

Review

Mental Health Education in the Digital Era: Reclaiming Humanism in Technology-Driven Higher Education

Luísa Soares 

Department of Psychology, Faculty of Arts and Humanities, Universidade da Madeira, 9000-250 Funchal, Portugal; lsoares@staff.uma.pt

Received: 25 March 2026; **Revised:** 20 April 2026; **Accepted:** 28 April 2026; **Published:** 14 May 2026

Abstract: The rapid digital transformation in healthcare has reshaped the landscape of mental health practice and education. Universities face the challenge of balancing technological innovation with the preservation of humanistic values and relational care, particularly within the formation of health professionals. This article aims to discuss the implications of digitalization for mental health education in university contexts and to propose an integrative model that reconciles technological advancement with empathy, ethical reflection, and clinical humanism. A conceptual review was conducted, combining literature on health professions education, digital health technologies, and transdisciplinary pedagogical practices. Theoretical perspectives from psychology, medicine, and education were integrated to identify critical tensions and opportunities within the digital transformation of higher education. Universities that embed humanistic dialogue, reflective practice, and interprofessional collaboration within curricula demonstrate greater resilience and adaptability in training in mental health. Higher education institutions must act as laboratories for balancing technology and humanism. Future professionals require both digital competence and emotional intelligence to ensure that mental health care remains centered on the individual. Ethical education, empathy, and common sense should guide the digital evolution of mental health teaching and practice.

Keywords: Mental Health Education; Digital Health; Humanism; Medical Psychology; Higher Education; Artificial Intelligence; Health 4.0

1. Introduction

This article explores the intersection of mental health education, technological innovation, and humanistic values in university contexts. Building upon previous reflections on the coexistence between doctors and psychologists, it highlights the need for academic institutions to integrate digital tools responsibly while preserving empathy, ethics, and critical thinking [1,2]. This reflection contributes to the theme issue of the Journal of the European Society of Medicine, which aims to gather diverse perspectives on mental health practices and research.

Digital transformation has become a defining characteristic of contemporary health systems. In mental health, this transformation has extended to education, research, and clinical practice, challenging traditional pedagogical models. Universities today must move beyond knowledge transmission to cultivate ethical awareness, relational skills, and digital fluency among future practitioners [3,4].

The digital transformation of mental health practices has accelerated a structural shift in how knowledge is produced, disseminated, and applied within universities. What was once a relatively linear process, where research generated evidence and teaching transmitted it, has become a dynamic, iterative ecosystem in which both domains continuously inform and reshape one another. Digital tools, data-driven methodologies, and emerging therapeutic

modalities have blurred the boundaries between research and practice, requiring academic institutions to rethink not only what they teach but how they teach it. This transformation is not merely technological; it is epistemological and pedagogical, demanding a reconfiguration of the very foundations of medical and psychological education.

Within contemporary universities, research and teaching can no longer operate as parallel tracks. Instead, they function as mutually reinforcing systems that shape how future professionals conceptualize mental health, engage with patients, and navigate complex ethical landscapes. Students are no longer passive recipients of established knowledge; they are increasingly expected to critically engage with evolving evidence, interpret digital data, and apply insights in real-time contexts. This shift requires integrating research processes directly into teaching practices, exposing students early to inquiry-based learning, transdisciplinary collaboration, and critical appraisal skills. In practical terms, this means embedding research literacy across curricula, encouraging participation in ongoing projects, and fostering a mindset where questioning and adaptation are central competencies [5,6].

At the same time, the rapid expansion of digital mental health tools, including telepsychology platforms, mobile health applications, artificial intelligence, assisted diagnostics, and virtual therapeutic environments, has fundamentally altered the skill set required of practitioners [7,8]. Technical proficiency alone is insufficient. Future clinicians must understand not only how to use these tools but also how they influence the therapeutic relationship, patient autonomy, and clinical decision-making. The risk is clear, without adequate training, technology may be adopted in ways that prioritize efficiency over empathy, or scalability over individualized care. Universities therefore face a strategic imperative to ensure that technological competence is developed alongside, rather than at the expense of core human-centered skills [1,9,10].

This is where the emphasis on reflexivity becomes critical. Reflexivity, understood as the capacity to critically examine one's own assumptions, biases, and professional actions, must be actively cultivated within training programs. In a digital context, this includes questioning how algorithms shape diagnostic processes, how digital interfaces mediate communication, and how data collection practices may reinforce or challenge existing inequalities. Reflexivity transforms students from tool users into critical practitioners who can navigate ambiguity and make informed, ethically grounded decisions. It also supports resilience and adaptability, qualities that are increasingly essential in a field characterized by rapid change.

Communication skills, traditionally central to mental health practice, also require redefinition. Digital environments introduce new modalities of interaction that alter verbal and non-verbal dynamics, affect rapport building, and challenge traditional notions of presence and engagement. Training must therefore extend beyond face-to-face communication to include competencies in online therapeutic engagement, digital empathy, and cross-platform communication strategies [11,12]. This is not a trivial adjustment; it requires deliberate pedagogical design, including simulated digital consultations, supervised telehealth experiences, and reflective exercises that help students understand the nuances of mediated interaction [12-14].

Equally important is the strengthening of ethical awareness in an increasingly complex technological landscape. Issues such as data privacy, informed consent in digital settings, algorithmic bias, and the commercialization of mental health services introduce new ethical dilemmas that cannot be addressed through traditional frameworks alone. Universities must proactively integrate these topics into curricula, moving beyond abstract ethical principles toward applied, scenario-based learning that reflects real-world challenges. Students should be encouraged to engage with case studies involving digital tools, debate competing ethical perspectives, and develop the capacity to justify their decisions within a structured ethical framework.

From an institutional perspective, this transformation requires more than incremental curriculum updates; it calls for a strategic reorientation. Interdisciplinary collaboration becomes essential, bringing together expertise from psychology, medicine, data science, ethics, and even design. Faculty development is equally critical, as educators themselves must be equipped to navigate and teach within this evolving landscape. Investment in digital infrastructure, partnerships with healthcare providers, and engagement with industry stakeholders can further support the alignment between academic training and professional realities.

However, there is also a risk of overcorrection, allowing technological innovation to dictate educational priorities rather than serve them. Universities must maintain a clear focus on their core mission, the development of competent, ethical, and reflective professionals capable of promoting psychological well-being. Technology should be positioned as an enabler, not a driver, of this mission. This requires ongoing evaluation of educational outcomes, critical engagement with emerging trends, and a willingness to resist solutions that prioritize novelty over value.

Looking ahead, the institutions that will lead in health professions education are those that embrace this complexity rather than simplify it. They will be the ones that integrate research and teaching seamlessly, that balance technological innovation with humanistic principles, and that prepare students not just for the current landscape but for continuous transformation. In this sense, the evolution of medical and psychological training is not a one-time adjustment but an ongoing process of adaptation and reflection.

Ultimately, the goal is clear, to develop professionals who are not only technically competent but also critically aware, ethically grounded, and capable of meaningful human connection in a digital world. Achieving this requires a deliberate and strategic approach to education, one that recognizes the interdependence of research and teaching, embraces the opportunities and challenges of digital transformation, and places the development of the whole practitioner at its center.

Method: State-of-the-Art Conceptual Review

This study adopts a transparent state-of-the-art conceptual review approach to synthesize current knowledge on mental health education in the digital era. A structured search was conducted across Scopus, Web of Science, and PubMed databases, covering publications between 2014 and 2025.

Keywords included combinations of: “mental health education”, “digital health”, “telepsychology training”, “AI in healthcare education”, “empathy training”, “ethics in digital health”, and “health professions education”.

Inclusion criteria comprised: (i) peer-reviewed empirical studies, (ii) systematic or narrative reviews, and (iii) theoretical frameworks directly addressing digital transformation in health education. Exclusion criteria included non-indexed sources without peer review, opinion pieces lacking theoretical grounding, and studies unrelated to training or educational outcomes.

Thematic analysis was conducted to identify recurrent dimensions, including: (1) digital competencies, (2) relational and emotional skills, (3) ethical challenges, and (4) pedagogical innovation. These themes informed the development of the integrative model proposed in this paper.

2. The Role of Higher Education in Mental Health Promotion

Higher education institutions play a vital role in promoting mental health literacy and resilience. They serve not only as centers of scientific production but also as environments where empathy, critical thinking, and human connection can be developed [15]. Integrating psychology within faculties of arts and humanities—such as at the University of Madeira—symbolizes the need to bridge scientific rigor with the art of human understanding.

To achieve this balance, universities must design curricula that transcend the traditional boundaries of disciplinary specialization and foster the development of human competencies alongside scientific and technical ones. Training in health professions cannot be limited to cognitive mastery or procedural knowledge; it must intentionally include ethical reflection, communication skills, teamwork, and emotional literacy. Curricula should incorporate experiential learning, narrative medicine, reflective writing, and interdisciplinary seminars that allow students to engage with the human dimensions of illness, suffering, and recovery. Such pedagogical strategies enable future professionals to integrate technological and clinical expertise with compassion and moral responsibility.

Developing these human-centered curricula is not a peripheral adjustment or a matter of pedagogical preference; it is a structural reform that directly impacts the quality, relevance, and sustainability of modern health education. In a context where technological sophistication is advancing faster than relational competence, universities face a clear strategic choice: either produce technically efficient professionals or cultivate practitioners capable of delivering meaningful, ethical, and person-centered care. The latter requires deliberate design. Empathy, self-awareness, and relational intelligence cannot be assumed as byproducts of training, they must be explicitly embedded, practiced, assessed, and continuously refined throughout the educational journey.

This shift implies moving beyond traditional, content-heavy curricula toward competency-based models that value how knowledge is applied as much as what knowledge is acquired. Embedding empathy, for instance, is not about adding isolated modules on “soft skills,” but about integrating perspective-taking, emotional attunement, and patient centered communication across all learning contexts. Clinical simulations, reflective writing, supervised practice, and feedback rich environments become critical tools to operationalize these competencies. Similarly, self-awareness must be cultivated through structured opportunities for reflection, encouraging students to recog-

nize their biases, emotional responses, and decision-making patterns, particularly in complex or uncertain clinical situations.

Relational intelligence, in turn, becomes a core professional asset. In mental health contexts especially, the quality of the therapeutic relationship is often as influential as the intervention itself. Universities therefore need to train students to navigate interpersonal dynamics with nuance, managing boundaries, building trust, negotiating meaning, and adapting communication to diverse populations and digital formats. This is particularly relevant in hybrid and online care environments, where the absence of physical presence amplifies the importance of intentional, skilled interaction. By aligning scientific knowledge with human sensitivity, universities create professionals who can translate evidence into practice without losing sight of the person behind the data.

From an institutional standpoint, implementing such curricula requires coherence and alignment across multiple levels, curriculum design, teaching methodologies, assessment strategies, and faculty development. Educators must be equipped not only to teach technical content but also to model relational competencies and facilitate reflective processes. Assessment systems must evolve to capture complex skills such as empathy and ethical reasoning, moving beyond purely cognitive evaluation toward more holistic frameworks.

Ultimately, positioning higher education as a transformative space means recognizing its role in shaping not just what professionals know, but who they become. When scientific knowledge and human sensitivity coexist within the same educational architecture, the outcome is not simply a more skilled practitioner, but a more responsible and responsive one. These are professionals capable of diagnosing and treating, but also of accompanying, understanding, and supporting individuals in vulnerable moments—delivering care that is not only effective, but meaningful.

Training of health professionals cannot be limited to cognitive mastery or procedural knowledge; it must intentionally include ethical reflection, communication skills, teamwork, and emotional literacy. Curricula should incorporate experiential learning, narrative medicine, reflective writing, and interdisciplinary seminars that allow students to engage with the human dimensions of illness, suffering, and recovery.

An especially powerful pedagogical approach is the integration of art, such as poetry, music, and literature, into health education. Exposure to artistic expression stimulates emotional awareness, imagination, and the capacity for empathy, offering students a deeper understanding of human vulnerability and resilience. Reading poetry, for instance, enhances sensitivity to language and emotion, while music facilitates the recognition of nonverbal communication and emotional attunement. Both practices strengthen the ability to perceive nuances in patients' experiences that often escape purely clinical analysis. In psychology, such methods promote self-reflection and therapeutic presence; in nursing, they nurture compassion and attentiveness; in medicine, they help future physicians sustain empathy despite the pressures of clinical practice.

Integrating the arts into mental health and medical education can contribute to forming professionals who are intellectually rigorous yet emotionally grounded. Ultimately, teaching through art does not distract from science, it completes it, reminding health professionals that understanding a patient's story is as essential as understanding their diagnosis. Universities are crucial ecosystems for the early recognition and prevention of mental health issues among students and professionals.

3. Digitalization and the Risk of Dehumanization

Technological progress, while indispensable, risks displacing the human component of care. The doctor–patient and psychologist–client relationships remain the cornerstone of therapeutic efficacy [4]. Training programs must therefore teach digital ethics and clinical communication concurrently. As Carl Rogers noted, genuine listening and acceptance precede any effective intervention [16].

In the contemporary university, the tension between publishing metrics and pedagogical purpose remains a central issue. The challenge is to align academic productivity with social impact—ensuring that scientific inquiry directly informs the training of compassionate, evidence-based practitioners. This calls for interdisciplinary collaboration between educators, clinicians, and researchers to produce actionable knowledge that benefits both academia and society.

Technological innovation—from telepsychology to artificial intelligence—has expanded access to care but also introduced risks of depersonalization. While digital tools enhance diagnosis and treatment, they can distance practitioners from the human experience if not grounded in ethical and relational principles. Medical and psychology

students should therefore receive training not only in digital literacy but also in the “art of conversation,” as emphasized by Carl Rogers, to maintain the centrality of the person in clinical practice.

Recent studies have shown that improvements in structured telepsychology training programs improve both clinical confidence and patient engagement [3,4]. For example, simulation-based teleconsultation training has been associated with increased communication effectiveness and perceived empathy in digital environments [3,12]. Additionally, AI-assisted diagnostic tools, when integrated with ethical training, enhance decision-making accuracy while maintaining patient-centered care [1,2].

Humanistic Perspectives in Health Education: The Legacy of Carl Rogers

Carl Rogers’ humanistic psychology offers an indispensable foundation for contemporary health education, particularly in medicine and psychology. His model places the individual—whether patient or student—at the center of every learning and therapeutic process, emphasizing authenticity, empathy, and unconditional positive regard as the pillars of interpersonal growth [17]. Rogers viewed learning as a deeply personal and emotional act, arguing that meaningful knowledge arises when individuals feel understood, respected, and psychologically safe.

In the training of health professionals, this perspective translates into pedagogical models that privilege dialogue, reflection, and emotional awareness. The person-centered approach proposed by Rogers encourages educators to see students not as passive recipients of information but as active participants in their own intellectual and emotional development. This approach fosters what Rogers called facilitative learning environments—contexts in which openness, curiosity, and vulnerability are not only accepted but valued as part of professional growth.

In medical education, Rogers’ principles are reflected in patient-centered care *and* narrative medicine, which encourage future physicians to listen actively and empathically, acknowledging the subjective dimensions of illness alongside its biological manifestations [18]. In psychology, they underpin therapeutic training focused on empathy, congruence, and relational attunement—skills that remain essential regardless of theoretical orientation. Within higher education, integrating Rogers’ humanism means cultivating not just scientific competence but also emotional intelligence, ethical sensitivity, and the ability to engage authentically with others.

At a time when digital transformation risks depersonalizing relationships, Rogers’ vision remains profoundly relevant. His humanistic ethos reminds educators and practitioners that technology and scientific precision can only serve their true purpose when anchored in compassion and respect for the inherent dignity of every human being. Thus, medical and psychological education inspired by Rogers’ thought prepares professionals not merely to cure but to care—to see, listen to, and accompany others in their suffering and healing.

4. Research, Teaching, and the University Mission

The academic environment increasingly prioritizes publication metrics, sometimes at the expense of pedagogical integrity [6,19–22]. True educational innovation arises from integrating research outcomes into the formation of professionals capable of critical reasoning and empathy. Universities must therefore align research productivity with societal well-being and the common good [23,24].

Universities must not forget that their mission transcends the mere production of scientific output. They are, above all, responsible for the ethical and human formation of professionals who have chosen a vocation within higher education—one that involves responsibility, empathy, and public service. When institutional recognition and academic careers become excessively dependent on the number of publications indexed in databases such as Scopus or Web of Science, the educational purpose risks being reversed. Knowledge then becomes an end in itself, disconnected from social and pedagogical transformation. This overvaluation of bibliometric impact can undermine the essence of academia as a space for critical thinking, creativity, and human development, reducing higher education to a competitive system rather than a formative one [25].

Beyond producing measurable outputs, universities should prioritize the cultivation of human competencies as the foundation of medical, nursing, and psychological education. Skills such as empathy, active listening, emotional regulation, and ethical discernment are indispensable in the clinical context, where technology alone cannot address the complexity of human suffering. Developing these relational and communicative abilities allows future professionals to see patients not as data or diagnoses but as whole persons. Integrating these dimensions into curricula strengthens the quality of care and reaffirms the social role of health sciences as both a scientific and

profoundly human endeavor.

Theoretical perspectives from psychology, medicine, and education were integrated to identify critical tensions and opportunities within the digital transformation of higher education. From psychology, humanistic and constructivist theories emphasize the importance of empathy, self-reflection, and the learner's active role in meaning-making [20]. These approaches remind educators that digital tools should not replace relational pedagogy but enhance it by fostering dialogue, self-awareness, and emotional connection.

From medicine, the narrative and biopsychosocial models reinforce the notion that effective health education must address the complexity of the human experience, not merely its biological dimensions [19,20]. Narrative medicine, in particular, encourages students to interpret patients' stories, cultivating sensitivity to context and subjectivity even in virtual or technologically mediated environments [21,22].

In education, experiential and transformative learning theories underscore that genuine understanding arises from reflection on lived experience and emotional engagement [23]. Within digital higher education, these theories call for pedagogical models that blend virtual interaction with reflective, embodied, and community-based learning. The convergence of these three domains—psychology, medicine, and education—thus reveals both the tensions (between technology and humanism, speed and reflection) and the opportunities (for innovation, accessibility, and interdisciplinary growth) that define contemporary training in mental health [24].

Vygotsky's sociocultural theory provides a crucial framework for understanding how learning and professional identity formation occur in medicine and psychology. Central to his perspective is the notion that knowledge is not transmitted but co-constructed through social interaction, dialogue, and shared cultural tools [20]. In the education of future doctors and psychologists, this implies that learning should emerge from collaborative contexts where students engage actively with mentors, peers, and patients, rather than passively absorbing information.

The concept of the zone of proximal development (ZPD) is particularly illuminating in clinical training. It refers to the distance between what a learner can achieve independently and what they can accomplish with guidance or collaboration [20]. In medical and psychological education, the ZPD manifests through supervised clinical practice, case discussions, and reflective mentoring—spaces where students progressively integrate technical expertise with ethical reasoning and emotional sensitivity. These relational environments allow learners to internalize professional attitudes and values that cannot be acquired through theoretical instruction alone.

Moreover, Vygotsky's emphasis on mediated learning resonates strongly in the digital age. Technological platforms, virtual simulations, and telemedicine environments can serve as mediating tools that extend the ZPD, enabling experiential learning even at a distance. However, these digital mediations must remain anchored in human interaction and reflective dialogue, ensuring that technology enhances rather than replaces the interpersonal dimension of education. When applied thoughtfully, Vygotskian principles can transform health education into a socially grounded, ethically reflective, and deeply human process that prepares professionals to think critically, collaborate effectively, and care compassionately.

For example, in some medical education programs, students engage in simulated teleconsultations where they interact with standardized patients via digital platforms, followed by structured feedback sessions. These interventions have been associated with measurable improvements in communication quality and patient-centered behaviors [3,13,15].

5. Towards a Human-Centered Technological Paradigm

Health 4.0 and the Internet of Things (IoT) have revolutionized healthcare delivery [23]. However, clinical training must ensure that these technologies remain tools serving human needs, not replacements for authentic interpersonal care. Transdisciplinary collaboration between psychology, medicine, engineering, and ethics is essential to maintain this equilibrium [26]. For instance, wearable devices and connected sensors can provide valuable real-time data on patients' sleep patterns, stress levels, and physiological responses, allowing earlier detection of emotional distress. Yet, such tools should complement, not replace, the empathetic dialogue between patient and clinician. Similarly, AI-driven platforms can assist therapists in monitoring progress or personalizing interventions, but they must be grounded in ethical frameworks that protect confidentiality and autonomy. Universities and training institutions therefore bear the responsibility of teaching students to interpret and use technological data through a humanistic lens, ensuring that every algorithm or digital platform reinforces, rather than erodes, the relational dimension of care. The ultimate goal of Health 4.0 must be to expand the reach of compassion and

evidence-based support, not to mechanize the encounter between human beings (see **Table 1**).

Table 1. Integrative Model for Digital Mental Health Education, Components, Implementation Strategies and Measurable Indicators.

Component	Description	Implementation	Measurable Indicators
Digital Competence	Use of AI, telehealth, data literacy	Simulation platforms, teleconsultation training	Digital literacy scores, task performance
Emotional Intelligence	Empathy, self-awareness	Reflective writing, supervision by clinical psychologists	Empathy & cognitive scales
Ethical Reasoning	Decision-making in digital dilemmas	Case-based learning, AI ethics modules	Ethical reasoning scales
Relational Skills	Communication in digital settings	Role-play, telepsychology simulations	Patient satisfaction, communication ratings
Transdisciplinary Integration	Collaboration across fields	Joint seminars, project-based learning	Team performance, integration scores

As training in mental health adapts to Health 4.0 and the Internet of Things (IoT), universities must preserve the essence of human connection. Artificial intelligence can assist diagnosis, but it cannot replace the therapeutic relationship. The next generation of health professionals should be equipped to integrate data-driven insights with psychological sensitivity, bridging the digital and human dimensions of care.

A structured curriculum should integrate three core domains:

- (1) Digital Health Competencies (AI literacy, telehealth practice, data interpretation);
- (2) Humanistic and Relational Skills (empathy, communication, reflective practice);
- (3) Ethical and Critical Reasoning (data privacy, algorithmic bias, autonomy).

Pedagogical strategies should include simulation-based learning, supervised teleconsultations, interdisciplinary modules, and reflective exercises. This ensures alignment between technological proficiency and human-centered care.

Evaluating competencies in digital health professions education requires multidimensional approaches. Empathy and relational skills can be assessed using validated scales (e.g., Jefferson Scale of Empathy) combined with observed structured clinical examinations (OSCEs) in digital settings.

Ethical reasoning should be evaluated through case-based assessments and scenario analysis involving AI and telehealth dilemmas. Digital competence can be measured via performance-based tasks in simulated environments. This integrated assessment approach ensures that both technical and human competencies are systematically evaluated.

6. Conclusions

Synthesis: Humanism and Sociocultural Learning in Health Education

The theoretical contributions of Lev Vygotsky and Carl Rogers converge in a vision of education that places the human relationship at the core of learning and professional practice. While emerging from different paradigms—the sociocultural and the humanistic—both authors highlight that personal transformation and knowledge construction occur through authentic interpersonal encounters.

From Vygotsky’s perspective, learning is a socially mediated process in which interaction, dialogue, and collaboration drive cognitive and emotional development. His concept of the zone of proximal development demonstrates that growth arises not in isolation but through guided participation with others who facilitate learning. Applied to medical and psychological training, this means that supervision, teamwork, and reflective dialogue are not peripheral, but fundamental spaces where professional identity and ethical awareness are formed.

Rogers, in turn, complements this view by emphasizing the quality of those interactions. His humanistic psychology reminds us that true learning happens only in environments of empathy, authenticity, and unconditional positive regard. Whereas Vygotsky explains how individuals learn through social connection, Rogers illuminates why that connection must be emotionally safe and ethically grounded. Together, they form a pedagogical synthesis that reconciles intellectual rigor with emotional depth—a necessary balance for the education of health professionals.

In the current digital era, where Health 4.0 technologies, artificial intelligence, and online education reshape the landscape of training, the combined legacies of Vygotsky and Rogers serve as an ethical compass. They remind

us that technology must remain a mediator of human learning, not a substitute for it, and that no algorithm can replace the transformative power of empathy and dialogue. The future of medical and psychological education therefore depends on integrating the sociocultural insight that learning is relational with the humanistic conviction that every learner—and every patient—is a person deserving of understanding, respect, and compassion.

Training in mental health in the digital era must uphold humanistic values while embracing innovation. Universities should cultivate serenity, empathy, and ethical reflection amid technological acceleration. Before being professionals, we are human beings—this reminder should anchor the design of any educational model for future health practitioners.

The future of mental health education lies in harmonizing technological progress with ethical reflection and human empathy. Academic institutions must act as laboratories for this balance—cultivating serenity, common sense, and critical thinking amid the acceleration of the digital age. By doing so, they uphold the foundational principle that before being doctors, psychologists, or researchers, we are first and foremost human beings.

Higher education institutions must act as laboratories for balancing technology and humanism. As society transitions toward a digital and data-driven paradigm, universities are uniquely positioned to mediate this transformation with ethical awareness and human-centered purpose. They are not only spaces of technological innovation but also moral communities that shape the attitudes, values, and responsibilities of future professionals [23,24].

In the context of mental health, this balance is particularly delicate. Future health professionals must acquire digital competence—the ability to interpret data, use artificial intelligence responsibly, and apply telehealth technologies effectively—while cultivating emotional intelligence, empathy, and ethical judgment [25–27]. These two forms of literacy, the technological and the emotional, are not opposites but complementary dimensions of professional excellence. A clinician who masters diagnostic software but lacks empathy risks reducing the patient to an algorithm; conversely, empathy without digital proficiency may limit access to innovation and precision. The modern university must therefore integrate both dimensions, teaching how to use technology without losing humanity.

Ethical education, empathy, and common sense should guide the digital evolution of mental health teaching and practice. This implies embedding bioethics, communication skills, and reflective practice throughout the curriculum—not as optional modules but as transversal competencies that shape every stage of learning [28–31]. Digital platforms can be used to simulate ethical dilemmas, foster collaborative problem-solving, and connect students across disciplines and cultures. In doing so, universities fulfill their dual mission: to advance knowledge and to preserve human dignity in a world increasingly mediated by machines.

Ultimately, higher education should not aspire merely to produce competent technicians but reflective practitioners capable of moral discernment and compassionate care. When technology is guided by humanism—and humanism informed by technology—education becomes a space of genuine transformation, where science and empathy coexist in service of the person.

In the digital era, mental health education in higher education faces the challenge of reclaiming humanism amid technology-driven dominance. Li [32], Prinsloo [33], and Hernández-Peña et al. [34] argue that moral education must integrate digital competencies to foster emotional resilience, redefining higher education as a space for ethical and psychological development. Universities should reclaim hope and humanity, positioning themselves as centers of holistic formation in a context of technological acceleration. Complementarily, Hernández-Peña et al. [34] advocate a humanist reading of the digital age, emphasizing that psychology must preserve the centrality of subjective experience against technological dehumanization. These authors converge on the need for higher education to balance digital innovation with humanistic values essential for student mental health. Tinoco et al. [35] also highlight post-pandemic digital behaviors among higher education students, identifying risks of dependency and the need for balanced technological integration to protect mental health. These authors converge on the need for higher education to balance digital innovation with humanistic values essential for student mental health.

Funding

This research received no external funding.

Institutional Review Board Statement

Not applicable.

Informed Consent Statement

Not applicable.

Data Availability Statement

Not applicable.

Conflicts of Interest

The author declares no conflict of interest.

AI Use Statement

No generative AI tools were used for content generation or data analysis. AI was employed solely for language editing and proofreading support.

References

1. Masters, K. Artificial Intelligence in Medical Education. *Med. Teach.* **2019**, *41*, 976–980.
2. Morley, J.; Machado, C.C.V.; Burr, C.; et al. The Ethics of Artificial Intelligence in Health Care: A Mapping Review. *Soc. Sci. Med.* **2020**, *260*, 113172.
3. Waseh, S.; Dicker, A.P. Telemedicine Training in Undergraduate Medical Education: Mixed-Methods Review. *JMIR Med. Educ.* **2019**, *5*, e12515.
4. Shore, J.H.; Yellowlees, P.; Caudill, R.; et al. Best Practices in Videoconferencing-Based Telemental Health April 2018. *Telemed. J. E Health* **2018**, *24*, 827–832.
5. Soares, L. Self-Knowledge of Health Professional: Therapist Styles. *J. Clin. Res. Rep.* **2025**, *18*. [[CrossRef](#)].
6. Santos Silva, I.; Hollmann, M.; Potocnjak, M.; et al. Impact of Magnetic Fields on the Proteome of Human Cells: A Pilot and Feasibility Study. *PriMera Sci. Med. Public Health* **2025**, *7*, 1–14.
7. Torous, J.; Jän Myrick, K.; Rauseo-Ricupero, N.; et al. Digital Mental Health and COVID-19: Using Technology Today to Accelerate the Curve on Access and Quality Tomorrow. *JMIR Ment. Health* **2020**, *7*, e18848.
8. Handayani, P.W.; Alifia, K.; Sutanto, J.; et al. Online Community Support for Stroke Survivors and Caregivers: Scoping Review. *J. Med. Internet Res.* **2026**, *28*, e71190.
9. Chan, K.S.; Zary, N. Applications and Challenges of Artificial Intelligence in Medical Education: Integrative Review. *JMIR Med. Educ.* **2019**, *5*, e13930.
10. Monrouxe, L.V.; Rees, C.E. *Healthcare Professional Identities: Power, Resistance, and the Future of Medical Education*, 2nd ed.; Wiley-Blackwell: London, UK, 2025.
11. Liaw, S.Y.; Carpio, G.A.C.; Lau, Y.; et al. Multiuser Virtual Worlds in Healthcare Education: A Systematic Review. *Nurse Educ. Today* **2018**, *65*, 136–149.
12. Gerke, S.; Minssen, T.; Cohen, G. Ethical and Legal Challenges of Artificial Intelligence-Driven Healthcare. In *Artificial Intelligence in Healthcare*; Academic Press: Cambridge, MA, USA, 2020; pp. 295–336.
13. Santos Silva, I.; Paulo, S.F.; Soares, L.; et al. Investigating Social Sensemaking Technologies for Emotional Well-being of Stroke Survivors and Caregivers. *Proc. ACM Hum.-Comput. Interact.* **2025**, *9*, CSCW119. [[CrossRef](#)].
14. Gordo, A.; Santos Silva, I.D.; Nicolau, H.; et al. On the Potential of Virtual Reality for Locomotion Rehabilitation. *Ann. Med.* **2021**, *53*, S191.
15. World Health Organization. *Mental Health: Strengthening Our Response*; WHO: Geneva, Switzerland, 2022.
16. Kaplan, R.M.; Spittel, M.L.; Zeno, T.L. Educational Attainment and Life Expectancy. *Policy Insights Behav. Brain Sci.* **2014**, *1*, 189–194.
17. Rogers, C.R. *On Becoming a Person: A Therapist's View of Psychotherapy*; Houghton Mifflin: Boston, MA, USA, 1961.
18. Martinez-Garcia, D.; Rodriguez-Mañas, L. State-of-the-Art in Lifestyle Interventions for Healthy Aging: A Systematic Review of Nutrition and Physical Activity Guidelines. *J. Aging Health* **2025**, *37*, 312–328.
19. Soares, L. Technology as an Imperative Tool in Education of Clinical and Health Psychology. *J. Educ. Lang. Stud.* **2024**, *2*, 555589. [[CrossRef](#)].
20. Vygotsky, L.S. *Mind in Society: The Development of Higher Psychological Processes*; Harvard University Press: Cambridge, MA, USA, 1978.
21. Aceto, G.; Persico, V.; Pescapé, A. Industry 4.0 and Health 4.0: The Internet of Things, Big Data, and Cloud

- Computing for Healthcare. *Comput. Netw.* **2020**, *171*, 107174.
22. Topol, E.J. *Deep Medicine: How Artificial Intelligence Can Make Healthcare Human Again*; Basic Books: New York, NY, USA, 2019.
 23. Charon, R. *Narrative Medicine: Honoring the Stories of Illness*; Oxford University Press: New York, NY, USA, 2006.
 24. Nussbaum, M.C. *Not for Profit: Why Democracy Needs the Humanities*; Princeton University Press: Princeton, NJ, USA, 2010.
 25. Santos Silva, I.; Soares, L.; Schifferdecker-Hoch, F. 7 Dimensions of Holistic Wellbeing (7DHW): A Theoretical Model. *Arch. Intern. Med. Res.* **2024**, *7*, 321–330.
 26. Goleman, D. *Emotional Intelligence: Why It Can Matter More Than IQ*; Bantam Books: New York, NY, USA, 1995.
 27. Barbosa, A.; Rocha, J.; Neto, I.G. Psychotherapeutic Interventions in Prolonged Grief: An Evidence-Based Systematic Review. *Rev. Port. Psicossom.* **2025**, *27*, 12–30. (in Portuguese)
 28. Soares, L.; Botella, L.; Corbella, S.; et al. Different client styles and building the alliance with a therapist. *Rev. Argent. Clin. Psicol.* **2013**, *22*, 27–36. (in Spanish)
 29. Pellegrino, E.D. *The Virtues in Medical Practice*; Oxford University Press: New York, NY, USA, 1993.
 30. Pellegrino, E.D.; Thomasma, D.C. *For the Patient's Good: The Restoration of Beneficence in Health Care*; Oxford University Press: New York, NY, USA, 1988.
 31. Altbach, P.G.; de Wit, H. Post-Pandemic Global Dynamics of Higher Education: From Competition to Collaboration? *Int. High. Educ.* **2024**, *117*, 3–6.
 32. Li, D. Mental Health and Moral Education in the Digital Age. *Int. J. Web Based Learn. Teach. Technol.* **2025**, *20*, 20. [CrossRef].
 33. Prinsloo, P. (Re)claiming Humanity, Reclaiming Hope: The Role of Higher Education in the 21st Century. *Rev. Nac. Adm.* **2020**, *11*, 85–93. [CrossRef].
 34. Hernández-Peña, H.; Lagomarsino Montoya, M.; Aguirre Martínez, G.; et al. The Digital Age Understood From the Perspective of Humanistic Psychology. *Rev. Costarric. Psicol.* **2020**, *39*, 35–53. (in Spanish). [CrossRef]
 35. Tinoco, R.; Veiga, S.; Ribeiro, A. Digital Worlds in Higher Education in the Post-Pandemic Period: Risk Behaviors, Dependencies, and Future Perspectives. *EduSer* **2026**, *18*. (in Portuguese). [CrossRef]



Copyright © 2026 by the author(s). Published by UK Scientific Publishing Limited. This is an open access article under the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

Publisher's Note: The views, opinions, and information presented in all publications are the sole responsibility of the respective authors and contributors, and do not necessarily reflect the views of UK Scientific Publishing Limited and/or its editors. UK Scientific Publishing Limited and/or its editors hereby disclaim any liability for any harm or damage to individuals or property arising from the implementation of ideas, methods, instructions, or products mentioned in the content.