

## Formed by Algorithms: New Tasks of Christian Educators

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### ABSTRACT

Social media—TikTok, Instagram, Facebook—has become one of the most powerful formative forces among students today. It shapes not only how they communicate but also how they think, feel, and believe. What began as a tool for expression has become a system of formation that directs attention, defines identity, and distorts desire. Unfortunately, many educators fail to recognize this hidden force. Perhaps they are victims of the same habits, or they hold an uncritical optimism toward technology, or they assume that students will eventually outgrow its algorithm. In this paper I argue that Christian educators must recover a theological vision of technology grounded in the story of creation, fall, and redemption. Technology, like social media, is not neutral but spiritually formative, shaping the soul toward either worship or idolatry. The paper concludes by outlining practical implications for educators who seek to cultivate wisdom, discernment, and faithful presence in a digital age.

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### INTRODUCTION

In August 2025, Indonesian netizens erupted in outrage when it emerged that members of the national legislature were receiving 50 million rupiah monthly housing allowances in addition to their base salary—an amount many viewed as outrageous amid economic hardship (Sutrisna, 2025). Social media feeds flooded with images and addresses of legislators, and mobs in Jakarta and other cities stormed, looted, and vandalized the private residences of officials, including Finance Minister Sri Mulyani. The house of lawmaker Ahmad Sahroni was among the first targeted after netizens circulated footage of his luxury cars and provocative remarks about wealth (Antara, 2025; Irwinsyah, 2025). Similarly, Eko Patrio, an entertainer turned legislator, faced backlash for flaunting affluence online while citizens struggled. What began as online indignation soon materialized as collective anger on the streets—an unsettling reminder of how social media can transform shared resentment into real-world force, setting the stage for understanding its broader power across the globe.

In 2021, Elon Musk’s casual tweet calling Dogecoin “the people’s crypto” sent the coin’s value surging overnight, demonstrating how a single social media utterance can shake global markets (Yun, 2024). The same digital channels amplify compassion: children’s educator Ms. Rachel mobilized hundreds of thousands of TikTok followers to fund humanitarian relief within hours (Hajdenberg, 2024). However, those same networks have become conduits of despair. In March 2022, a Michigan teenager took his own life after online blackmail through Instagram, his tragedy multiplied by algorithmic exposure (Dilanian, 2023). More recently, Mikayla Raines, a YouTube animal-rescue influencer with millions of followers, died by suicide, and her husband cited sustained online bullying as a contributing factor (Duxter, 2025). Platforms that once promised connection now also magnify manipulation, comparison, vulnerability, and anxiety (Haidt, 2024). This tension between generative and destructive power reveals how social media operates not merely as a tool but increasingly as a force that shapes perception, meaning, and moral imagination.

The stories above, which a decade ago would have seemed unimaginable, now appear in news feeds with numbing regularity. In 2025, more than 5 billion people—over 65 percent of the world’s population—use social media daily (Meltwater & We Are Social, 2025). Indonesia, where I live, ranks among the world’s most active users, with the average person spending three hours and 11 minutes a day on social platforms (Meltwater, 2024). Recent research suggests that algorithmic personalization not only narrows what students see but also strains their sustained attention and complicates judgments of credibility in digital environments (Brown-Devlin, 2022; Chan et al., 2025; Swart, 2021). Surveys also note a decline in sensitivity to religious or moral content as entertainment and outrage dominate digital attention (Reinke, 2017). It becomes apparent that Christian educators today face not only a pedagogical task but a formative

one, so that students attain attributes and values that capacitate them to know and serve God and others in the church and society as a whole (Magezi et al, 2023). In the context of educators, the task of educating students' character should be understood as a calling from God, even at the most basic level: early childhood education (Lim & Setia, 2025). Christian educators, I argue, must recover a basic Christian philosophy of technology—one that interprets every digital tool within the larger story of creation, fall, and redemption. This recovery involves three essential tasks: discerning technology's fallen influence, understanding its created purpose, and guiding its redemptive use in Christian formation.

## METHODOLOGY

This paper employs a theological framework drawn from the redemptive-historical story of Creation, Fall, Redemption, and Consummation (CFRC)—a model deeply rooted in the Reformed tradition of Christian theology (Kuyper, 1898/2019). As Santoso and Puspitasari (2023) note, Abraham Kuyper's concept of *sphere sovereignty* affirms that God's sovereignty extends to every domain of human life, including education, calling Christian educators to recognize their vocation as participation in God's redemptive rule within creation. Popularized by theologians such as Al Wolters (2005) and Craig Bartholomew (Bartholomew & Goheen, 2013), the framework views all aspects of life, including technology, as part of God's good creation that has been corrupted by sin yet remains open to renewal through grace. This approach is particularly suited to theological reflection on social media because it neither demonizes nor idealizes technological culture. Instead, it allows for a nuanced moral reading: recognizing technology's original goodness, diagnosing its distortions under the power of sin, and seeking to redirect it toward love and service.

While the complete framework includes a fourth stage—Consummation—I omit it for two main reasons. First, my focus here is on the present vocation of Christian educators who live and teach within history, participating in God's ongoing work of redemption rather than its final completion. Second, consummation, I suppose, belongs wholly to God, who alone will bring His creation to its ultimate fulfillment. Human participation, including the work of Christian educators, properly ends at the redemptive stage; beyond that lies the divine act that perfects what history and education can only anticipate. Until the day Jesus comes back, we are called to stand firm in the faith (Bartholomew & Goheen, 2013).

## FINDINGS

### The Fallen

Each time we pause over a photo, click a link, or forward a post to a friend, social media platforms quietly record what we do. They note not only what we like but how long we linger, what we enlarge to see more clearly, even what we almost tap but resist. Every hesitation becomes a clue in a vast behavioral profile. Algorithms compare our patterns with millions of others, predicting what we might desire, fear, or buy next. In this invisible trade, our attention is the commodity. As Orłowski warns in *The Social Dilemma* (2020), “If you're not paying for the product, then you are the product.” What feels like a free service—sharing memories, staying informed, finding community—is actually a system designed to map and monetize the contours of our inner life. These platforms know us through data trails we hardly notice, turning ordinary habits of curiosity and connection into the raw material of profit.

Shoshana Zuboff (2019) names this hidden trade surveillance capitalism, “a new economic order that claims human experience as free raw material for hidden commercial practices of extraction, prediction, and sales.” Behind every convenience and notification lies a marketplace of behavioral prediction. Google and Facebook pioneered this logic when they discovered that human experience could be extracted at no extra cost and rendered as behavioral data. In such a system, users are no longer agents but resources; what we say, search, and watch becomes property to be analyzed and sold. Zuboff calls it “a new species of power,” one that replaces persuasion with programming, cultivating patterns that keep us scrolling and submitting more data. The tools we once thought we controlled now study and modify us in return (McLuhan, 1964). Crouch (2017) adds that the main problem with our technology is not that it is too powerful, but that it makes us too weak.

There are at least five consequences that we now suffer under the rule of algorithmic formation. First, social media confines us within personalized bubbles, reinforcing our own assumptions until truth becomes indistinguishable from preference (Lanier, 2019; Reinke, 2017). We no longer seek what is true but what feels familiar. Algorithms quietly sort our attention into worlds that resemble ourselves. Over time, news

feeds narrow, friends align, and disagreement disappears. This personalization, once sold as convenience, now fuels polarization. The 2016 and 2020 U.S. elections, the Brexit referendum, and countless smaller disputes across nations showed how digital echo chambers reward outrage and filter out dissent. What began as a tool for connection now fragments public truth, creating a culture where facts compete with feelings and confirmation bias shapes conviction.

Beyond politics, the same digital design erodes personal well-being. Research from the Happiness Research Institute (2015) found that young people who use social media passively—scrolling or viewing others’ lives—report greater loneliness and shame, while active users who communicate directly feel happier and more connected. The perceived-to-be-happiest countries cannot avoid algorithms. Their 2019 Nordic study also observed that girls experience stronger emotional effects than boys, especially when parental support is weak (Birkjær & Kaats, 2019). What connects these findings is formation: the same algorithms that divide societies also reshape the inner life of individuals.

The third consequence concerns the moral formation of vice (Reinke, 2017). The seven deadly sins—pride, envy, wrath, sloth, greed, gluttony, and lust—have not disappeared in the digital age; they have become the design features of social media—digital vices leading to digital idolatry. Indeed, the gods of technology promise omniscience, omnipresence, and omnipotence—powers that belong to God alone—that we willingly succumb (Detweiler, 2013). Pride thrives in the careful curation of posts that display success and perfection. Envy follows immediately, as The Facebook Experiment reported that half of users envy others’ experiences and one in three envy how happy others appear online (Happiness Research Institute, 2015). Wrath finds expression in hate comments and online shaming, where outrage becomes entertainment. Sloth takes the form of doomscrolling to death (McCracken, 2025), the lazy restlessness of constant refresh without reflection. Greed drives users to monetize even self-deprecating content, turning humiliation into revenue. Gluttony appears in the insatiable consumption of digital content—from endless scrolling to the Mukbang phenomenon (Tekin et al., 2025), where the desire to taste everything becomes its own spectacle. And lust, stripped of intimacy, manifests in the objectification of bodies as images for reaction. What older theologians called sin, algorithms now call engagement.

The fourth consequence is oppression. What appears neutral and technical often deepens old divisions. As Cathy O’Neil (2016) observes, algorithms can reinforce racism, sexism, and economic inequality through hidden data patterns that decide who receives opportunities and who is denied them. Safiya Noble (2018) likewise demonstrates that even search engines—tools we often trust as gateways to truth—can reproduce and legitimize systemic prejudice, showing that “racism and sexism are part of the architecture and language of technology itself.” Recommendation systems quietly learn our biases and feed them back to us, producing a digital hierarchy that mirrors—and magnifies—social injustice. The fifth consequence is meaninglessness (Lanier, 2019). In a world where visibility replaces truth, and attention becomes the measure of worth, language itself loses moral gravity. Outrage is rewarded, irony replaces reverence, and belief is privatized into mood. The result is a spiritual numbness where life feels fragmented and weightless (Reinke, 2017). Each of these conditions—distortion, despair, vice, oppression, and meaninglessness—is not an isolated flaw but a single mechanism amplified by algorithms that keep users addicted, engaged, and trapped in a vicious cycle. What began as a tool for expression has become a system of formation, shaping not only what we see but who we become. Christian educators, then, cannot easily yield to the fun and popularity of technology in hand but must remain fully aware of its hidden power to form, deform, and even destroy the very souls they seek to nurture.

## The Creation

Neil Postman (1985) once wrote that “every technology is both a burden and a blessing; not either–or, but this–and–that.” The previous section has shown much of the burden, yet Scripture begins with blessing. If God is good, then creation is good; and if creation is good, then the human creature—made in God’s image—is also good. God’s first command to humanity, to “till and keep” the earth, is a call to develop, organize, and imagine: the roots of what we now call technology. To work, to name, and to make are acts of obedience to the Creator’s design. The fact that metal tools or instruments first appear in the biblical narrative after the fall does not mean that technology is evil, any more than the appearance of logic after sin would make reason corrupt. Such reasoning confuses sequence with cause. Technology, like logic, belongs to God’s general revelation and is therefore good in itself. Yet because fallen humans often pursue

self-glorification rather than service, technology cannot remain neutral. Each invention bears the tension between divine gift and human misuse, between creativity that honors God and creativity that replaces Him

Creation’s goodness points not backward to a lost Eden but forward to a perfected city. The biblical story ends in a New Jerusalem, not in wilderness recovery but in cultivated glory—a place of light, architecture, and music. The redeemed world will not abolish technology; it will transfigure it. One may imagine amplifiers and sound engineers still aiding the praise of God, creativity without distortion, design without domination. Brad Kallenberg (2010) observes that technological change is irreversible; once a tool reshapes the conditions of human life, “we cannot imagine the world without it.” Such irreversibility gestures toward the continuity between creation and new creation: what is made through human imagination will be refined, not erased. Neil Postman (1992) helps clarify this dynamic when he writes that “technological change is not additive; it is ecological—it changes everything.” That ecological transformation already anticipates the eschatological renewal of all things. Technology, like language and culture, is woven into the created order and awaits redemption. Its destiny is not annihilation but orientation: to be turned from self-display toward service, from manipulation toward worship. Christian educators, then, must help students see that technology’s truest purpose is not mastery over creation but participation in its praise.

Albert Wolters (2005) captures the continuity between creation and culture when he writes that “the earth had been completely unformed and empty; in the six-day process of development God had formed it and filled it—but not completely. People must now carry on the work of development.” In this sense, technology belongs to the unfinished work of creation. The divine command to “subdue the earth” is not an order of domination but of participation—an invitation to continue God’s forming and filling activity. Every human tool, from the first plow to the latest algorithm, echoes this calling to cultivate potential within creation. Theologically, this means that inventiveness is not a symptom of sin but a reflection of grace: the human impulse to design is itself a trace of the Creator’s generosity. Yet this same power to form also carries the danger to deform. For Christian educators, this means technology must be taught not only as a tool to be managed but as a gift to be stewarded with hope. When students learn to see their devices as extensions of a good creation awaiting renewal, they also glimpse the Creator whose image they bear. Education, then, becomes an act of cultivating gratitude for technology’s goodness and imagination for its ultimate purpose.

## The Redemption

Redemption does not abolish creation but reorders its loves. Augustine described sin as disordered love—when what is good is loved in the wrong way or for the wrong end. In this sense, technology itself does not corrupt; instead, the human heart directs it toward false worship. Tony Reinke (2021) notes that our devices “reveal what already rules our hearts,” exposing our craving for attention, affirmation, and control. The algorithms that promise connection often function as catechisms of desire, training us to seek immediacy rather than patience, novelty rather than wisdom, and self-display rather than service. Yet redemption begins precisely at the level of desire: it reforms what we want and how we love (Smith, 2016). Christian formation, therefore, is not merely about managing screen time but about sanctifying attention. To teach with this awareness is to see every classroom, every phone, and every network as potential liturgies of the heart—places where students either conform to the digital order of the world or are transformed by the renewing of their minds.

There are several practical habits that Christian educators can use to help students experience redemption in their digital lives. These habits are not about rejecting technology but about recovering attentiveness and freedom within it. First, many people have found value in a digital Sabbath (Schuurman, 2013)—a chosen period of rest from screens to remind our souls that technology serves rather than rules. One need not adopt Jaron Lanier’s total withdrawal (Lanier, 2019); even short, scheduled breaks can help renew attention. For some, however, abstinence or uninstalling may be the wiser path. Scripture never forbids wine, yet those who cannot handle even a small measure do best to avoid it altogether; the same may hold for social media.

Second, the purposely designed obstacles can interrupt impulsive scrolling. James Clear (2018) suggests that habits weaken when friction increases. Students may set screen-time limits whose passcodes are known only to a parent or friend, place chargers away from the bed, turn screens to grayscale, or use alarm clocks instead of phones. Third, redemption deepens through accountable community. Friends may agree on playful penalties—“If you see me scrolling during our quiet time, I’m buying dinner.” Families may introduce curfews or shared physical activities such as futsal, badminton, karaoke, or evening walks.

These embodied rhythms nurture joy and belonging. Such habits are simple yet sacramental: they train the soul to receive technology not as an idol but as a gift reclaimed for love and learning.

The last is the intentional spiritual discipline. Kyle Idleman (2013) writes that “Idols are defeated not by being removed but by being replaced.” Our desire cannot simply be deleted, it must be redirected. The gospel never calls us to empty the heart but to fill it rightly—to replace false worship with true devotion. For this reason, spiritual discipline remains essential to digital redemption. Yet such disciplines must fit the shape of each soul. As Gary Thomas (2020) reminds us, God fashions every person with a distinct spiritual temperament: some encounter Him through study and contemplation, others through action, beauty, or solitude. A single universal formula for devotion can therefore wound rather than heal. At the same time, difference does not abolish discipline; it simply personalizes it. Those who abandon all structure in the name of authenticity fall into a quieter idolatry—the worship of their own spontaneity. Christian educators can help students discern practices that train love according to their design: silence for the reflective, service for the active, song for the artistic. When rightly ordered, these disciplines do not suppress desire; they sanctify it, turning the restless heart toward its true end.

## CONCLUSIONS

Haidt (2024) says that “we handed an entire generation of children a device that distills the worst of human nature and called it progress.” Indeed, social media has become a new environment of formation, shaping attention, desire, and identity more deeply than formal education, and many have faith in it. However, within the Christian story, it is neither enemy nor savior but a space where human creativity and sin coexist. This paper has outlined three tasks for Christian educators: to discern social media’s fallen influence, to understand its created goodness, and to guide its redemptive use in soul formation. The goal is not withdrawal but wise participation—teaching students to order their loves toward truth and worship rather than novelty and approval. When guided with theological discernment, young generations can grow into users who cultivate virtue, gratitude, and hope. In faithful formation, they may learn to use the digital world to serve the Creator’s purpose of forming and filling His creation.

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