important implications for education and policy. If motivation is now shaped not only by family, school, and personality but also by digital systems, platform design, data practices, and global inequalities in access, then educational institutions and policymakers must rethink how motivation is nurtured. Motivation can no longer be treated as a purely private psychological trait. It is also a social, pedagogical, and technological issue. This means that schools, universities, and policy frameworks must actively create conditions in which human drive supports learning, well-being, and ethical achievement rather than distraction, dependence, or emotional exhaustion (OECD, 2021; UNESCO, 2023).

17.1 Need for digital motivation literacy

A major implication is the need for what may be called digital motivation literacy. This refers to the ability to understand how digital environments shape attention, desire, reward, comparison, and persistence. Learners today need more than technical digital skills; they also need the ability to recognize how gamification, algorithmic recommendation, social metrics, and personalized feeds influence their goals and behavior. In this sense, digital motivation literacy is an educational response to the motivational architecture of contemporary technology. It helps individuals move from passive consumption to reflective participation and from external stimulation to self-directed engagement. Although the phrase itself is a contemporary framing, it is strongly supported by wider calls for digital literacy, critical awareness, and ethical engagement in technology-rich education (Fu & Weng, 2024; OECD, 2021; UNESCO, 2023).

17.2 Role of educators in fostering meaningful engagement

Educators have a crucial role in fostering meaningful engagement. In the digital age, teaching cannot be reduced to content delivery alone. Teachers, mentors, and facilitators must help learners connect digital tools with personal meaning, discipline, and reflective growth. This includes designing learning experiences that support autonomy, give constructive feedback, encourage participation, and reduce passive dependence on external rewards. Educators are especially important because they can humanize digital learning by creating relationships of trust, encouragement, and intellectual challenge. When learners feel supported rather than controlled, they are more likely to develop authentic engagement and stronger internal motivation (Ryan & Deci, 2000; UNESCO, 2023; Zimmerman, 2002).

17.3 Curriculum focus on self-management and goal-setting

The curriculum itself should place greater emphasis on self-management and goal-setting. In a world of abundance, distraction, and constant information flow, students need explicit opportunities to learn how to plan, prioritize, monitor progress, regulate effort, and revise strategies. These are no longer secondary study skills; they are central competencies for achievement and well-being. Goal-setting and self-regulated learning should therefore be embedded into educational practice across levels and disciplines. A curriculum that values these skills helps students become purposeful learners rather than reactive users of technology. It also prepares them for digital work and lifelong learning beyond formal education (Broadbent & Poon, 2015; Locke & Latham, 2002; Zimmerman, 2002).

17.4 Institutional support for mental well-being in digital spaces

Educational institutions must also provide stronger support for mental well-being in digital spaces. Constant online presence, performance pressure, and social comparison can weaken motivation when not balanced by care and support. Institutions should therefore create policies and services that protect student well-being, including counseling access, mentoring systems, reasonable digital workload expectations, inclusive communication practices, and safe online communities. Evidence suggests that the relationship between digital technology use and well-being is complex rather than uniformly harmful, which means institutional responses should be balanced, evidence-based, and humane.

Motivation becomes sustainable when learners feel psychologically safe as well as academically challenged (Orben & Przybylski, 2019; UNESCO, 2023; UNICEF, 2021).

17.5 Policies for ethical technology design

Another major implication concerns policies for ethical technology design. Educational technologies should not manipulate attention, exploit vulnerability, or reduce learners to data points. Instead, policy must insist that digital systems used in education uphold fairness, privacy, transparency, safety, human agency, and developmental appropriateness. Recent work on ethical and human-centered AI in education shows that responsible design requires collaboration among educators, learners, developers, and policymakers. Motivation is deeply affected by design: a platform can either support autonomy and purposeful engagement or encourage dependence and compliance through opaque nudging. Ethical design is therefore central to the future of motivation in education (Fu & Weng, 2024; Nguyen et al., 2023; UNICEF, 2021).

17.6 Inclusive access to digital opportunities for achievement

Policy must address inclusive access to digital opportunities for achievement. Motivation cannot flourish fairly where access is unequal. Devices, connectivity, assistive technologies, accessible design, language support, and social encouragement all shape who is able to participate meaningfully in digital learning and achievement cultures. Research on online learning at scale has shown that access alone does not guarantee equity; intentional design and targeted support are necessary to reduce achievement gaps. Thus, inclusive policy must move beyond simply providing technology and toward ensuring that all learners can use digital environments in ways that are empowering, accessible, and developmentally meaningful (Kizilcec et al., 2017; OECD, 2021; UNESCO, 2023).

Taken together, these educational and policy implications suggest that motivation in the digital age should be understood as a shared responsibility. Individuals must cultivate self-awareness and purpose, educators must design meaningful learning, institutions must protect well-being, and policymakers must ensure ethical and inclusive digital systems. Only under these conditions can motivation become not merely a response to digital stimulation, but a durable force for human growth, achievement, and social good (OECD, 2021; Ryan & Deci, 2000; UNESCO, 2023).

18. Conclusion

Motivation remains one of the most powerful forces behind human progress, shaping learning, work, creativity, and personal achievement across all stages of life. In the digital age, however, motivation can no longer be understood only through traditional ideas of ambition, reward, or self-discipline. The rapid spread of digital technologies has fundamentally transformed both the sources and expressions of human drive. Today, people are motivated not only by internal goals and social expectations, but also by online visibility, instant feedback, digital competition, virtual communities, and algorithmic influence. This transformation has created new opportunities for achievement. Digital platforms provide access to knowledge, collaboration, recognition, and innovation on an unprecedented scale. They enable individuals to learn independently, share talents globally, and pursue goals with greater flexibility and connectivity. At the same time, digital environments also carry serious risks. Constant comparison, information overload, distraction, dependence on external validation, and pressure to remain visible can weaken intrinsic motivation and harm mental well-being. It also reshapes the meaning of success, often privileging speed, popularity, and measurable engagement over patience, reflection, and enduring commitment to deeper personal and social goals in everyday digital life today. For this reason, a new perspective on motivation is urgently needed. Achievement in the contemporary world should not be measured only by speed, productivity, or online success, but also by depth, purpose, balance, and ethical responsibility. Sustainable motivation must integrate clear purpose, disciplined effort, creativity, emotional resilience, and mindful digital engagement. It should empower individuals to use technology as a tool for growth rather than becoming controlled by it. Reimagining motivation in the digital age is therefore essential for meaningful human development. It helps individuals and societies align achievement with well-being, innovation with values, and ambition with humanity. Only then can motivation remain a constructive force for personal fulfillment and collective progress.

References:

1. Anderson, I. A., & Wood, W. (2023). Social motivations' limited influence on habitual behavior: Tests from social media engagement. *Motivation Science*, 9(2), 107–119. <https://doi.org/10.1037/mot0000292>
2. Ansari, S., Iqbal, N., Asif, R., Hashim, M., Farooqi, S. R., & Alimoradi, Z. (2024). Social media use and well-being: A systematic review and meta-analysis. *Cyberpsychology, Behavior, and Social Networking*, 27(10), 704–719. <https://doi.org/10.1089/cyber.2024.0001>
3. Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191–215. <https://doi.org/10.1037/0033-295X.84.2.191>
4. Dweck, C. S. (1986). Motivational processes affecting learning. *American Psychologist*, 41(10), 1040–1048. <https://doi.org/10.1037/0003-066X.41.10.1040>
5. Eccles, J. S., & Wigfield, A. (2002). Motivational beliefs, values, and goals. *Annual Review of Psychology*, 53, 109–132. <https://doi.org/10.1146/annurev.psych.53.100901.135153>
6. Peters, D., Calvo, R. A., & Ryan, R. M. (2018). Designing for motivation, engagement and wellbeing in digital experience. *Frontiers in Psychology*, 9, Article 797. <https://doi.org/10.3389/fpsyg.2018.00797>
7. Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68–78. <https://doi.org/10.1037/0003-066X.55.1.68>
8. Ryan, R. M., & Deci, E. L. (2020). Intrinsic and extrinsic motivation from a self-determination theory perspective: Definitions, theory, practices, and future directions. *Contemporary Educational Psychology*, 61, Article 101860. <https://doi.org/10.1016/j.cedpsych.2020.101860>
9. Ryan, R. M., Rigby, C. S., & Przybylski, A. K. (2006). The motivational pull of video games: A self-determination theory approach. *Motivation and Emotion*, 30(4), 347–363. <https://doi.org/10.1007/s11031-006-9051-8>
10. Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191–215. <https://doi.org/10.1037/0033-295X.84.2.191>
11. Chen, K.-C., & Jang, S.-J. (2010). Motivation in online learning: Testing a model of self-determination theory. *Computers in Human Behavior*, 26(4), 741–752. <https://doi.org/10.1016/j.chb.2010.01.011>
12. Chiu, T. K. F. (2024). A classification tool to foster self-regulated learning with generative artificial intelligence by applying self-determination theory: A case of ChatGPT. *Educational Technology Research and Development*, 72, 2401–2416. <https://doi.org/10.1007/s11423-024-10366-w>
13. Chiu, T. K. F., Moorhouse, B. L., Chai, C. S., & Ismailov, M. (2024). Teacher support and student motivation to learn with artificial intelligence (AI) based chatbot. *Interactive Learning Environments*, 32(7), 3240–3256. <https://doi.org/10.1080/10494820.2023.2172044>
14. Deci, E. L. (1971). Effects of externally mediated rewards on intrinsic motivation. *Journal of Personality and Social Psychology*, 18(1), 105–115.
15. Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. Plenum. <https://doi.org/10.1007/978-1-4899-2271-7>
16. Dweck, C. S. (2006). *Mindset: The new psychology of success*. Random House.
17. Eccles, J. S., & Wigfield, A. (2002). Motivational beliefs, values, and goals. *Annual Review of Psychology*, 53(1), 109–132. <https://doi.org/10.1146/annurev.psych.53.100901.135153>

18. Fishbach, A., Steinmetz, J., & Tu, Y. (2016). Motivation in a social context: Coordinating personal and shared goal pursuits with others. In A. J. Elliot (Ed.), *Advances in motivation science* (Vol. 3, pp. 35–79). Elsevier. <https://doi.org/10.1016/bs.adms.2015.12.005>
19. Hartnett, M. (2016). *Motivation in online education*. Springer.
20. Hartnett, M., St. George, A., & Dron, J. (2011). Examining motivation in online distance learning environments: Complex, multifaceted, and situation-dependent. *International Review of Research in Open and Distance Learning*, 12(6), 20–38. <https://doi.org/10.19173/irrodl.v12i6.1030>
21. Howard, J. L., Bureau, J., Guay, F., Chong, J. X. Y., & Ryan, R. M. (2021). Student motivation and associated outcomes: A meta-analysis from self-determination theory. *Perspectives on Psychological Science*, 16(6), 1300–1323. <https://doi.org/10.1177/1745691620966789>
22. Jaramillo-Mediavilla, L., Basantes-Andrade, A., Cabezas-González, M., & Casillas-Martín, S. (2024). Impact of gamification on motivation and academic performance: A systematic review. *Education Sciences*, 14(6), 639. <https://doi.org/10.3390/educsci14060639>
23. Lepper, M. R., Greene, D., & Nisbett, R. E. (1973). Undermining children's intrinsic interest with extrinsic reward: A test of the overjustification hypothesis. *Journal of Personality and Social Psychology*, 28(1), 129–137. <https://doi.org/10.1037/h0035519>
24. Maslow, A. H. (1970). *Motivation and personality* (2nd ed.). Harper & Row.
25. McClelland, D. C. (1987). *Human motivation*. Cambridge University Press.
26. Ryan, R. M., & Deci, E. L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary Educational Psychology*, 25(1), 54–67.
27. Ryan, R. M., & Deci, E. L. (2020). Intrinsic and extrinsic motivation from a self-determination theory perspective: Definitions, theory, practices, and future directions. *Contemporary Educational Psychology*, 61, 101860. <https://doi.org/10.1016/j.cedpsych.2020.101860>
28. Shanmugasundaram, M., & Tamilarasu, A. (2023). The impact of digital technology, social media, and artificial intelligence on cognitive functions: A review. *Frontiers in Cognition*, 2, 1203077. <https://doi.org/10.3389/fcogn.2023.1203077>
29. Wang, Y., Wang, H., Wang, S., Wind, S. A., & Gill, C. (2024). A systematic review and meta-analysis of self-determination-theory-based interventions in the education context. *Learning and Motivation*, 87, 102015. <https://doi.org/10.1016/j.lmot.2024.102015>
30. Weiner, B. (1985). An attributional theory of achievement motivation and emotion. *Psychological Review*, 92(4), 548–573. <https://doi.org/10.1037/0033-295X.92.4.548>
31. Xia, Q., Chiu, T. K. F., Lee, M., Sanusi, I. T., Dai, Y., & Chai, C. S. (2022). A self-determination theory (SDT) design approach for inclusive and diverse artificial intelligence (AI) education. *Computers & Education*, 189, 104582. <https://doi.org/10.1016/j.compedu.2022.104582>
32. Bloom, N., Han, R., & Liang, J. (2024). Hybrid working from home improves retention without damaging performance. *Nature*, 630(8018), 920–925. <https://doi.org/10.1038/s41586-024-07500-2>
33. Brucks, M. S., & Levav, J. (2022). Virtual communication curbs creative idea generation. *Nature*, 605(7908), 108–112. <https://doi.org/10.1038/s41586-022-04643-y>
34. Cui, T., Tan, B., & Shi, Y. (2024). Fostering humanistic algorithmic management: A process of enacting human-algorithm complementarity. *The Journal of Strategic Information Systems*, 33(2), 101838. <https://doi.org/10.1016/j.jsis.2024.101838>
35. Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. Plenum Press.

36. Deci, E. L., & Ryan, R. M. (2000). The “what” and “why” of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227–268. https://doi.org/10.1207/S15327965PLI1104_01
37. Gagné, M., & Deci, E. L. (2005). Self-determination theory and work motivation. *Journal of Organizational Behavior*, 26(4), 331–362. <https://doi.org/10.1002/job.322>
38. Guaña-Moya, J., Arteaga-Alcívar, Y., Criollo-C, S., & Cajamarca-Carrasco, D. (2024). Use of interactive technologies to increase motivation in university online courses. *Education Sciences*, 14(12), 1406. <https://doi.org/10.3390/educsci14121406>
39. Herzberg, F. (1976). *The managerial choice: To be efficient and to be human*. Dow Jones-Irwin.
40. Jaramillo-Mediavilla, L., Basantes-Andrade, A., Cabezas-González, M., & Casillas-Martín, S. (2024). Impact of gamification on motivation and academic performance: A systematic review. *Education Sciences*, 14(6), 639. <https://doi.org/10.3390/educsci14060639>
41. King, N. (1970). Clarification and evaluation of the two-factor theory of job satisfaction. *Psychological Bulletin*, 74(1), 18–31. <https://doi.org/10.1037/h0029444>
42. Latham, G. P., & Pinder, C. C. (2005). Work motivation theory and research at the dawn of the twenty-first century. *Annual Review of Psychology*, 56, 485–516. <https://doi.org/10.1146/annurev.psych.55.090902.142105>
43. Locke, E. A., & Latham, G. P. (2002). Building a practically useful theory of goal setting and task motivation: A 35-year odyssey. *American Psychologist*, 57(9), 705–717. <https://doi.org/10.1037/0003-066X.57.9.705>
44. Maslow, A. H. (1970). *Motivation and personality* (2nd ed.). Harper & Row.
45. McClelland, D. C. (1987). *Human motivation*. Cambridge University Press.
46. Ryan, R. M., & Deci, E. L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary Educational Psychology*, 25(1), 54–67. <https://doi.org/10.1006/ceps.1999.1020>
47. Ryan, R. M., & Deci, E. L. (2020). Intrinsic and extrinsic motivation from a self-determination theory perspective: Definitions, theory, practices, and future directions. *Contemporary Educational Psychology*, 61, 101860. <https://doi.org/10.1016/j.cedpsych.2020.101860>
48. Van Eerde, W., & Thierry, H. (1996). Vroom’s expectancy models and work-related criteria: A meta-analysis. *Journal of Applied Psychology*, 81(5), 575–586. <https://doi.org/10.1037/0021-9010.81.5.575>
49. Wahba, M. A., & Bridwell, L. G. (1976). Maslow reconsidered: A review of research on the need hierarchy theory. *Organizational Behavior and Human Performance*, 15(2), 212–240. [https://doi.org/10.1016/0030-5073\(76\)90038-6](https://doi.org/10.1016/0030-5073(76)90038-6)
50. Zayid, H., Alzubi, A., Berberoğlu, A., & Khadem, A. (2024). How do algorithmic management practices affect workforce well-being? A parallel moderated mediation model. *Behavioral Sciences*, 14(12), 1123. <https://doi.org/10.3390/bs14121123>
51. Balci, S., Secaur, J. M., & Morris, B. J. (2022). Comparing the effectiveness of badges and leaderboards on academic performance and motivation of students in fully versus partially gamified online physics classes. *Education and Information Technologies*, 27(6), 8631–8668. <https://doi.org/10.1007/s10639-022-10983-z>
52. Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Prentice-Hall.
53. boyd, d. (2014). *It’s complicated: The social lives of networked teens*. Yale University Press.

54. boyd, d. m., & Ellison, N. B. (2007). Social network sites: Definition, history, and scholarship. *Journal of Computer-Mediated Communication*, 13(1), 210–230. <https://doi.org/10.1111/j.1083-6101.2007.00393.x>
55. Castells, M. (2000). *The rise of the network society* (2nd ed.). Blackwell Publishers.
56. Chen, K.-C., & Jang, S.-J. (2010). Motivation in online learning: Testing a model of self-determination theory. *Computers in Human Behavior*, 26(4), 741–752. <https://doi.org/10.1016/j.chb.2010.01.011>
57. Crone, E. A., & Konijn, E. A. (2018). Media use and brain development during adolescence. *Nature Communications*, 9(1), 588. <https://doi.org/10.1038/s41467-018-03126-x>
58. da Silva Pinho, A., Céspedes Izquierdo, V., Lindström, B., & van den Bos, W. (2024). Youths' sensitivity to social media feedback: A computational account. *Science Advances*, 10(43), eadp8775. <https://doi.org/10.1126/sciadv.adp8775>
59. Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. Plenum Press.
60. Deci, E. L., & Ryan, R. M. (2000). The “what” and “why” of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227–268. https://doi.org/10.1207/S15327965PLI1104_01
61. Vries, D. A., Möller, A. M., Wieringa, M. S., Eigenraam, A. W., & Hamelink, K. (2018). Social comparison as the thief of joy: Emotional consequences of viewing strangers' Instagram posts. *Media Psychology*, 21(2), 222–245. <https://doi.org/10.1080/15213269.2016.1267647>
62. Duffy, B. E., & Hund, E. (2015). “Having it all” on social media: Entrepreneurial femininity and self-branding among fashion bloggers. *Social Media + Society*, 1(2), 1–11. <https://doi.org/10.1177/2056305115604337>
63. Duffy, B. E., & Wissinger, E. (2017). Mythologies of creative work in the social media age: Fun, free, and “just being me.” *International Journal of Communication*, 11, 4652–4671.
64. Ellison, N. B., Steinfield, C., & Lampe, C. (2007). The benefits of Facebook “friends”: Social capital and college students' use of online social network sites. *Journal of Computer-Mediated Communication*, 12(4), 1143–1168. <https://doi.org/10.1111/j.1083-6101.2007.00367.x>
65. Ferrari, A. (2013). *DIGCOMP: A framework for developing and understanding digital competence in Europe*. Publications Office of the European Union.
66. Global Education Monitoring Report Team. (2023). *Global education monitoring report 2023: Technology in education—A tool on whose terms?* UNESCO. <https://doi.org/10.54676/UZQV8501>
67. Greenhow, C., Robelia, B., & Hughes, J. E. (2009). Learning, teaching, and scholarship in a digital age: Web 2.0 and classroom research—What path should we take now? *Educational Researcher*, 38(4), 246–259. <https://doi.org/10.3102/0013189X09336671>
68. GSMA. (2024). *The mobile economy 2024*. GSMA.
69. Hamari, J., Koivisto, J., & Sarsa, H. (2014). Does gamification work?—A literature review of empirical studies on gamification. In 2014 47th Hawaii International Conference on System Sciences (pp. 3025–3034). IEEE. <https://doi.org/10.1109/HICSS.2014.377>
70. Hartnett, M. (2016). *Motivation in online education*. Springer. <https://doi.org/10.1007/978-981-10-0700-2>
71. Hartnett, M., St. George, A., & Dron, J. (2011). Examining motivation in online distance learning environments: Complex, multifaceted, and situation-dependent. *The International Review of Research in Open and Distributed Learning*, 12(6), 20–38.

72. Hsu, H.-C. K., Wang, C. V., & Levesque-Bristol, C. (2019). Reexamining the impact of self-determination theory on learning outcomes in the online learning environment. *Education and Information Technologies*, 24(3), 2159–2174. <https://doi.org/10.1007/s10639-019-09863-w>
73. International Telecommunication Union. (2024). Facts and figures 2024. ITU.
74. Jenkins, H. (2006). *Confronting the challenges of participatory culture: Media education for the 21st century*. MacArthur Foundation.
75. Li, C., Liang, L., Fryer, L. K., & Shum, A. (2024). The use of leaderboards in education: A systematic review of empirical evidence in higher education. *Journal of Computer Assisted Learning*, 40(6), 3406–3442. <https://doi.org/10.1111/jcal.13077>
76. Mayer, R. E. (2009). *Multimedia learning* (2nd ed.). Cambridge University Press. <https://doi.org/10.1017/CBO9780511811678>
77. Nadkarni, A., & Hofmann, S. G. (2012). Why do people use Facebook? *Personality and Individual Differences*, 52(3), 243–249.
78. Nesi, J., & Prinstein, M. J. (2015). Using social media for social comparison and feedback-seeking: Gender and popularity moderate associations with depressive symptoms. *Journal of Abnormal Child Psychology*, 43(8), 1427–1438. <https://doi.org/10.1007/s10802-015-0020-0>
79. OECD. (2023). *OECD digital education outlook 2023: Towards an effective digital education ecosystem*. OECD Publishing. <https://doi.org/10.1787/c74f03de-en>
80. Oyserman, D. (2009). Identity-based motivation: Implications for action-readiness, procedural-readiness, and consumer behavior. *Journal of Consumer Psychology*, 19(3), 250–260.
81. Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68–78. <https://doi.org/10.1037/0003-066X.55.1.68>
82. Sala, A., Porcaro, L., & Gómez, E. (2024). Social media use and adolescents' mental health and well-being: An umbrella review. *Computers in Human Behavior Reports*, 14, 100404. <https://doi.org/10.1016/j.chbr.2024.100404>
83. Sherman, L. E., Payton, A. A., Hernandez, L. M., Greenfield, P. M., & Dapretto, M. (2016). The power of the like in adolescence: Effects of peer influence on neural and behavioral responses to social media. *Psychological Science*, 27(7), 1027–1035. <https://doi.org/10.1177/0956797616645673>
84. Turkle, S. (2011). *Alone together: Why we expect more from technology and less from each other*. Basic Books.
85. Twenge, J. M. (2019). More time on technology, less happiness? Associations between digital-media use and psychological well-being. *Current Directions in Psychological Science*, 28(4), 372–379. <https://doi.org/10.1177/0963721419838244>
86. Valkenburg, P. M. (2022). Social media use and well-being: What we know and what we need to know. *Current Opinion in Psychology*, 45, 101294. <https://doi.org/10.1016/j.copsy.2021.12.006>
87. Valkenburg, P. M., Meier, A., & Beyens, I. (2022). Social media use and its impact on adolescent mental health: An umbrella review of the evidence. *Current Opinion in Psychology*, 44, 58–68. <https://doi.org/10.1016/j.copsy.2021.08.017>
88. van Dijk, J. (2020). *The digital divide*. Polity Press.
89. van Laar, E., van Deursen, A. J. A. M., van Dijk, J. A. G. M., & de Haan, J. (2017). The relation between 21st-century skills and digital skills: A systematic literature review. *Computers in Human Behavior*, 72, 577–588. <https://doi.org/10.1016/j.chb.2017.03.010>

90. Verduyn, P., Gugushvili, N., Massar, K., Täht, K., & Kross, E. (2020). Social comparison on social networking sites. *Current Opinion in Psychology*, 36, 32–37.
91. Wilmer, H. H., Sherman, L. E., & Chein, J. M. (2017). Smartphones and cognition: A review of research exploring the links between mobile technology habits and cognitive functioning. *Frontiers in Psychology*, 8, 605. <https://doi.org/10.3389/fpsyg.2017.00605>
92. Allen, T. D., Golden, T. D., & Shockley, K. M. (2015). How effective is telecommuting? Assessing the status of our scientific findings. *Psychological Science in the Public Interest*, 16(2), 40–68. <https://doi.org/10.1177/1529100615593273>
93. Alvarez De La Vega, J. C., Cecchinato, M. E., Rooksby, J., & Newbold, J. (2023). Understanding platform-mediated work-life: A diary study with gig economy freelancers. *Proceedings of the ACM on Human-Computer Interaction*, 7(CSCW1), Article 106, 1–32. <https://doi.org/10.1145/3579539>
94. Bakker, A. B. (2022). The social psychology of work engagement: State of the field. *Career Development International*, 27(1), 36–53. <https://doi.org/10.1108/CDI-08-2021-0213>
95. Bakker, A. B., & Demerouti, E. (2007). The job demands-resources model: State of the art. *Journal of Managerial Psychology*, 22(3), 309–328. <https://doi.org/10.1108/02683940710733115>
96. Chen, Z., Vogel, D., Yang, T., & Deng, J. (2020). The effect of social media-enabled mentoring on online tacit knowledge acquisition within sustainable organizations: A moderated mediation model. *Sustainability*, 12(2), 616. <https://doi.org/10.3390/su12020616>
97. Chiu, T. K. F. (2022). Applying the self-determination theory (SDT) to explain student engagement in online learning during the COVID-19 pandemic. *Journal of Research on Technology in Education*, 54(sup1), S14–S30. <https://doi.org/10.1080/15391523.2021.1891998>
98. Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. Plenum Press.
99. Deci, E. L., & Ryan, R. M. (2000). The “what” and “why” of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227–268.
100. Engel, E., Gell, S., Heiss, R., & Karsay, K. (2024). Social media influencers and adolescents’ health: A scoping review of the research field. *Social Science & Medicine*, 340, 116387. <https://doi.org/10.1016/j.socscimed.2023.116387>
101. Eurofound, & International Labour Office. (2017). *Working anytime, anywhere: The effects on the world of work*. Publications Office of the European Union & International Labour Office.
102. Gagné, M., & Deci, E. L. (2005). Self-determination theory and work motivation. *Journal of Organizational Behavior*, 26(4), 331–362. <https://doi.org/10.1002/job.322>
103. Gulzar, M. A., Ahmad, M., Hassan, M., & Rasheed, M. I. (2022). How social media use is related to student engagement and creativity: Investigating through the lens of intrinsic motivation. *Behaviour & Information Technology*, 41(11), 2283–2293. <https://doi.org/10.1080/0144929X.2021.1917660>
104. Hennig, F., Wesche, J. S., Handke, L., & Kerschreiter, R. (2024). Designing virtual mentoring programs based on students’ motivation to participate: A qualitative study. *Information and Learning Sciences*, 125(11/12), 1001–1029. <https://doi.org/10.1108/ILS-10-2023-0155>
105. Herani, R., & Pranandari, A. (2024). Promote or inhibit? Examining the influence of youth digital advocacy on digital social entrepreneurship. *Social Enterprise Journal*, 20(5), 654–677. <https://doi.org/10.1108/SEJ-11-2023-0136>
106. Jabagi, N., Croteau, A.-M., Audebrand, L. K., & Marsan, J. (2019). Gig-workers’ motivation: Thinking beyond carrots and sticks. *Journal of Managerial Psychology*, 34(4), 192–213. <https://doi.org/10.1108/JMP-06-2018-0255>

107. Jabeen, F., Tandon, A., Sithipolvanichgul, J., Srivastava, S., & Dhir, A. (2023). Social media-induced fear of missing out (FoMO) and social media fatigue: The role of narcissism, comparison and disclosure. *Journal of Business Research*, 159, 113693. <https://doi.org/10.1016/j.jbusres.2023.113693>
108. Kalischko, T., & Riedl, R. (2021). Electronic performance monitoring in the digital workplace: Conceptualization, review of effects and moderators, and future research opportunities. *Frontiers in Psychology*, 12, 633031. <https://doi.org/10.3389/fpsyg.2021.633031>
109. Kahn, W. A. (1990). Psychological conditions of personal engagement and disengagement at work. *Academy of Management Journal*, 33(4), 692–724.
110. Kayas, O. G. (2023). Workplace surveillance: A systematic review, integrative framework, and research agenda. *Journal of Business Research*, 168, 114212. <https://doi.org/10.1016/j.jbusres.2023.114212>
111. Leonardi, P. M., Parker, S. H., & Shen, R. (2024). How remote work changes the world of work. *Annual Review of Organizational Psychology and Organizational Behavior*, 11(1), 193–219. <https://doi.org/10.1146/annurev-orgpsych-091922-015852>
112. Levin, I., & Mamlok, D. (2021). Culture and society in the digital age. *Information*, 12(2), 68. <https://doi.org/10.3390/info12020068>
113. Lindsay, S., Kolne, K., & Cagliostro, E. (2018). Electronic mentoring programs and interventions for children and youth with disabilities: Systematic review. *JMIR Pediatrics and Parenting*, 1(2), e11679. <https://doi.org/10.2196/11679>
114. Martinez, A. M., Browne, L. J., & Knee, C. R. (2024). Conceptualizing social media contingent self-esteem: Associations between echo chambers, contingent self-esteem, and problematic social media use. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace*, 18(3), Article 2. <https://doi.org/10.5817/CP2024-3-2>
115. Mazmanian, M., Orlikowski, W. J., & Yates, J. (2013). The autonomy paradox: The implications of mobile email devices for knowledge professionals. *Organization Science*, 24(5), 1337–1357. <https://doi.org/10.1287/orsc.1120.0806>
116. McAnally, K., & Hagger, M. S. (2024). Self-determination theory and workplace outcomes: A conceptual review and future research directions. *Behavioral Sciences*, 14(6), 428. <https://doi.org/10.3390/bs14060428>
117. Montag, C., Demetrovics, Z., Elhai, J. D., Grant, D., Koning, I., Rumpf, H.-J., Spada, M. M., Throuvala, M., & van den Eijnden, R. (2024). Problematic social media use in childhood and adolescence. *Addictive Behaviors*, 153, 107980. <https://doi.org/10.1016/j.addbeh.2024.107980>
118. Oksanen, A., Celuch, M., Oksa, R., & Savolainen, I. (2024). Online communities come with real-world consequences for individuals and societies. *Communications Psychology*, 2, 71. <https://doi.org/10.1038/s44271-024-00112-6>
119. Przybylski, A. K., Murayama, K., DeHaan, C. R., & Gladwell, V. (2013). Motivational, emotional, and behavioral correlates of fear of missing out. *Computers in Human Behavior*, 29(4), 1841–1848. <https://doi.org/10.1016/j.chb.2013.02.014>
120. Ragu-Nathan, T. S., Tarafdar, M., Ragu-Nathan, B. S., & Tu, Q. (2008). The consequences of technostress for end users in organizations: Conceptual development and empirical validation. *Information Systems Research*, 19(4), 417–433. <https://doi.org/10.1287/isre.1070.0165>
121. Rayland, A., & Andrews, J. (2023). From social network to peer support network: Opportunities to explore mechanisms of online peer support for mental health. *JMIR Mental Health*, 10, e41855. <https://doi.org/10.2196/41855>

122. Ryan, R. M., & Deci, E. L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary Educational Psychology*, 25(1), 54–67. <https://doi.org/10.1006/ceps.1999.1020>
123. Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68–78. <https://doi.org/10.1037/0003-066X.55.1.68>
124. Simon, H. A. (1971). Designing organizations for an information-rich world. In M. Greenberger (Ed.), *Computers, communications, and the public interest* (pp. 37–72). Johns Hopkins Press.
125. Syed, R. T., Alzahmi, R. A., & Tariq, U. (2024). Digital entrepreneurship education in universities through the lens of educators: Evidence from the United Arab Emirates. *Cogent Education*, 11(1), 2409472. <https://doi.org/10.1080/2331186X.2024.2409472>
126. Tian, J., Li, B., & Zhang, R. (2024). The impact of upward social comparison on social media on appearance anxiety: A moderated mediation model. *Behavioral Sciences*, 15(1), 8. <https://doi.org/10.3390/bs15010008>
127. Villalobos-Zúñiga, G., & Cherubini, M. (2020). Apps that motivate: A taxonomy of app features based on self-determination theory. *International Journal of Human-Computer Studies*, 140, 102449. <https://doi.org/10.1016/j.ijhcs.2020.102449>
128. Vedeckina, M., & Borgonovi, F. (2021). A review of evidence on the role of digital technology in shaping attention and cognitive control in children. *Frontiers in Psychology*, 12, 611155. <https://doi.org/10.3389/fpsyg.2021.611155>
129. Wang, S., Wang, F., Zhu, Z., Wang, J., Tran, T., & Du, Z. (2024). Artificial intelligence in education: A systematic literature review. *Expert Systems with Applications*, 252, 124167. <https://doi.org/10.1016/j.eswa.2024.124167>
130. Zayid, H., Alzubi, A., Berberoğlu, A., & Khadem, A. (2024). How do algorithmic management practices affect workforce well-being? A parallel moderated mediation model. *Behavioral Sciences*, 14(12), 1123. <https://doi.org/10.3390/bs14121123>
131. Zuboff, S. (2019). *The age of surveillance capitalism: The fight for a human future at the new frontier of power*. PublicAffairs.
132. Bandura, A. (1997). *Self-efficacy: The exercise of control*. Worth Publishers.
133. Broadbent, J., & Poon, W. L. (2015). Self-regulated learning strategies & academic achievement in online higher education learning environments: A systematic review. *The Internet and Higher Education*, 27, 1–13. doi:10.1016/j.iheduc.2015.04.007
134. Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. Plenum Press. doi:10.1007/978-1-4899-2271-7
135. Duckworth, A. L., Peterson, C., Matthews, M. D., & Kelly, D. R. (2007). Grit: Perseverance and passion for long-term goals. *Journal of Personality and Social Psychology*, 92(6), 1087–1101. doi:10.1037/0022-3514.92.6.1087
136. Dweck, C. S. (2006). *Mindset: The new psychology of success*. Random House.
137. Fu, Y., & Weng, Z. (2024). Navigating the ethical terrain of AI in education: A systematic review on framing responsible human-centered AI practices. *Computers and Education: Artificial Intelligence*, 7, Article 100306. doi:10.1016/j.caeai.2024.100306
138. Kizilcec, R. F., Saltarelli, A. J., Reich, J., & Cohen, G. L. (2017). Closing global achievement gaps in MOOCs. *Science*, 355(6322), 251–252. doi:10.1126/science.aag2063
139. Locke, E. A., & Latham, G. P. (2002). Building a practically useful theory of goal setting and task motivation: A 35-year odyssey. *American Psychologist*, 57(9), 705–717. doi:10.1037/0003-066X.57.9.705

140. Milligan, C., & Littlejohn, A. (2017). Why study on a MOOC? The motives of students and professionals. *The International Review of Research in Open and Distributed Learning*, 18(2), 92–102.
141. Nguyen, A., Ngo, H. N., Hong, Y., Dang, B., & Nguyen, B.-P. T. (2023). Ethical principles for artificial intelligence in education. *Education and Information Technologies*, 28, 4221–4241. doi:10.1007/s10639-022-11316-w
142. OECD. (2021). OECD digital education outlook 2021: Pushing the frontiers with artificial intelligence, blockchain and robots. doi:10.1787/589b283f-en
143. Orben, A., & Przybylski, A. K. (2019). The association between adolescent well-being and digital technology use. *Nature Human Behaviour*, 3, 173–182. doi:10.1038/s41562-018-0506-1
144. Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68–78. doi:10.1037/0003-066X.55.1.68
145. UNESCO. (2023). Global education monitoring report 2023: Technology in education: A tool on whose terms?
146. UNICEF. (2021). Policy guidance on AI for children (2.0).
147. Zimmerman, B. J. (2002). Becoming a self-regulated learner: An overview. *Theory Into Practice*, 41(2), 64–70. doi:10.1207/s15430421tip4102_2