

How Experts Learn: Charting a Course for Advanced Practice Teaching and Learning

Matthew R. Kutz, PhD, AT, ATC, CSCS, CES

Doctor of Athletic Training Program, Nicole Wertheim College of Nursing and Health Sciences, Florida International University, Miami

Context: Changes in the healthcare landscape include a burgeoning gig economy, large-scale job vacancies, remote learning, and a volatile, uncertain, complex, and ambiguous (VUCA) marketplace, which requires reevaluating our approach to education. These changes fundamentally alter the nature and assumptions of education.

Objective: To generate dialogue on the relevance of heutagogy, a self-determined learning model, in contrast to traditional pedagogical and andragogical methods.

Background: The healthcare industry is experiencing a workforce exodus. The gig economy, characterized by flexible, freelance work, is on the rise and reshaping the job market. Heutagogy, as a holistic self-determined learning approach, equips learners with the skills to thrive in this evolving landscape.

Synthesis: Heutagogy emphasizes learners' proactive roles in their education, fostering autonomy and adaptability. It complements the flexibility demanded by a VUCA marketplace and empowers individuals to navigate unpredictable dynamics. It empowers learners to identify knowledge gaps, navigate complexity, and continuously grow, focusing on learner capability and autonomy. Heutagogy is particularly relevant where professionals must adapt rapidly and meet evolving patient expectations.

Results: This article delineates the progression from pedagogy to andragogy to heutagogy, highlighting heutagogy's proactive learning facilitation. Heutagogy benefits advanced-practice learners and professionals entering a dynamic environment, fostering adaptability, personalized learning, and collaborative exploration.

Recommendations: The integration of heutagogy into formal education should strike a balance between autonomy and structured guidance. Faculty roles must shift to become informal mentors and learner advocates, supporting learners and equipping them for a self-determined career trajectory.

Conclusions: Involving heutagogy in athletic training education will not be easy. However, as educators embrace heutagogy, they must redefine their roles as facilitators of self-determined learning, ensuring that learners are prepared to navigate the uncertainties of the modern marketplace.

Key Words: heutagogy, self-determined learning, gig economy, healthcare education, VUCA

Dr Kutz is currently a clinical professor in the Doctor of Athletic Training Program at Florida International University. Address correspondence to Matthew R. Kutz, PhD, AT, ATC, CSCS, CES, Doctor of Athletic Training Program, Nicole Wertheim College of Nursing and Health Sciences, Florida International University, 11200 SW 8 Street - AHC 3, Miami, FL 33199. mkutz@fiu.edu.

Full Citation:

Kutz MR. How experts learn: charting a course for advanced practice teaching and learning. *Athl Train Educ J.* 2024;19(1):35–41.

How Experts Learn: Charting a Course for Advanced Practice Teaching and Learning

Matthew R. Kutz, PhD, AT, ATC, CSCS, CES

KEY POINTS

- The gig economy has a significant influence on healthcare, contributing to the challenges of finding, recruiting, and retaining employees and may explain the high number of vacant healthcare positions.
- Heutagogy is a Transformative Teaching and Learning Practice particularly in response to the changing landscape of healthcare, the Great Resignation, and the gig economy.
- Learning strategies, evolving from pedagogy to andragogy and finally heutagogy, must align with learner needs, with heutagogy proving the most benefit for advanced-practice learners and professionals.
- Heutagogy promotes personalized learning for real-world challenges and is seen as crucial for preparing professionals to thrive in a rapidly evolving healthcare landscape.

INTRODUCTION

In a professional climate characterized by vacant jobs, remote and virtual learning, constant changes in healthcare policy and education, a burgeoning gig economy, unprecedented levels of healthcare workers exiting their jobs, and a marketplace that is volatile, uncertain, complex, and ambiguous (VUCA), there is an urgent need to re-examine how we approach learning and knowledge acquisition. This necessity emphasizes the importance of heutagogy as a critical teaching and learning practice, which stands as a contrast to more traditional practices rooted in pedagogy and andragogy.

THE CHANGING MARKETPLACE

Clinicians are exiting healthcare at an unprecedented pace,¹ which is driving significant changes in the marketplace and indirectly education. Unique to this is that burnout is not cited among the main reasons for this exodus. This “great resignation” in healthcare is facilitated by chaotic clinical environments, perceived lack of organizational support, toxic cultures, disrespect, and unethical work climates,¹⁻³ and satisfaction with one’s supervisor continues to be one of the most significant factors to employee turnover.⁴ In addressing the Great Resignation in healthcare, The President of the American College of Cardiology has stated that “addressing and resolving the current workforce crisis is a critical strategic initiative.”⁵ The reality is that healthcare across all sectors is changing. Employees are harder to find, recruit, and retain, and the emergence of the gig economy is contributing to that difficulty.

One of the many emergent influences of a volatile, uncertain, complex, and ambiguous (VUCA) marketplace on the learning landscape is the gig economy. The gig economy, representing a quintessential complexity in society, is characterized by flexible, temporary, or freelance jobs, as opposed to the traditional full-time employment.⁶ Ecosnomists Mishra and Yadav⁷ state that growth of the gig economy is unstoppable. The gig economy grew by 33% in 2020, expanding 8.25 times faster than the US economy as a whole. This trend shows no signs of stopping. It

is estimated that by 2028, gig workers in the United States alone will top over 90 million,⁸ and other estimates report that by 2027, 50% of the US workforce will participate in the gig economy.⁹

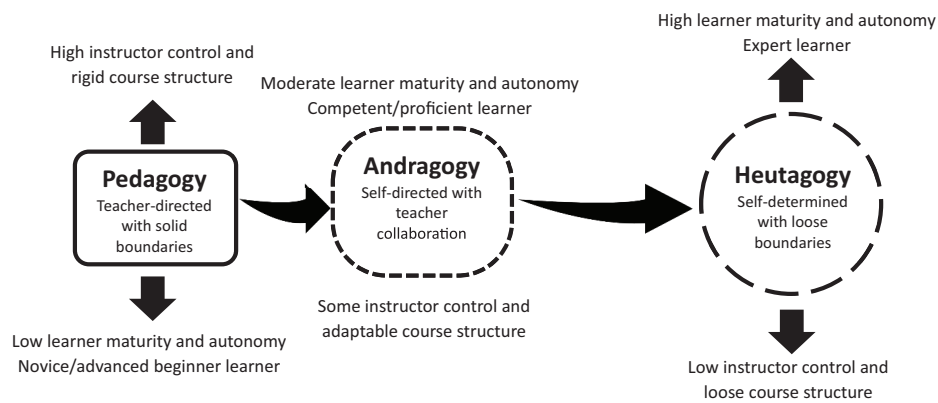
This explosion in gig work may help explain why there are so many vacant healthcare jobs and may provide a clue for employers of athletic trainers on where the workforce is or what they are waiting for. The gig economy provides a perfect ecosystem for large gaps in applicant pools and recruitment. In a recent study on the gig economy within healthcare, it was said that, “the majority of millennials and employees are shifting toward a working model that is identified by freedom in working hours, choice of work, freelancing, and small tasks (gigs), characterized by short-term contracts rather than being a full-time employee in an organization.”¹⁰ It is likely that some eligible employees born during or after the 1980s (ie, Millennials and Gen Z), some of who are in their mid- to late 40s, prefer gig work over traditional jobs.

Many people mistakenly think that the gig economy is about side hustles or earning extra spending money. That is not the case; in 2020, 44% of gig workers in the United States are considering gig work to be their primary source of income, a trend that is clearly growing.¹¹ Although the desire for gig work does include discretionary income, it is more frequent to find that the drivers behind the gig economy are for autonomy, flexibility, avoidance of being micromanaged, distaste for office politics, and independence.¹⁰⁻¹²

The fact is, “the gig economy is shaping the way healthcare is managed and delivered.”¹³ A fact that directly influences education and learning. Failing to adjust for this “new shape” is irresponsible at best and negligent at worst. Athletic training educators must ask, what can be done to prepare our students for a profession within a global marketplace with economic forces few of us have encountered or understand? For example, within the context of internationalization, nursing researchers have reported that the gig economy can address many of the “major challenges” affecting the expatriate workforce.¹¹ As international athletic training increases in prevalence, the gig economy may become even more relevant to athletic training education and practice and should be an important part of the profession’s future research agenda.

The American Academy of Physician Leadership published an editorial stating that the coronavirus disease 2019 pandemic was a major accelerant to the gig economy in healthcare,¹⁴ presumably leaving many disciplines lagging. Within medicine, physicians are embracing the gig economy as an alternative to traditional clinical settings.¹⁴ Specific to athletic training, Go4, telehealth, and travel care are examples of accommodating this growing gig economy. As the nature of work in this VUCA economy is constantly shifting, the gig worker has emerged as an adaptation. Despite the already turbulent environment of providing patient-centric care in a micromanaged environment, providing that care in a gig economy adds further complexity and

Figure. The evolution of teaching and learning.



often requires a broad and adaptive skill set and self-determined learning, where heutagogy becomes invaluable to the learner.

EDUCATING FOR ADAPTIVE SKILLS IN VUCA

Heutagogy is the study of self-determined learning.¹⁵ It applies a holistic approach to developing learner capabilities, with learning as an active and proactive process and learners serving as “the major agent in their own learning, which occurs as a result of personal experiences.”¹⁶ According to Blaschke,¹⁵ a heutagogical learning environment facilitates the development of capable learners and emphasizes both the development of learner competencies and the development of the learner’s capability and capacity. Heutagogy considers the importance of knowing how to learn and treats it as a fundamental skill that can accommodate for the pace of innovation and the changing structure of communities and workplaces.^{16,17} Blaschke¹⁵ states that heutagogy transcends competency and secures learner capability, which is characterized by “learner confidence in his or her competency and, as a result, the ability to take appropriate and effective action to formulate and solve problems in both familiar and unfamiliar and changing settings.”

Adding a heutagogical framework to teaching and learning strategies may provide some relief to the factors associated with VUCA, the Great Resignation, and the gig economy. Heutagogy equips the learner with the ability to proactively identify gaps in their knowledge and independently seek solutions, ensuring that they remain competitive and updated. This form of self-determined learning not only complements the flexibility of the current marketplace but also empowers individuals to navigate its unpredictable dynamics, bolstering their value in the face of changing market demands, which includes patient expectations.

EVOLUTION OF LEARNING

Most learners begin their educational journey under a pedagogy-oriented framework, a teacher-directed learning paradigm. Here, the student, often unaware of what they do not know, is reliant on a teacher to define both the content and method of learning. This method of instruction, while effective for foundational knowledge, may not suffice in a rapidly changing environment. This philosophy does not accommodate knowledge workers and requires the “teacher” to always know more than the student.

As learners mature, especially into adulthood, they move into the realm of andragogy, a term coined in 1833 by Alexander

Knapp and later introduced to the educational literature by Eduard Lindeman.^{18,19} It was much later that Malcom Knowles brought it into the mainstream.²⁰ Andragogy is a self-directed learning approach recognizing that adults are often aware of what they need or want to learn. They set the pace, select the content, and decide the method, taking charge of their learning journey. Often, teachers and students collaborate, and the instructor acts as a guide or facilitator in learning. In a VUCA marketplace, where expertise is in constant flux and where a gig economy requires the ability to adapt to unpredictable and unknown variables, another level of learning emerges: heutagogy. This self-determined learning approach is the domain of the proficient and expert. Unlike other forms of learning, heutagogy is proactive, where the learner, often in collaboration with other experts, identifies gaps or “unknowns” in their knowledge. Recognizing these areas, they actively pursue new insights, essentially teaching themselves and unearthing undiscovered information. Under this framework, the teacher takes on the role of a mentor or advocate and can be much less of a content expert without much detriment to the “student.” This is good news, as some athletic training faculty do not treat or have not treated patients in years or even decades, and the “contemporary expertise” they have, as required by the Commission on Accreditation of Athletic Training Education standards, is often in curriculum design, administration, or research and not clinical practice. A depiction of learning autonomy and the progression toward heutagogy-based learning is depicted in the Figure.

WHERE DO HEUTAGOGICAL METHODS BELONG?

As a self-determined approach, heutagogy is the domain of the proficient and expert. It requires a level of awareness and metacognition that novice learners may be lacking and best supports postgraduate students who already possess industry-based competency.²¹ As such, it is most appropriate for advanced-practice learning environments, such as doctoral programs (research-based PhDs to advanced-practice DATs), advanced-practice residencies, and postprofessional continuing education.

However, heutagogy is not exclusively the domain of advanced-practice education. Research in nursing education and undergraduate medical education in the United Kingdom has demonstrated that heutagogy has clear benefits for entry-level or professional learners.^{21,22} Original research with undergraduate medical students reported that students found heutagogy to be more practice oriented and that heutagogy significantly improved student confidence and capability compared with andragogy and pedagogy.²¹

Glanville²³ states that nursing education does not provide high enough levels of self-efficacy in learning and that “heutagogy could emerge to transform knowledge construction” in a direction that enables students to acquire the needed level of self-efficacy and capacity to navigate complex changing environments.

Heutagogy does provide significant challenges to educators.²² It takes a skilled and expert educator to leverage heutagogy at the level needed to foster the capacity and confidence needed by clinicians to navigate the nonclinical threats (gig economy, VUCA marketplace, and workplace exodus) facing the profession. Educators of entry-level (professional) students are much less prepared or perhaps lack the mindset necessary to facilitate self-determined learning. Therefore, they may feel more comfortable implementing heutagogy within postprofessional, residency-based, or advanced-practice (DAT) education, which admittedly is a great place to start.

Heutagogy plays a pivotal role as the driving model behind the type of learning needed to face today’s complex challenges. Its principles and approaches align closely with the needs of seasoned professionals who are seeking to push the boundaries of their knowledge and expertise. Here are some ways heutagogy contributes to advanced-practice learning, all of which contribute to learning to ask better questions:

1. **Navigating the unknown.** Experts often find themselves at the forefront of their fields, where standard knowledge resources are limited or nonexistent. Heutagogy equips them with the tools and mindset to navigate these unknown terrains, encouraging them to explore, experiment, and discover.
2. **Fostering continuous growth.** The very nature of heutagogy is rooted in continuous learning. For experts, this means an ongoing commitment to personal and professional growth, ensuring that they remain at the cutting edge of their professions.
3. **Developing adaptability.** In rapidly evolving fields, the ability to pivot and adapt is crucial. Heutagogical practices encourage adaptability, enabling experts to reassess and realign their objectives based on evolving data, research, and insights.
4. **Encouraging reflection.** Advanced practice often requires introspection. Heutagogy places a strong emphasis on self-reflective practices, prompting experts to evaluate their strategies, methodologies, and outcomes, leading to refined approaches and enhanced understanding.
5. **Personalized learning pathways.** Experts often have unique learning needs that do not fit into conventional structures. Heutagogy supports the development of personalized learning pathways, tailored to individual objectives, challenges, and curiosities.
6. **Promoting collaborative exploration.** Although heutagogy is deeply personal, it also acknowledges the value of collaborative exploration. Experts can engage with peers, combining their knowledge and skills to tackle complex challenges and create new knowledge.
7. **Facilitating innovation.** At its core, heutagogy is about pushing knowledge boundaries. For experts, this translates to innovative thinking and the development of novel solutions (entrepreneurial thinking), methodologies, and practices that can redefine their fields.
8. **Autonomy in evaluation.** Traditional evaluation methods may not always capture the nuances of advanced practice. Heutagogy empowers experts to set their criteria for success,

ensuring that evaluations are relevant, meaningful, and constructive.

9. **Cultivating resilience.** By navigating the uncertainties and complexities of uncharted knowledge territories, experts practicing heutagogy build resilience. They become better equipped to handle failures, setbacks, and challenges, turning them into opportunities for growth.

For advanced-practice learners, it is not only about acquiring knowledge but also about creating it, refining it, and applying it in innovative ways. Heutagogical processes support this intricate journey, making it an invaluable asset to teaching and learning.

NOT GLORIFIED ANDRAGOGY

Of note, when comparing heutagogy with pedagogy and andragogy in undergraduate medical education in the United Kingdom, the heutagogical model was found to produce more confident and capable learners.²¹ Furthermore, Bhojrab²² established that for nursing students, heutagogy is offered as an emerging and potentially highly congruent educational framework placed around practice-based learning. Original research comparing all 3 reported significant differences between all 3 and found that heutagogy empowers learners to “feel maximum participation in their own learning.”²¹

Andragogy alone is inadequate for the challenges facing future clinicians. In fact, nurse educators have stated that, “andragogical approaches treat education as doing in the present, [which is what Knowles referred to as “immediacy of application”] rather than preparation for the future.”²² Still, other nurse educators have argued convincingly that andragogy fails to capture the way knowledge needs to be created in complex changing environments.²¹ Heutagogy is not a radical leap into the “educative unknown” and is instead a necessary evolutionary advance from andragogy.²²

Self-determined learning (heutagogy) and self-directed learning (andragogy) are both advanced learning methods that emphasize autonomy and control for the learner. However, they differ in their approaches, depth, and scope. Understanding these distinctions can provide deeper insights into how learners can be best supported at different stages of their development. Table 1 shows a breakdown of the differences between heutagogy and andragogy.

Self-directed and self-determined learning place the learner at the center of the process, and heutagogy demands a deeper level of autonomy, adaptability, and exploration. As learners progress in their journey, transitioning from andragogy to heutagogy can empower them to push boundaries, innovate, and create and discover the knowledge that they need to navigate their context successfully and ask better questions. Learners will also develop skills that are very useful in professional education and during clinical assignments and long-term immersions.

Heutagogy embodies adaptive and forward thinking. In a gig economy where roles and requirements change swiftly, this capacity to self-determine learning and target unknown areas is invaluable. Similarly, in a VUCA marketplace, where predictability is low, the ability to proactively target and learn from unknown areas can be a significant competitive advantage. With the gig economy comes the need for quickly executed high-level

Table 1. Comparison of Andragogy to Heutagogy

Criteria	Andragogy: Self-Directed Learning	Heutagogy: Self-Determined Learning
Level of autonomy	Learners identify their learning needs, formulate learning goals, and take initiative in acquiring knowledge. However, learning is still “controlled;” the educator allows students to collaborate in the learning process. ²¹ Learners are guided by an instructor. ²⁰	Learners decide the “what,” “how,” and “why” of learning. They set their path, determining content, processes, and evaluation methods.
Learning maturity	Positioned as the approach where learners, especially adults, recognize learning needs based on experiences. They seek to fill gaps in their knowledge or skills using single-loop learning. ^{15,21}	For those who have achieved expertise and look beyond conventional knowledge. They explore unknowns and venture into unfamiliar contexts (professional settings) and use double-loop learning. ^{15,21}
Approach to unknowns	Focuses on addressing known gaps in understanding. Learners recognize what they do not know and seek to learn it.	Navigates the unknown. Learners might not have a clear picture of what they do not know but are driven to explore, experiment, and discover.
Flexibility and adaptability	There is flexibility in pace and content, but learning objectives are collaboratively defined and set at the beginning.	Higher degree of reflection and adaptability. Learners continually reassess and realign their objectives based on evolving understanding.
Evaluation	Evaluation methods are standardized or predetermined.	Learners set their criteria for success, using self-reflective practices to evaluate their progress and outcomes.

contract negotiations, tax planning, retirement planning, upskilling and reskilling, and adaptive resilience that transcends working with difficult supervisors, peers, or diverse patients.

Although pedagogy lays the foundation and andragogy builds on it, heutagogy promotes a culture of intrinsically motivated continuous proactive learning. Many faculty members, even in advanced doctoral or postprofessional programs, may be hesitant to adopt this mindset. Faculty in this new emergent marketplace must relinquish much of the control they traditionally held in the formation and development process of learners. As the landscape continues to evolve, it is evident that heutagogy will play a pivotal role in navigating the uncharted waters of the modern world.

HEUTAGOGY AND HEALTHCARE PROFESSIONALS: ENHANCING FORMAL EDUCATION AND BEYOND

Healthcare, with its ever-evolving knowledge base and imperative evidence-based practice and quality improvement, demands competent professionals who are continuously learning and adapting. Heutagogy can be a benefit to healthcare professionals in their formal education, clinical practice, and ongoing professional development. The following outlines the benefits of heutagogy for healthcare professionals in their early education:

1. **Navigating complex knowledge.** Healthcare knowledge is vast and often intricate. Heutagogy empowers learners to dive deep into topics, identify gaps, and seek out the latest information.
2. **Personalized learning.** Every clinician has different strengths, weaknesses, and areas of interest. Heutagogy encourages a tailored educational experience, addressing individual needs and curiosities.
3. **Preparation for real-world challenges.** Clinicians often encounter unprecedented and complex cases. Heutagogical

practices help them develop problem-solving skills, adaptability, and the confidence to tackle unfamiliar situations.

4. **Continuous professional development.** Beyond formal education, the healthcare field requires continuous learning due to new research, techniques, and technologies. Heutagogy fosters a mindset of lifelong learning, preparing professionals for a career of ongoing education.
5. **Collaborative exploration.** Heutagogy encourages learners to collaborate with peers, share insights, and jointly navigate challenges, mimicking real-world healthcare settings where teamwork is crucial.

Heutagogy is not a panacea or a silver bullet. There are both risks and rewards to this level of learning. Table 2 describes some “pros and cons” of integrating heutagogy into healthcare education.

IMPLICATIONS OF HEUTAGOGY ON HEALTHCARE EDUCATION

The integration of heutagogy into healthcare education heralds a profound shift in the traditional educational paradigm. As mentioned earlier, the integration of heutagogy may be met with resistance at the professional level, where program directors are tied to focusing on Commission on Accreditation of Athletic Training Education standards and educational competencies. However, that does not negate the obligation to prepare students for the marketplace that they are about to enter. I can only speculate, but failing to do this may account for at least some of the retention issues of the profession. We do know heutagogy adds to learner confidence,¹⁵ which may help to improve student outcomes and early professional socialization. As healthcare professionals grapple with the complexities and unpredictability of patient care, faculty who encourage a self-determined approach to learning equip them with the autonomy, adaptability, and critical thinking necessary for excellence.

Table 2. Pros and Cons of Heutagogy

Factors	Pros of Integrating Heutagogy in Healthcare Education	Cons of Integrating Heutagogy in Healthcare Education ^a
Autonomy and motivation	Allowing professionals to determine their learning paths can increase motivation and engagement.	Requires high self-discipline. Not all learners may be ready for the level of autonomy that heutagogy demands. It requires significant self-discipline and initiative.
Deepened understanding	Rather than rote learning, heutagogy promotes a deep understanding and the ability to apply knowledge innovatively.	Potential for gaps. Without structured guidance, there is a risk that some learners might miss essential content or misprioritize topics.
Flexibility	Heutagogy supports various learning styles and paces, catering to a diverse group of learners.	Challenging to implement. In structured educational settings, introducing heutagogy might be logistically and pedagogically challenging.
Future preparedness	Encourages proactive learning, preparing professionals for future unknowns in the healthcare sector.	Evaluation difficulties. With diverse learning paths, evaluating and ensuring that all learners meet a consistent standard can be complicated.

^a The Commission on Accreditation of Athletic Training Education standards provide a disincentive to overcome these cons and warrant further dialogue.

However, this approach reshapes the role of faculty members. Rather than being the primary source of knowledge, faculty transition into facilitators, guiding and mentoring students through their self-determined learning journeys. Their role becomes one of support, offering expertise when required, challenging students to delve deeper, and providing a safety net to ensure that no critical knowledge areas are overlooked.

Essentially, heutagogy elevates the role of faculty in the educational process by reimagining how to empower learners. For faculty, this means adapting to a new, equally vital role not just as educators but as catalysts for self-determined discovery and challenging the status quo in the form of learning to ask better questions that uncover the hidden assumptions and preconceptions of their “students.”

Although heutagogy presents a transformative approach to learning, especially pertinent for the VUCA marketplace found in healthcare, its implementation in formal academic settings requires thoughtful consideration. Balancing heutagogical methods with structured guidance can help harness its strengths while mitigating potential drawbacks, ultimately preparing healthcare professionals for a future of informed and adaptive practice.

FUTURE TRENDS AND RESEARCH AREAS IN HEUTAGOGY FOR HEALTHCARE EDUCATION

As healthcare continues its rapid evolution, the adoption of heutagogy in education is expected to become more pronounced. The need for clinicians to proactively identify and fill knowledge gaps while being adaptable in the face of unforeseen challenges is paramount not only for practicing professionals but also for entry-level clinicians. Future trends may see a more integrated blending of pedagogy, andragogy, and heutagogy in curricula, catering to different levels of learner expertise and promoting a seamless transition from foundational learning to self-determined exploration. The rapid rise of the gig economy, especially digital health technologies, personalized medicine, and telehealth, further emphasizes the need for a heutagogical approach, as clinicians must be adept at assimilating new information and tools into their practice.

Future research should address the need to understand the efficacy of heutagogical approaches in achieving tangible healthcare outcomes, patient satisfaction, and professional joy. Studies might explore how heutagogy affects clinical decision-making processes, patient care strategies, and interdisciplinary collaborations. Additionally, with faculty roles evolving from knowledge gatekeepers to learning facilitators, research could delve into the best training methods for educators to support heutagogical learning. Investigating potential pitfalls and challenges of this self-determined approach, and devising strategies to mitigate them, will also be crucial. As the healthcare landscape becomes more complex, the push toward heutagogy in education will be essential in shaping clinicians who are not only knowledgeable but also agile, reflective, and innovative thinkers capable of leading in an unpredictable future.

CONCLUSIONS

Amid a rapidly transforming professional landscape, athletic training educators play a pivotal role in preparing healthcare professionals to thrive in the face of unprecedented challenges. The importance of heutagogy as a transformative teaching and learning practice cannot be overstated. Athletic training educators face challenges and responsibilities where they must not only equip their students with clinical competencies but also prepare them to navigate the complex dynamics of the gig economy, the Great Resignation, and the VUCA marketplace. Heutagogy may be one way to empower our constituents with the skills and mindset needed to become self-determined learners.

The gig economy’s rise presents athletic training educators with the task of ensuring that their students are not just able job seekers but adaptable professionals capable of pursuing multiple opportunities, sometimes simultaneously. Educators must guide their students toward autonomy and flexibility and help them gain the ability to take charge of their learning journeys, recognizing that heutagogy is not only about preparing students for the present but also about equipping them for an unknown future. As healthcare continually evolves, educators should foster a culture of self-determined lifelong learning and encourage students to proactively seek knowledge and solutions to the

challenges that they will face. The shift from traditional teaching roles to facilitators of self-determined learning may be challenging for athletic training educators. It demands a shift in mindset from being the primary resource for knowledge to becoming informal mentors and collaborative guides.

REFERENCES

- Linzer M, Griffiths EP, Feldman MD. Responding to the great resignation: detoxify and rebuild the culture. *J Gen Intern Med.* 2022;37(16):4276–4277. doi:10.1007/s11606-022-07703-1
- Abbasi J. Pushed to their limits, 1 in 5 physicians intends to leave practice. *JAMA.* 2022;327(15):1435–1438. doi:10.1001/jama.2022.5074
- Sull C, Sull D, Zweig B. Toxic culture is driving the Great Resignation. MIT Sloan Management Review. Published January 11, 2022. Accessed June 23, 2022. <https://sloanreview.mit.edu/article/toxic-culture-is-driving-the-great-resignation>
- Bogaert K, Leider JP, Castrucci BC, Sellers K, Whang C. Considering leaving, but deciding to stay: a longitudinal analysis of intent to leave in public health. *J Public Health Manag Pract.* 2019;25(2 Suppl):S78–S86. doi:10.1097/PHH.0000000000000928
- Fry E. Resigned to the “Great Resignation?”. *J Am Coll Cardiol.* 2022;79(24):2463–2466. doi:10.1016/j.jacc.2022.05.004
- Malik R, Visvizi A, Skrzek-Lubasińska M. The gig economy: current issues, the debate, and the new avenues of research. *Sustainability.* 2021;13(9):5023. doi:10.3390/su13095023
- Mishra I, Yadav A. The future of gig workforce. In: Gupta A, Tewary T, Gopalakrishnan BN, eds. *Sustainability in the Gig Economy.* Springer; 2022:283–292. doi:10.1007/978-981-16-8406-7_21
- Number of freelancers in the United States from 2017 to 2028. Statista. Published September 2017. Accessed October 8, 2023. <https://www.statista.com/statistics/921593/gig-economy-number-of-freelancers-us/>
- How the gig economy changed the future of healthcare in the US. Osmosis. Published March 27, 2023. Updated May 3, 2023. Accessed September 21, 2023. <https://www.osmosis.org/blog/2023/03/27/how-the-gig-economy-changed-the-future-of-healthcare-in-the-us>
- Alanezi F, Alanzi T. A Gig mHealth Economy Framework: scoping review of internet publications. *JMIR Mhealth Uhealth.* 2020;8(1):e14213. doi:10.2196/14213
- Al-Dossary R. Investigating the feasibility of applying the gig economy framework in the nursing profession towards the Saudi Arabian vision 2030. *Inform Med Unlock.* 2022;30:100921. doi:10.1016/j.imu.2022.100921
- Manyika J, Lund S, Bughin J, Robinson K, Mischke J, Mahajan D. Independent work: choice, necessity, and the gig economy. McKinsey Global Institute. Published October 10, 2016. Accessed October 8, 2023. <https://www.mckinsey.com/featured-insights/employment-and-growth/independent-work-choice-necessity-and-the-gig-economy#/>
- Naghieh A. Gig economy and the transformation of professional boundaries in healthcare. In: Page-Tickell R, Yerby E, eds. *Conflict and Shifting Boundaries in the Gig Economy: An Interdisciplinary Analysis (The Changing Context of Managing People).* Emerald Publishing Limited; 2020:129–138. doi:10.1108/978-1-83867-603-220201010
- Alperin P. Physicians and the gig economy. American Association for Physician Leadership. Published September 8, 2020. Accessed September 21, 2023. <https://www.physicianleaders.org/articles/physicians-and-the-gig-economy>
- Blaschke LM. Heutagogy and lifelong learning: a review of heutagogical practice and self-determined learning. *Int Rev Res Open Distributed Learn.* 2012;13(1):56–71. doi:10.19173/irrodl.v13i1.1076
- Hase S, Kenyon C. From andragogy to heutagogy. *UltiBase Articles.* 2000;5:1–10.
- Hase S, Kenyon C. Heutagogy: a child of complexity theory. *Complicity.* 2007;4(1):111–119. doi:10.29173/cmplct8766
- Zmeyov SI. Andragogy: origins, developments, and trends. *Int Rev Educ.* 1998;44(1):103–108.
- Nixon-Ponder S. *Eduard C. Lindeman. Leaders in the Field of Adult Education.* Kent State University; 1995. <https://files.eric.ed.gov/fulltext/ED380667.pdf>
- Knowles M. *Self-Directed Learning: A Guide for Learners and Teachers.* Follett Publishing Company; 1975.
- Bansal A, Jain S, Sharma L, Sharma N, Jain C, Madaan M. Students’ perception regarding pedagogy, andragogy, and heutagogy as teaching-learning methods in undergraduate medical education. *J Educ Health Promot.* 2020;9:301. doi:10.4103/jehp.jehp_221_20
- Bhoyrub J, Hurley J, Neilson GR, Ramsay M, Smith M. Heutagogy: an alternative practice-based learning approach. *Nurse Educ Pract.* 2010;10(6):322–326. doi:10.1016/j.nepr.2010.05.001
- Glanville I, Houd S. The scholarship of teaching: implications for the nursing faculty. *J Prof Nurs.* 2004;20(1):7–14. doi:10.1016/j.profnurs.2003.12.002