

Immersive Virtual Reality Experience for Informed Career Decision-making

Manuel Antonio Caudillo-Melgoza¹ and Mario Alberto Caudillo Melgoza²

¹Tecnológico de Monterrey, Estado de México, México

²CLeaders, Estado de México, México

manucaudillo@tec.mx

mcaudillo@cleaders.com

Abstract: Tecnológico de Monterrey's Tec21 framework structures student development through Exploration, Focus, and Specialization phases, supported by a triad of peer mentors, program directors, and student mentors. Despite this robust design, two decision points, leaving the Exploration phase and selecting a specialization, emerge as peaks of stress and anxiety, driven by fears of irreversible mistakes, financial uncertainty, and external pressures. A mixed-methods survey of 78 sixth-semester students revealed that while most report low stress when choosing a university or major, a significant minority experiences moderate to severe anxiety. Open responses highlighted concerns about costly tuition, heavy course loads, confusing curricular options, and worry over disappointing family or peers. Traditional interventions, detailed program overviews, mindfulness exercises, and proactive advising, provide some relief but may not fully engage Generation Z learners, who gravitate toward immediate, immersive experiences. Simultaneously, Tec's Mostla innovation hub has established VR Zones on twenty campuses, each equipped with HTC Vive Pro stations and a proven track record of five thousand visits within the first ten months. Yet, existing VR applications do not address the specific decision-making challenges faced by students. Anchored by the university's 2030 vision, "education not just for work but for life, and continuously", and its credo of "leadership, innovation, and entrepreneurship for human flourishing," a tailored VR prototype offers a compelling solution. By recreating campus tours, career pathways, and specialization scenarios in a controlled virtual environment, students can test outcomes without real-world stakes. This experiential rehearsal bridges information gaps, alleviates financial and logistical anxieties, and builds emotional resilience and self-efficacy, core components of human flourishing. Discussion of survey findings alongside VR's proven capacity for social-emotional learning suggests that immersive simulations can transform high-pressure academic choices into guided explorations. Students who feared choosing the wrong discipline or losing scholarships could, for instance, virtually navigate financial aid processes or "walk through" a corporate project before committing. By aligning Tec21's phased curriculum and well-being dimensions with interactive VR modules, the university can deliver decision-making workshops and in-simulation prompts that reinforce confidence at those pivotal junctures. In conclusion, implementing bespoke VR experiences, grounded in Tec21 pedagogy and deployed through Mostla's infrastructure, promises to convert moments of acute anxiety into opportunities for growth. Such an approach not only prepares students for professional success but also nurtures their capacity for continuous learning and balanced living, satisfying Tecnológico de Monterrey's aspiration to cultivate resilient individuals ready for the challenges of an ever-changing world.

Keywords: Virtual reality, Experiential learning, Game-Based learning, Higher education, Educational innovation

1. Introduction

Tecnológico de Monterrey's Tec21 framework guides learners through three stages, aiming to build foundational skills, deepen disciplinary expertise, and ultimately empower students to design bespoke specialties aligned with their aspirations. This phased curriculum is reinforced by a triad of people, peer mentor, program director, and student mentor, who support academic, professional, and personal development. Yet, critical transition points, exiting Exploration and choosing a specialty, coincide with elevated stress and anxiety, as students grapple with lifelong implications, financial uncertainty, and social expectations. Traditional remedies, including detailed program overviews and mindfulness exercises, offer some relief but may fall short for Generation Z learners accustomed to immersive, interactive experiences.

An innovation centre in the university mature VR infrastructure presents a unique opportunity. By situating decision-making scenarios within virtual simulations that replicate campus life, career pathways, and specialization options, students can rehearse choices in a low-stakes environment. Such an approach promises to bridge information gaps, bolster self-efficacy, and cultivate emotional resilience in line with the institution's 2030 vision of education "for life" and its ethos of "leadership, innovation, and entrepreneurship for human flourishing."

2. Context

The Tec21 educational framework at Tecnológico de Monterrey is structured around three progressive phases that guide students from broad exploration to personalized specialization. In the initial Exploration stage,

learners engage with competencies common to multiple disciplines, an approach that also serves to reinforce their confidence in choosing a career path. During the subsequent Focus phase, attention shifts toward the mastery of skills directly related to the student's selected field. Finally, in the Specialization stage, known as Semesters Tec, students gain the freedom to curate experiences aligned with their vocational interests, whether through disciplinary specializations, collaborative projects with industry partners, dual-degree programs, or international exchanges, all designed to broaden horizons and support well-rounded development.

Parallel to this curricular design, the Tec21 accompaniment model assigns each incoming student a dedicated support team consisting of a peer mentor, program director, and student mentor. The peer mentor, drawn from upper semesters in a related program, offers practical advice on campus life and helps newcomers navigate institutional practices, especially those transitioning from different preparatory systems. The program director assumes responsibility for professional academic guidance, ranging from career decisions and specializations to scheduling, international programs, and disciplinary specializations, ensuring that each student's academic trajectory aligns with their goals. The student mentor addresses personal growth by fostering the seven dimensions of well-being outlined in Tec21: self-awareness and management, innovative entrepreneurship, social intelligence, ethics and citizenship, complex reasoning, communication, and digital transformation.

Drawing on three years of mentoring experience that follow students from their first semester through the seventh of eight, two pivotal decision points have emerged: exiting the Exploration phase and selecting a specialization. These junctures coincide with the ongoing maturation of the prefrontal cortex, a brain region vital for reasoning, planning, and decision-making, which neuroscientific research indicates continues developing into the mid-twenties (Steinberg, 2005). Recognizing that such moments often trigger anxiety, mentors collaborate closely with the university's Well-Being Department to offer timely support. This combined effort ensures that students approach critical academic choices from a position of informed calm rather than heightened stress.

2.1 Stress and Anxiety in Decision-Making in Higher Education

Research into how stress and anxiety influence decision-making among university students uncovers a dynamic interaction between emotional states, mental processes, and situational pressures. A recurring observation is that academic stress and indecision reinforce one another. Flores-Buils and Mateu-Pérez (2025) found that students experiencing vocational uncertainty often report heightened academic stress, with attentional lapses and anxious feelings intensifying their career-related doubts. Anghel and Gati (2019) reached similar conclusions, showing significant associations between career decision difficulties and negative emotions such as stress, anxiety, and depression. Extending this perspective, Lee and Park (2016) observed that anxiety linked to practical training and low confidence in career decision-making contribute to procrastination and less favourable vocational outcomes.

Studies examining decision-making under uncertain conditions further highlight anxiety's role in shaping choices. Yan et al. (2022) noted that during the COVID-19 pandemic, elevated anxiety prompted students to seek quick cognitive closure, at times leading to precipitous or irrational judgments. McKian (2015) demonstrated impaired inhibitory control in students with greater anxiety and stress symptoms, making them more inclined toward risky options. In a focused study on domain-specific fears, Buelow and Barnhart (2016) reported that math anxiety undermines performance on tasks requiring careful risk-reward evaluation, suggesting both general and subject-related anxieties can skew decision strategies toward suboptimal paths.

Attention has also turned to interventions aimed at easing the cognitive burden of stress and anxiety. Eshet, Grinautsky, and Steinberger (2024) showed that mindfulness exercises can lower statistical anxiety and reduce tendencies toward unethical decision-making under risky conditions. Parallel findings from Thomas, Kamath, and Joseph (2024) indicate that mindfulness-based stress reduction programs bolster self-confidence and diminish academic test anxiety. Together, these studies imply that cultivating mindful awareness may enhance decision-making by lessening emotional interference and improving focus.

Such evidence underscores the importance of addressing stress and anxiety to support effective decision-making in higher education. Academic pressure and negative affect undermine clarity and self-assurance, sometimes provoking hasty or risky choices. Mindfulness practices offer a viable countermeasure, and future research would benefit from longitudinal and experimental designs to unravel the mechanisms at play and to assess intervention outcomes across diverse academic contexts.

2.2 Social-Emotional Development in Higher Education

Recent research highlights a shift toward hands-on learning approaches that nurture social-emotional capacities in university contexts. Experiential pedagogies, from community service to gamified coursework, are reshaping curricula and equipping students with empathy, resilience, and collaboration skills vital for personal and professional areas.

Service learning and community engagement stand out as powerful drivers of social-emotional growth. Rodríguez-Zurita et al. (2024) found that students involved in sustainability-focused service projects report stronger social responsibility, improved emotional resilience, and heightened empathy. By confronting real-world challenges, learners engage in reflective practices that reinforce emotional awareness and foster key socio-emotional learning (SEL) outcomes (Rodríguez-Zurita et al., 2024).

Leadership education similarly relies on immersive experiences to develop affective and interpersonal competencies. K  pyl   and Palvalin (2023) outline a model in which management principles are taught through practice-oriented exercises, prompting students to navigate uncertainty and examine their emotional responses. Sandberg (2024) adds that art-based leadership modules, integrating aesthetic and embodied activities, promote self-reflection and elevate emotional intelligence among emerging leaders.

Active learning methods such as flipped classrooms and gamification further illustrate this connection. Pellu, et al. (2023) observed that flipped-classroom environments enhance listening, problem-solving, and collaboration, driven by deeper emotional engagement. In business management courses, Skritsovali (2023) demonstrated that gamified elements boost motivation while cultivating resilience and creative teamwork, underscoring the capacity of game mechanics to support SEL.

The move to remote and hybrid instruction has inspired digital experiential formats. Thier, Mason, and Mattice (2023) describe virtual study-abroad and NGO partnership projects that build global awareness, adaptability, and intercultural communication in online settings. Brodie et al. (2022) argue that post-pandemic educational reforms must address socio-emotional well-being directly, recommending digitally mediated experiential initiatives to sustain autonomy, self-regulation, and community across dispersed learning environments.

Instructional support plays a crucial role in embedding SEL within higher education. Collie (2021) shows that student-centred teaching strategies enhance emotional regulation and social competence. Mart  nez, et al. (2023) demonstrate that incorporating active methodologies into teacher training creates conditions where academic achievement and socio-emotional development reinforce one another, highlighting the importance of educator preparation in sustaining SEL.

Together, these studies illustrate that experiential learning, through service projects, leadership simulations, active approaches, and digital adaptations, offers multiple pathways to cultivate social-emotional skills in higher education.

2.3 Immersive Virtual Reality Experiences in Higher Education

Recent academic literature highlights the growing use of immersive virtual reality (VR) technologies in higher education to support not only cognitive development but also SEL. These immersive environments offer opportunities for students to engage with emotionally charged, simulated contexts that stimulate authentic affective responses and interpersonal reflection.

A notable body of work centres on VR's potential to foster empathy and emotional understanding. For instance, Beverly et al. (2022) describe how 360   cinematic VR experiences in healthcare education enhance not only technical competencies but also emotional engagement through an increased sense of presence. Similarly, Aguirre-Calan et al. (2024) examine a VR intervention tailored to university students, finding that when integrated into courses addressing ethical and social issues, immersive VR significantly enhances empathic awareness. These findings suggest that VR simulations can function as experiential platforms for confronting complex interpersonal scenarios, thereby contributing to the emotional development of learners.

Qualitative studies provide further evidence of VR's impact on non-technical skills relevant to SEL. Helle et al. (2023) conducted focus group sessions with healthcare and social work students, revealing that VR-based simulations promote ethical reflection, communication, and decision-making. In parallel, Lie et al. (2023) report on the development of a VR educational tool intended to elicit emotional responses, noting increased empathy among participants as a direct outcome of interacting with virtual characters in emotionally realistic settings.

Systematic reviews reinforce these findings within professional education. Juan and O’Connell (2024) synthesize a range of studies on simulation-based learning in nursing education, concluding that immersive VR scenarios help cultivate empathy and emotional responsiveness critical for clinical practice. Dhiman (2023) extends this perspective by highlighting VR’s ability to expose students to diverse worldviews and emotionally charged environments, effectively bridging the empathy gap.

Further research explores VR’s role in supporting self-efficacy and learner motivation, both key factors in socio-emotional development. Hsiao (2021) shows that immersive experiential education strengthens social work students’ confidence and engagement. Blair et al. (2021) add that 360° VR content in health and social care education generates emotionally immersive learning spaces that encourage active emotional participation. Farley and Herrera (2023) also document the benefits of trauma-sensitive VR environments, noting their potential to build empathy and emotional readiness for real-world challenges.

Together, these studies suggest that immersive VR, when thoughtfully integrated into higher education curricula, can serve as a powerful medium for socio-emotional learning. By simulating emotionally resonant experiences, VR supports the development of empathy, self-awareness, and interpersonal competence—skills essential for personal and professional growth.

3. Rationale for the Virtual Reality Experience

Anchored in the institution’s 2030 ambition to deliver an education “not just for work but for life, and continuously,” and guided by the motto “leadership, innovation, and entrepreneurship for human flourishing,” a dedicated VR prototype can extend this vision by immersing students in lifelike scenarios at key decision moments. Rather than confronting abstract uncertainties alone, learners step into virtual simulations that mirror campus environments, career pathways, and specialization choices, allowing them to experiment with outcomes without real-world stakes. In doing so, the experience cultivates emotional resilience and self-efficacy, core ingredients of human flourishing, while bridging information gaps and reducing financial or logistical anxieties. This alignment of pedagogical purpose with Mostla’s technological capacity transforms high-pressure academic choices into an exploratory journey that prepares students not only for professional success but for a balanced, flourishing life.

3.1 Analysis of Student Stressors in Decision-Making

A mixed-methods instrument comprising Likert-scale items and open-ended questions was administered to 78 sixth semester students to explore stress and anxiety at three critical decision points in their higher-education trajectories. Participants first rated their emotional response to choosing a university on a five-point scale (1 = not at all stressed/anxious; 5 = severe anxiety or physical symptoms). Although the plurality (37.2 %) selected “2,” a notable 17.9 %–14.1 % of students reported moderate to high stress (ratings of 3 or 4) and 5.1 % rated their anxiety at the highest level. When asked to elaborate on ratings of 3 or above, many described fear of irreversible mistakes (“I didn’t want to pick the wrong program and waste time”), financial uncertainty (“I wasn’t sure I could afford tuition”), and personal crises that magnified indecision (“a personal crisis made me question my motives”). Others cited academic workload concerns, short, content-heavy courses and rapid deadlines that threatened both grades and well-being, and the pressure of family expectations or disappointing others.

In the second decision phase, selecting a major in the second or third semester, stress levels eased slightly, with 43.6 % at “1” and 32.1 % at “2,” yet 24.4 % still reported moderate to severe anxiety (ratings 3–5). Open responses illuminated anxiety around changing fields: students recounted lengthy, worrisome processes of switching majors, reluctance to disappoint parents, and doubts about their own aptitude in the newly chosen discipline. Uncertainty around similar program options, unclear curricular descriptions, and a lack of guidance exacerbated these fears. One student remarked that engineering disciplines “felt too similar” on paper, amplifying indecision, while another noted anxiety over confessing a change of heart to their family.

By the sixth semester, when choosing a specialization experience, stress was more evenly distributed: 35.5 % of respondents rated “1,” 25.8 % “2,” and 25.8 % “3,” with only 11.3 % selecting “4” and 1.6 % a “5.” Students who rated their stress at 3 or higher described conflicting opportunities, such as deciding between an exchange program and a local internship, short planning windows for researching requirements, and worries about long-term career impact. One participant explained that fear of choosing a specialization “that wouldn’t lead to a job” loomed large, while another worried about adapting to a new campus environment. Social pressures also surfaced, with several students admitting they felt judged by peers or family for their choices.

Together, the quantitative and qualitative data reveal that, although the majority of students experience mild stress across these decision points, a substantial minority endure moderate to severe anxiety driven by uncertainty, fear of error, financial concerns, information gaps, and external expectations. These findings suggest that targeted interventions, such as comprehensive decision-making workshops, detailed program overviews, and proactive advising, should be concentrated at the transition from broad Exploration to Focus and throughout the specialization planning phase, enabling students to approach these pivotal choices with confidence and reduced distress.

3.2 Technological Context and Feasibility

Tecnológico de Monterrey already possesses a mature technological backbone that enables the deployment of immersive virtual reality (VR) solutions across its campuses. In late 2017, the institution unveiled Mostla, a dedicated innovation hub, during the International Congress of Innovation and Educational Research; the facility then began serving students, faculty, and staff in January 2018. Within ten months, Mostla recorded over 5,000 visits, signalling strong institutional uptake and community enthusiasm.

Over the following years, Mostla's footprint grew to encompass twenty campuses, each hosting a VR Zone outfitted with four HTC Vive Pro stations. These zones empower users to navigate richly detailed virtual spaces and engage with interactive simulations. The choice of the name "Mostla", derived from the Nahuatl word for "tomorrow", speaks to its aspiration to nurture a spirit of exploration and digital competence among learners and educators alike. To realize this vision, Mostla pursues four core objectives: embedding cutting-edge technology in curricular and extracurricular projects; guiding students in leveraging VR for cross-disciplinary initiatives; advising academic staff on the thoughtful incorporation of immersive tools; and aligning these technologies with large-scale institutional priorities.

Mostla also provides structured group demos, tailored consulting services, and a reservation system for VR hardware and spaces, making advanced immersive tools readily available across fields of study. Despite this well-developed hardware network, a notable absence persists in software solutions designed specifically for higher education contexts. Current VR titles often fail to align closely with course objectives or institutional goals, limiting their pedagogical value. This gap reveals a clear opportunity: by creating or customizing VR applications that address the unique needs of university students, the institution can fully capitalize on its existing infrastructure and enhance educational outcomes through immersive, game-based experiences.

4. Discussion

The Tec21 model's phased progression, from Exploration through Focus to Specialization, intends to scaffold students' academic and personal growth. Yet our findings reveal that the transition points where learners exit broad exploration and select specialization often coincide with spikes in stress and anxiety. Flores-Buils and Mateu-Pérez (2025) identify a reciprocal relationship between vocational uncertainty and academic stress, an insight borne out by students' reports of fear of irreversible mistakes and financial worries during their initial choice of university. Likewise, Anghel and Gati (2019) link career indecision with heightened negative emotions, a pattern reflected in our participants' anxiety when contemplating program changes in early semesters.

Although stress diminishes somewhat during the major-selection phase, with 43.6 % reporting minimal anxiety, the persistence of moderate to severe stress in 24.4 % of students underscores Lee and Park's (2016) observation that low confidence in decision-making can foster procrastination and emotional strain. By the sixth semester, stress levels become more evenly distributed; yet 27.4 % still describe moderate to severe anxiety when choosing a specialization, echoing Yan et al.'s (2022) finding that uncertainty can drive hasty, ill-considered choices, and McKian's (2015) evidence of impaired inhibitory control under stress.

Mindfulness interventions have shown promise in reducing decision-related anxiety (Eshet, Grinautsky, & Steinberger, 2024; Thomas, Kamath, & Joseph, 2024). However, their reliance on sustained practice may limit uptake among Generation Z learners who favour immediate, interactive engagement. Here, immersive VR offers a contextually relevant alternative: by simulating campus environments, career pathways, and specialization options, students encounter lifelike scenarios that allow safe experimentation without real-world stakes. This virtual rehearsal can reduce informational gaps and financial or logistical anxieties, directly addressing the stressors our mixed-methods data uncovered.

Mostla's well-established network of VR Zones across twenty campuses provides the necessary hardware backbone for such an intervention. Yet, as the rationale highlights, the absence of bespoke software tailored to decision-making hinders pedagogical impact. By developing dedicated VR prototypes aligned with Tec21's

phases and Tec21's well-being dimensions, the institution can leverage its technological capacity to cultivate emotional resilience and self-efficacy at critical junctures. This approach transforms high-pressure academic choices into guided exploratory experiences, thus bridging theory and practice in service of a more balanced, flourishing student journey.

5. Conclusions

The convergence of Tec21's structured phases, the documented stressors at pivotal academic junctures, and Mostla's VR capabilities points to a practical, context-sensitive intervention. Immersive prototypes that mirror real-world decision points can transform abstract anxieties into concrete explorations, enabling students to experiment, reflect, and build confidence before committing to life-shaping choices. By harnessing game-inspired interactions and emotionally responsive design, these VR experiences align with Generation Z's learning preferences while addressing the root causes of decision-related distress.

Implementing tailored VR applications, grounded in Tec21's pedagogical pillars and accompanied by targeted workshops and advisement, will allow Tecnológico de Monterrey to leverage existing resources for maximal impact. In doing so, the institution can satisfy its ambition to nurture not only capable professionals, but emotionally resilient individuals equipped for continuous growth and flourishing throughout their lives.

Acknowledgements

We want to acknowledge the technical and financial support of CLeaders, in the production of this work, the technical and financial support of the Writing Lab, Institute for the Future of Education, Tecnológico de Monterrey, Mexico, in the production of this work.

Ethics Declaration: This is to acknowledge that the authors report there are no competing interests to declare.

AI Declaration: The authors used OpenAI's ChatGPT to assist in organizing ideas, for grammar and style editing without generating substantive content. Additionally, the Scite platform was employed to perform intelligent searches for relevant, recent papers indexed in Scopus and Web of Science. Outputs from these tools were used solely to inform structural organization and language refinement; all analytic content and interpretations remain the author's own.

References

- Anghel, E., & Gati, I. (2019). The associations between career decision-making difficulties and negative emotional states. *Journal of Career Development*, 48(4), 537–551. <https://doi.org/10.1177/0894845319884119>
- Aguirre-Calan, G., Mejía-Jálabe, A., Romero-Torres, J., & Morillo-Andrade, A. (2024). Assessment of the impact of virtual reality on empathy and learning in university students. *International Journal of Religion*, 5(11), 6209–6225. <https://doi.org/10.61707/2whvbg90>
- Beverly, E., Rigot, B., Love, C., & Love, M. (2022). Perspectives of 360-degree cinematic virtual reality: interview study among health care professionals. *Jmir Medical Education*, 8(2), e32657. <https://doi.org/10.2196/32657>
- Blair, C., Walsh, C., & Best, P. (2021). Immersive 360° videos in health and social care education: a scoping review. *BMC Medical Education*, 21(1). <https://doi.org/10.1186/s12909-021-03013-y>
- Brodie, K., Joffe, A., Dukhan, S., Godsell, S., Klerk, D., & Padayachee, K. (2022). From pandemic disruption to post-pandemic transformation: New possibilities for teaching in South African higher education. *South African Journal of Higher Education*, 36(4), 66–84. <https://doi.org/10.20853/36-4-5180>
- Buelow, M. T., & Barnhart, W. R. (2015). The influence of math anxiety, math performance, worry, and test anxiety on the Iowa Gambling Task and Balloon Analogue Risk Task. *Assessment*, 24(1), 127–137. <https://doi.org/10.1177/1073191115602554>
- Collie, R. J. (2021). Instructional support, perceived social-emotional competence, and students' behavioral and emotional well-being outcomes. *Educational Psychology*, 42(1), 4–22. <https://doi.org/10.1080/01443410.2021.1994127>
- Dhiman, B. (2023). The power of immersive media: enhancing empathy through virtual reality experiences. <https://doi.org/10.22541/essoar.168565392.25062595/v1>
- Eshet, Y., Grinautsky, K., & Steinberger, P. (2024). To behave or not (un)ethically? The meditative effect of mindfulness on statistics anxiety and academic dishonesty moderated by risk aversion. *International Journal for Educational Integrity*, 20, 6. <https://doi.org/10.1007/s40979-024-00151-w>
- Farley, H. and Herrera, E. (2023). Unlocking empathy and preparedness. Ascilite Publications, 393–397. <https://doi.org/10.14742/apubs.2023.578>
- Flores-Buils, R., & Mateu-Pérez, R. (2025). The reciprocal relationship between vocational indecision and academic stress, and how to cope with it through resilience. *Education Sciences*, 15(2), 222. <https://doi.org/10.3390/educsci15020222>
- Helle, N., Vikman, M., Dahl-Michelsen, T., & Lie, S. (2023). Health care and social work students' experiences with a virtual reality simulation learning activity: qualitative study. *Jmir Medical Education*, 9, e49372. <https://doi.org/10.2196/49372>

- Hsiao, S. (2021). Effects of the application of virtual reality to experiential education on self-efficacy and learning motivation of social workers. *Frontiers in Psychology*, 12. <https://doi.org/10.3389/fpsyg.2021.770481>
- Juan, S. and O'Connell, K. (2024). A systematic review of the application of simulation to promote empathy in nursing education. *Simulation in Healthcare the Journal of the Society for Simulation in Healthcare*, 19(6), 379-387. <https://doi.org/10.1097/sih.0000000000000775>
- Käpylä, J., & Palvalin, M. (2023). Experiential pedagogical model for teaching management and leadership in higher education. <https://doi.org/10.36315/2023v2end128>
- Lee, M.-S., & Park, H. (2016). A study of practical training anxiety, career decision-making self-efficacy, and career decision level of students majoring in language rehabilitation in college. *The Journal of the Korea Contents Association*, 16(8), 169–179. <https://doi.org/10.5392/jkca.2016.16.08.169>
- Lie, S., Røykenes, K., Sæheim, A., & Groven, K. (2023). Developing a virtual reality educational tool to stimulate emotions for learning: focus group study. *Jmir Formative Research*, 7, e41829. <https://doi.org/10.2196/41829>
- Martínez, E., Pegalajar, M., & Burgos-García, A. (2023). Active methodologies and curricular sustainability in teacher training. *International Journal of Sustainability in Higher Education*, 24(6), 1364–1380. <https://doi.org/10.1108/ijshe-05-2022-0168>
- Mckian, S. (2015). Risky decision making and a failure of inhibitory control in university students with symptoms of anxiety, stress and depression. *European Psychiatry*, 30(S1), 1219. [https://doi.org/10.1016/S0924-9338\(15\)32001-0](https://doi.org/10.1016/S0924-9338(15)32001-0)
- Pellu, M., Nirwana, A. R., & Hajar, I. (2023). Correlation of social emotional learning with the use of flipped classroom method in learning listening. *Exposure Jurnal Pendidikan Bahasa Inggris*, 12(2), 250–256. <https://doi.org/10.26618/exposure.v12i2.12320>
- Rodríguez-Zurita, D., Jaya-Montalvo, M., Moreira-Arboleda, J., Díez, E., & Carrión-Mero, P. (2024). Sustainable development through service learning and community engagement in higher education: A systematic literature review. *International Journal of Sustainability in Higher Education*, 26(1), 158–201. <https://doi.org/10.1108/ijshe-10-2023-0461>
- Sandberg, B. (2024). Outcomes of art-based leadership development: A qualitative metasummary. *Behavioral Sciences*, 14(8), 714. <https://doi.org/10.3390/bs14080714>
- Skritsovali, K. (2023). Learning through playing: Appreciating the role of gamification in business management education during and after the COVID-19 pandemic. *The Journal of Management Development*, 42(5), 388–398. <https://doi.org/10.1108/jmd-04-2023-0124>
- Steinberg, L. (2005). Cognitive and affective development in adolescence. *Trends in Cognitive Sciences*, 9(2), 69–74. <https://doi.org/10.1016/j.tics.2004.12.005>
- Thier, M., Mason, D., & Mattice, B. (2023). Experiential learning... remotely: Study abroad, global citizenship and NGO management. *Higher Education Quarterly*, 78(3), 766–783. <https://doi.org/10.1111/hequ.12485>
- Thomas, T., Kamath, N., & Joseph, G. (2024). Efficacy of mindfulness based stress reduction [MBSR] on academic test anxiety and self-confidence among Indian undergraduates. *Social Medicine*, 17(3), 164–173. <https://doi.org/10.71164/socialmedicine.v17i3.2024.1731>
- Yan, D., Zhang, H., Guo, S., & Zeng, W. (2022). Influence of anxiety on university students' academic involution behavior during COVID-19 pandemic: Mediating effect of cognitive closure needs. *Frontiers in Psychology*, 13, 1005708. <https://doi.org/10.3389/fpsyg.2022.1005708>