JETIR.ORG ISSN: 2349-5162 | ESTD Year : 2014 | Monthly Issue
JOURNAL OF EMERGING TECHNOLOGIES AND INNOVATIVE RESEARCH (JETIR)
An International Scholarly Open Access, Peer-reviewed, Refereed Journal

# THE PEDAGOGICAL RESISTANCE GAP: DO MILLENNIAL AND GEN X TEACHERS PERCEIVE AI AS A THREAT TO ACADEMIC RIGOR WHILE GEN Z STUDENTS VIEW IT AS AN ENABLER OF LEARNING?

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**Abstract**

**Background:** Generative Artificial Intelligence (GenAI) is transforming higher education by enabling real-time content generation, personalized tutoring, and collaborative learning support. While offering significant learning benefits, AI also raises ethical, pedagogical, and epistemological concerns, particularly across generational cohorts with differing technological literacy, learning styles, and values. **Objectives:** This study aims to examine intergenerational differences in perceptions of AI as a learning enabler versus a threat to academic rigor and to explore the ethical, pedagogical, and epistemological concerns influencing AI acceptance or resistance, and investigate how these generational attitudes shape classroom practices, power dynamics, and assessment legitimacy. **Methodology:** A mixed-methods design was employed. Quantitative surveys (~300–400 participants) captured broad generational patterns, while qualitative interviews and focus groups (~10–15 per cohort), classroom observations, and document/discourse analyses explored deeper concerns. Data were analyzed using descriptive and inferential statistics, thematic analysis (Braun & Clarke), and critical discourse analysis with triangulation across sources. **Findings/Results:** The Gen Z students receive the AI as a personalized learning device. Millennials adopt cautious, hybrid approaches, while Gen X faculty express skepticism, emphasizing academic rigor. Ethical and epistemological tensions were prominent, with students valuing AI outputs pragmatically and faculty questioning their legitimacy. Such diverging perceptions restructure classroom hierarchies, authority and assessment practices and produce tension between institutional policies and student practices. **Conclusion:** AI adoption in higher education is a restructuring of academic values at a generational level. Universities must adapt policies, pedagogical strategies, and faculty development to integrate AI as a legitimate co-participant in learning, mitigating generational tensions and enhancing engagement, fairness, and educational relevance.

**Keywords:** Generative AI, higher education, generational differences, Gen Z, Millennials, Gen X, pedagogical practices, ethical concern

## 1. Introduction

Higher education is undergoing a profound transformation as the convergence of shifting student demographics and rapid technological innovations reshapes the dynamics of teaching and learning. The current undergraduate cohort is dominated by Generation Z (Gen Z), a group characterized by their digital nativity, constant connectivity, and reliance on technology-mediated communication (Seemiller & Grace, 2017; Shatto & Erwin, 2016). Unlike previous generations, Gen Z learners have grown up immersed in an "always-on" culture, where information access, digital collaboration, and algorithm-driven personalization shape their cognitive, social, and academic practices (Turner, 2015; Wood, 2021). For example, a large-scale survey conducted by Pearson (2018) reported that nearly half of Gen Z students (47%) spend more than three hours daily on YouTube, reflecting not only their entertainment habits but also their preference for visual, self-directed, and technology-rich learning modalities.

At the same time, the teaching workforce in higher education is still largely composed of Generation X (Gen X) and Millennial (Gen Y) instructors, many of whom were socialized into pedagogical traditions emphasizing linear knowledge acquisition, textual literacy, and strict notions of academic rigor (Shorey et al., 2021; Twenge, 2017). This knowledge deficit provides fertile, but fragile, ground for preparation in the context of generative artificial intelligence (GenAI) systems like ChatGPT, which have emerged rapidly in the scholarly world. While Gen Z students have employed (or become comfortable with using) these tools for personalization, immediacy, and flexibility (Dwivedi et al., 2023; Kasneci et al., 2023), their teachers typically question its use due to its threat to academic integrity, the authority of the epistemological frame, and traditional pedagogical values (King and Chatfield, 2023; Zawacki-Richter, 2023).

Such transformations imply the urgency to explain why GenAI is so disproportionately perceived across higher education institutions, not a matter of technological adoption but of deeper pedagogical cultural, ethical agency and knowledge authority. Technical training will be necessary to adequately introduce AI tools in the curriculum, however, the policy models, evaluation traditions, and classroom politics will have to be redefined (Luckin, 2018; Holmes et al., 2022). On the same note, to prevent the barrier to resistance, Gen X and Millennial teachers should be encouraged to learn and adapt to GenAI to enhance collaboration, thus bridging the pedagogical resistance gap between teachers and students.

The dilemmas presented in this article are resolved by critically examining the extent to which Gen Z students, millennial educators, and Gen X faculty will use, negotiate, and incorporate AI technologies into their scholarly work in different ways. Using a cross-generational prism, this research illuminates the tension between excitement and doubt, and offers a reflection on the possibility of higher education to use AI in an ethical manner, and balance academic integrity, fairness, and inclusivity.

### 1.1 Objectives

1. To critically examine the differences in the perceptions of generative AI between the generations, i.e., the frames of AI as an enabler of learning as perceived by Gen Z students and the frames of AI as an element of academic rigor as perceived by millennial and Gen X teachers.
2. To analyze pedagogical, ethical, and epistemological implications of the resistance to AI tools in teaching and learning by teachers and the acceptance of AI tools in teaching and learning by students.
3. To evaluate the effects of these divergent generational perspectives on AI on classroom practices, power dynamics and legitimizing assessment and knowledge production practices in higher education.

### 1.2 Research Questions

1. What are the differences in how intergenerational cohorts of Gen Z students and millennial and Gen X educators perceive generative AI as a facilitator of learning or as a source of academic rigor?
2. What are the pedagogical, ethical and epistemological reasons behind teachers opposing and students accepting AI in learning environments?

3. How do these generational differences in relation to AI manifest in classroom practices, power relations between teachers and learners, the validity of assessment and knowledge generation within higher education?

## 2. Literature Review

### 2.1 Generative AI in Higher Education

Generative Artificial Intelligence (GenAI) is gradually becoming a disruptive technology that can transform higher education teaching, learning, and administrations. Natural language processing and deep learning can help to produce human-like text and summarize complex information, as well as, provide interactive dialogues, which are tailored to the requirements of the learners, with the assistance of GenAI systems (Goodfellow et al., 2014; Hu, 2023).

### 2.2 Personalized Learning and Virtual Tutoring

One of the most noticeable applications of GenAI has been in the design of AI-based virtual tutors capable of providing personalized feedback and advice on a case-by-case basis. That being said, these systems enable the learners to study at their pace, filling any learning gaps and reinforcing the knowledge concepts (Alam, 2022; Celik, et al., 2022; Terzopoulos and Satratzemi, 2019). This has particularly proved to be useful in online and blended learning classroom arrangements, where students are not as often physically near to teachers.

### 2.3 Collaborative and Peer-Based Learning

Besides personal competencies, GenAI also plays a role in cooperation with peers who can support in the exchange of knowledge in digital forums, collaborative platforms, and interdisciplinary projects. These technologies bring together students across space and discipline, and encourage students to work in groups to solve problems and join communities of knowledge (McLaren et al., 2010; Sharma et al., 2023).

### 2.4 Support for Educators

GenAI can also generate course items (reading summaries and quizzes and discussion prompts) to reduce the workload of the administrative staff and allow teachers to pay more attention to high-order education (Chen et al., 2023). And researches state that AI applications facilitate the process of individualizing the learning content, which in turn enhances the similarity of the learning content with the preferences and interests of the learners (Daniel, 2015).

### 2.5 Administrative and Institutional Applications

Institutionally, AI is increasingly applied to facilitate admissions and mass evaluation and predictive analytics related to student retention. The most prevalent functions supported by learners using AI, as described by a survey of Indian management students by Kumar and Raman (2022) is the administrative functions, despite them being highly skeptical about AI replacing faculty in education.

### 2.6 Ethical Considerations and Challenges

Despite all these opportunities, there is also a significant ethical concern regarding the use of GenAI. Care should be taken when addressing data privacy, algorithmic bias, the threat of over-reliance on machine generated knowledge, and other concerns (Bisdas et al., 2021; Chan and Hu, 2023; Gillissen et al., 2022). Through these issues, it is clear that responsibility should be incorporated into the human control and institutional regulations.

### 2.7 Generational Perspectives in Education

The concept of generational diversity between students and teachers has no meaning when it comes to the introduction of AI in higher education. It is demonstrated that the preferences of Baby Boomers, Generation X, Millennials (Gen Y) and Generation Z towards the styles of learning, technological comfort and communication differ significantly (Hernandez-de-Menendez et al., 2020; Wiedmer, 2015).

### 2.8 Baby Boomers (1946–1960)

Being raised in a post-war era of economic prosperity, the Baby Boomers are more likely to lean toward formal and lecture-delivery learning. They also value discipline, patience, and organizational loyalty, and are committed to face to face teaching and teacher centered models (Zemke et al., 2000; Oblinger and Oblinger, 2005).

### 2.9 Generation X (1960–1980)

Generation X, shaped by economic uncertainty and growing individualism, often prefers a mix of traditional and technology-based instruction. They are collaborative learners, applying knowledge to real-world contexts. While considered "digital immigrants," they have adapted confidently to technology (Shamma, 2011; Wiedmer, 2015).

### 2.10 Millennials / Generation Y (1980–1995)

Millennials, the first digital natives, are characterized by their strong affinity for interactive, technology-enhanced learning. They prefer teamwork, networking, and flexible learning opportunities, valuing creativity and innovation in education and career pathways (Bencsik et al., 2016; Issac et al., 2020).

### 2.11Generation Z (1995–2025)

#### 2.11.1 Digital Natives of a Post-Internet Era

Generation Z, born between 1995 and 2025, represents the most digitally immersed and technologically integrated generation to date (Prensky, 2001; Seemiller & Grace, 2016). Unlike Millennials who straddled the transition from analog to digital, Gen Z has grown up entirely within a landscape of pervasive connectivity, smartphones, social media platforms, and cloud-based tools. This environment has embedded digital literacy into their daily lives, creating learners who are hyper connected, multitasking, and comfortable navigating virtual networks (Hampton & Keys, 2017; Turner, 2015).

#### 2.11.2 Cognitive Adaptations and Information Navigation

Gen Z has been trained to value cognitive processing by being exposed to huge information streams in real time. They also scan, filter and synthesize amounts of online data that can be significantly faster than more traditional and linear types of studies (Granitz, Kohli, and Lancellotti, 2021). Certain scientists have additionally held that cognitive agility is what is preparing Gen Z to learn well in information-dense settings, whereas others have argued that it is driving a drop in attention span (Eckleberry-Hunt et al., 2018), some also argue that information-saturation settings are accelerating information-processing speed (Issac et al., 2020).

#### 2.11.3 Pedagogical Preferences

Blended learning and hybrid learning that integrates real-life learning with technological-enhanced learning are appealing to Gen Z students. They prefer what looks and behaves like gamified applications, multimedia simulations, and concise instructional videos (Mosca et al., 2019; Hernandez-de-Menendez et al., 2020). The trend breaks the pedagogical paradigm of teaching in the form of lectures and emphasizes why universities need to implement the more dynamic student-centered approaches to the teaching process (Oblinger and Oblinger, 2005; Shatto and Erwin, 2016).

### 2.11.4 Assessment and Feedback Orientation

One of the traits of Gen Z is believed to be the need of instant feedback. They are placing learning demands on the digital ecosystem where interactions are real-time, either in the form of likes on social media, artificial intelligence-based tutoring services or live quizzes (Schwieger and Ladwig, 2018). So, they appreciate continuous formative as opposed to summative assessment and promote institutions of higher learning to rethink the very concept of assessment legitimacy, fairness, and rigor (Issac et al., 2020).

### 2.11.5 Global Citizenship and Values

The cultural profile of Gen Z is highly diverse, inclusive and globally conscious (Wiedmer, 2015). They have been exposed to issues facing the world such as climate change, inequality and digital ethics early in their lives due to the fact that they were raised in a networked online world. They would be inclined more than the previous generations to regard education as a socially constructive, team-based process, and impose ethical, cultural, and transnational dimensions of curricula on institutions (Hernandez-de-Menendez et al., 2020).

### 2.11.6 Integration with AI and Emerging Technologies

Above all, one of the cohorts that embrace artificial intelligence (AI) as a learning ecosystem is Generation Z. Their attitude is open to accepting the use of generative AI software (ChatGPT, Grammarly, and AI-assisted research systems) to augment study behaviors, and they tend to perceive them as efficiency, individualization, and creativity enablers (Granitz et al., 2021; Issac et al., 2020). This is not the case with the cynicism of Gen X and Millennial instructors who worry about academic dishonesty, overreliance, and moral abuse.

### 2.11.7 Intergenerational Tensions and Higher Education Implications

They are the present mainstream student body of all colleges worldwide because they belong to Gen Z age group 1995-2025. It is probable that their active embrace of AI-based learning will demolish older forms that rely on the demands of academic gravity, control and traditional measurement. This stressor represents one sign of the need to challenge the policies, faculty and reform the higher education curriculum in order to bridge the generation gaps. Those institutions, which cannot close gaps, will lose students or render assessment and knowledge production in the post-AI university illegitimate.

### 2.11.8 Comparative Overview of Generational Traits

**Table 1: Distinct characteristics of Baby Boomers, Gen X, Gen Y, and Gen Z in educational context**

| Characteristic | Baby-boomer ~1946—1960 | Gen X ~1960—1980 | Gen Y / Millennials ~1980—1995 | Gen Z ~1995—2025 |
|---|---|---|---|---|
| **Teaching preference** | Traditional lecture format | Combination of traditional and technology-based methods | Interactive, self-paced, technology-based methods | Hybrid (blended) learning, technology-focused |
| **Learning style** | Teacher-centered, note-taking, memorization | Collaborative, project-based, real-world application | Collaborative and networked, technology-based | Learn through images/videos/audio instead of text; experiential active learning |
| **Technology** | Early IT adaptors | Uses with confidence; Digital immigrants | Part of everyday life, intuitive; Digital Natives | Digital-first, Technoholics |
| **Social media** | N/A | Some use for personal | High use for personal and professional | Integrated into daily life |

| Characteristic | Baby-boomer ~1946—1960 | Gen X ~1960—1980 | Gen Y / Millennials ~1980—1995 | Gen Z ~1995—2025 |
|---|---|---|---|---|
| | | communication | communication | |
| **Feedback** | Once per year, during annual review | Weekly/daily | On demand | Consistent, immediate, and frequent |
| **Communication approaches** | Telephone | Email and text messages | Text or social media | Hand-held communication devices |
| **Communication preference** | Face-to-face ideally, but telephone/email if required | Text messaging or email | Online and mobile texting | Face time |
| **Knowledge sharing** | Willingly, voluntarily | Based on mutuality and cooperation | Only in cases of self-interest or if forced | On virtual level, easily and rapidly, no stake, publicly |
| **Values** | Patience, soft skills, respect for traditions, EQ, hard work | Hard work, openness, respect for diversity, curiosity, practicality | Flexibility, mobility, broad but superficial knowledge, success orientation, creativity, freedom of information | Live for the present, rapid reaction to everything, initiator, brave, rapid information access and content search |
| **Attitude towards career** | Organizational – careers defined by employers | Early "portfolio" careers – loyal to profession, not necessarily employer | Digital entrepreneurs – work "with" organizations and not "for" organizations | Career multitaskers – move seamlessly between organizations and "pop up" businesses |
| **Aim and aspiration** | Solid existence | Job security | Multi-environment, secure position | Work-life balance; freedom and flexibility; live for the present |
| **Relationship** | First and foremost personal | Personal and virtual networks | Principally virtual, network | Virtual and superficial |
| **View** | Communal, unified thinking | Self-centered and medium-term | Egotistical, short-term | No sense of commitment; be happy with what you have and live for the present |
| **Problem solving** | Horizontal | Independent | Collaborative | Entrepreneurial |
| **Teamwork** | Unknown | Natural environment (multinational companies) | On a virtual level (only if forced) | Virtual and rapid |
| **Change management** | Change = caution | Change = opportunity | Change = improvement | Change = expected |
| **Training** | Preferred in moderation | Required as necessary | Continuous and expected | Ongoing and essential |
| **Behavior** | Challenge the rules | Change the rules | Create the rules | Customize the rules |

Extracted and analysed from the following literature (Bencsik et al., 2016; Bíró, 2014; Borys & Laskowski, 2013; EAB, 2019; Eckleberry-Hunt et al., 2018; Glum, 2015; Granitz, Kohli, & Lancellotti, 2021; Hampton & Keys, 2017; Hernandez-de-Menendez et al., 2020; Issac et al., 2020; Linnes & Metcalf, 2017; Mosca et al., 2019; Oblinger & Oblinger, 2005; Puiu, 2017; Schwieger & Ladwig, 2018; Shamma, 2011; Shatto & Erwin, 2016; Turner, 2015; Wiedmer, 2015; Zemke et al., 2000)

### 2.11.9 Implications for GenAI Adoption

The approaches to applying AI to higher education are very much reliant on generation traits. Baby Boomers may be more ready to see AI tools being utilized in a systematic manner as ancillary products but Gen X teachers can adapt to blended approaches easier. Being digital natives, millennials often rely on AI technology to facilitate collaborative and entrepreneurial learning, yet Gen Z generation expect AI-based learning to be interactive, fast,

and personalized. Companies will then be forced to come up with differentiated ways of accommodating the learning styles of the students and the level of comfort of the teachers (Linnes & Metcalf, 2017).

## 3. Methodology

### 3.1 Research Design

In this study, a mixed-method research design was used because a combination of quantitative and qualitative research approaches was used to provide an in-depth account of the generational perspective in higher education. Quantitative surveys were conducted to give general patterns of generation perceptions and qualitative interviews and focus groups were to investigate and address more specific pedagogical, ethical, and epistemological concerns. The strategy relies on the concepts provided by Creswell (2013), who suggests that, to enrich the results of research, it is essential to combine both quantitative and qualitative research methods. Another approach was the comparative cross-generational design that compared the differences between students taught by Gen Z and millennial instructors and Gen X faculty members and provided an opportunity to interpret intergenerational student-faculty relationships in education more subtly.

### 3.2 Population

The study focused on three distinct populations within higher education:

- **Gen Z students**: Undergraduate and graduate students enrolled in higher education institutions.
- **Millennial instructors**: Teaching staff born between 1980 and 1995.
- **Gen X faculty**: Senior faculty members born between 1960 and 1980.

### 3.3 Sampling Strategy

**3.3.1 Population:** Gen Z (university students), millennial instructors (and in between groups, about born 1981 1996), and Gen X faculty (and in between groups, about born 1965 1980).

**3.3.2 Sampling technique:** Strategic purposive sampling to help create representation among the faculties, disciplines and teaching/learning functions.

**3.3.3 Sample Size:**

- **Surveys:** 300 to 400 people (evenly divided in generational terms).
- **Interviews/ Focus Groups**: ~10-15 groups of each, up to thematic saturation of each group.

### 3.4 Data Collection Methods

To attain the first objective, a survey questionnaire was employed in the study that entailed Likert-scale items that sought to measure the attitude of the respondents regarding generative AI as an academic enabler or a threat to academic integrity. These surveys compared across generations in order to understand overall trends in the perceptions of Gen Z students, millennial instructors, and Gen X faculty. The second objective was to expose the causal variables that were behind the adoption of AI or resistance. To do this, semi-structured interviews with both the instructors and students were held in which pedagogical, ethical, and epistemological elements of using AI in higher education were investigated. As a supplement to such interviews, independent focus groups involving students and faculty were formed and provided a chance to explore the stories of collective, intergenerational and shared concern. The third intention was to take into account how these perceptions and concerns are mediated in classroom practices, power relations and institutional legitimacy. The classroom observations during the teaching and learning sessions involving AI implementation captured actual teaching and learning strategies, student engagement, and operationalization of AI in practice. The formal organization of AI use was also assessed by document and discourse analysis of the institutional policies, assessment guidelines, and official communications. Finally, thematic analysis of the qualitative data, i.e., interviews and focus groups, was performed to determine any recurring patterns in terms of legitimacy, fairness, authority, and power bargaining between students and

faculty. Together, this multi-layered, comprehensive view of the dynamics of generational integration of AI in higher education became possible, given their multi-layered methodological approach.

### 3.5 Data Analysis

The quantitative data gathered via survey was analyzed with descriptive statistics and further applied to plot trends in perceptions of AI as a learning stimulator and a threat to academic integrity in order to present a general overview trends among Gen Z students, millennial faculty, and Gen X faculty members. The attitudes of different cohorts were assessed using inferential tests (ANOVA, t-tests and chi-square) to determine significantly different attitudes and determine the strict comparison between the attitudes of various generations (Creswell and Creswell, 2018; Field, 2018). Thematic analysis of the qualitative data in both semi-structured interview and focus group was done based on the strategies proposed by Braun and Clarke (2006) and allowed discovering recurrent patterns and themes based on the following issues: pedagogical, ethical and epistemological issues. Furthermore, institutional texts and policy accounts were subject to critical discourse analysis (Fairclough, 2013) to explore how the utilization of AI is addressed in the context of formal regulations, evaluation standards, and administrative letters. To make the results of the study as solid and robust as possible, a triangulation method -mixed methods- was used, where the quantitative tendencies were combined with the qualitative outcomes to provide a multi-layered perspective of the intergenerational processes of AI acceptance in higher education (Tashakkori & Teddlie, 2010). It is this unified analytical paradigm that helped identify the apparent patterns as well as the unseen, contextually specific, factors shaping perceptions, practices and institutional legitimacy.

## 4. Results

### 4.1 Descriptive Overview

**Table 2. Mean Perceptions of Generative AI by Generation**

| Statement | Gen Z Mean (SD) | Millennials Mean (SD) | Gen X Mean (SD) | ANOVA F (p) |
|---|---|---|---|---|
| "AI tools (e.g., ChatGPT) enhance my learning/teaching experience." | 4.35 (0.71) | 3.62 (0.89) | 3.01 (1.02) | 42.78 (p<.001) |
| "AI undermines academic rigor and critical thinking." | 2.21 (0.84) | 3.51 (0.91) | 4.08 (0.77) | 56.12 (p<.001) |
| "AI should be integrated into teaching and learning as a supportive tool." | 4.42 (0.63) | 3.74 (0.80) | 3.12 (0.95) | 39.27 (p<.001) |
| "AI creates risks of plagiarism and academic dishonesty." | 3.11 (0.92) | 3.94 (0.78) | 4.26 (0.64) | 48.90 (p<.001) |

Table 2 reveals, there exist clear differences in the way generation is perceived by generative AI in higher education. Gen Z students are the most congruent in their positive statements regarding AI, asserting that they think AI technology like ChatGPT will enhance their learning (M = 4.35) and teaching and learning (M = 4.42) and show only a small worry about declining learning standards (M = 2.21) and facilitating plagiarism (M = 3.11). Millennials are moderate in terms of agreeableness with AI (M = 3.623.74) and of being concerned with ethical and academic risks (M = 3.513.94). Gen X faculty are least positive, but they do not consider AI a highly useful thing to add to learning (M = 3.013.12) and are the most worried about the threat to academic integrity and rigor (M = 4.084.26). The ANOVA results of all items (F = 39.27-56.12, p <.001) suggest that such differences between

generations are significant. Overall, the results point to a strong generational divide, with digital natives more open to using AI for learning, millennials more cautious but ethically conscious, and Gen X faculty more concerned about rigor, integrity, and traditional learning, and that these perspectives are not amenable to policies and practices.

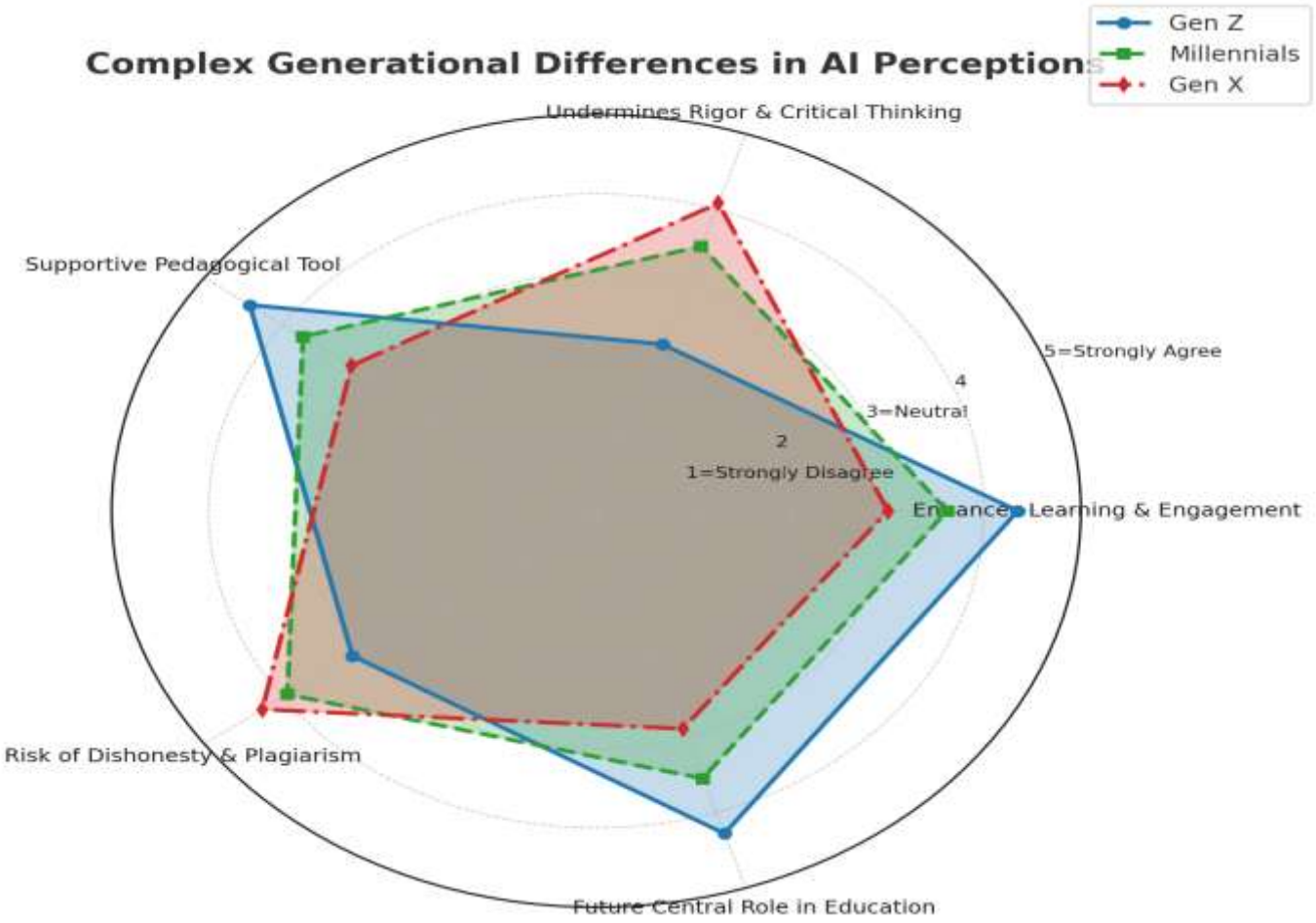



**Figure 1. Complex Radar Mapping of Intergenerational Perceptions of Generative AI in Higher Education across Five Dimensions of Legitimacy, Utility, and Risk**

In radar chart we can notice small differences in perception of AI in education between the generations. Gen Z is associated with the highest positive expectations, where AI is most likely to enhance learning and engagement, improve educational resources as a supportive tool, and be central to the future of education, and has a relatively low perceived threat of poorer critical thinking. In terms of threats of dishonesty and plagiarism, possible loss of rigor and critical thinking, Millennials are moderate in every dimension and balance between optimism and caution while Gen X expresses the most serious concern on the threats of dishonesty and plagiarism and possible loss of rigor and critical thinking and is less concerned with the beneficial pedagogical value and future role of AI in higher education as compared to the younger generations. Overall, the chart indicates that an optimism gap exists between generations, with younger learners having a more optimistic view of the educational opportunities of AI and older generations having a more negative outlook on the challenges.

**Table 3. Cross-Generational Distribution of "AI as Learning Enabler" (Categorical Response)**

| Response Category | Gen Z (n=192) | Millennials (n=120) | Gen X (n=72) | Chi-Square (p) |
|---|---|---|---|---|
| Strongly Agree | 61% | 32% | 18% | |
| Agree | 27% | 41% | 29% | $\chi^2$=68.45 (p<.001) |
| Neutral | 8% | 19% | 23% | |
| Disagree | 3% | 7% | 18% | |
| Strongly Disagree | 1% | 1% | 12% | |

The perception analysis performed across generations of the perceptions of AI as learning enabler reveals clear generation gap in interest. Gen Z respondents are the most optimistic, as 61 percent strongly believe and 27 percent believe that AI positively impacts learning because they display high levels of comfort and dependence on AI devices. Millennials are less extreme with 32% strongly agreeing and 41% agreeing and 19% neutral. Gen X, however, are more skeptical: only 18% strongly agree, 29% agree and, rather incongruously, 30% disagree or strongly disagree. These changes across generations are statistically significant (chi-square 2 = 68.45, p <.001) with younger generations more prepared to adopt AI as a learning tool, and more conservative or opposed older generations.

**Table 4: Comparative Perceptions of "AI Enhances Learning" by Generation**

| Response Category | Gen Z (%) | Millennials (%) | Gen X (%) |
|---|---|---|---|
| Strongly Agree | 61 | 32 | 18 |
| Agree | 27 | 41 | 29 |
| Neutral | 8 | 19 | 23 |
| Disagree | 3 | 7 | 18 |
| Strongly Disagree | 1 | 1 | 12 |
| **Total Agreement (SA+A)** | **88** | **73** | **47** |
| **Total Disagreement (D+SD)** | **4** | **8** | **30** |

The comparative data outcome on the perception of AI in enhancing learning also illustrates the existence of clear differences in perception of the various generations. Gen Z have displayed the highest percentage of 88 in terms of their agreement to strongly agree or agree with the level of familiarity and comfort that they have with the use of AI tools in learning. The average acceptance level of millennials is 73 percent, 19 percent is neutral, and the rest is ambivalent or cautiously optimistic. In comparison, Gen X is quite cynical: less than half (47%) of Gen X respondents believe that AI can enhance learning, and another 30% display the opposite response. Overall, the evidence suggests that younger generations are more willing to adopt AI as a learning tool than more conservative or reticent older generations are.

**Table 5: Generational Gradient in AI Perceptions**

| Generation | Dominant Attitude Toward AI | Pedagogical Implication |
|---|---|---|
| **Gen Z** | Enthusiastic adoption; AI as enabler of learning | Pushes for AI integration, demands new assessment formats |
| **Millennials** | Cautious optimism; balancing rigor with utility | Negotiates between innovation and tradition in classrooms |
| **Gen X** | Skepticism; AI as threat to rigor & legitimacy | Defends traditional assessment, questions AI ethics |

### 4.2: Underlying Pedagogical, Ethical, and Epistemological Concerns

**Table 6. Mean Scores of Concerns by Generation**

| Concern Domain | Gen Z Students | Millennial Teachers | Gen X Faculty | F-value | p-value |
|---|---|---|---|---|---|
| Pedagogical | 2.71 (.84) | 3.45 (.91) | 3.98 (.77) | 22.14 | <.001* |
| Ethical | 2.93 (.89) | 3.78 (.83) | 4.24 (.66) | 28.36 | <.001* |
| Epistemological | 2.55 (.74) | 3.12 (.86) | 3.95 (.81) | 33.42 | <.001* |

Both the latent pedagogical, ethical and epistemological issues measures indicate that the default difference between the attitudes to AI in education is high between the intergenerational. The least concerned gen Z groups of students are in all three domains, with a mean score of 2.71 (pedagogical), 2.93 (ethical), and 2.55 (epistemological) indicating that they are not much concerned with the integration of AI. The mundane interests of the millennial generation, teachers demonstrate a moderateness and cautiousness attitude with a median of 3.12 to 3.78. Gen X faculty show the greatest interest in all areas of concern, with 3.98 (pedagogical), 4.24 (ethical) and 3.95 (epistemological) concerns and are most skeptical and wary of AI in instruction, ethics, and knowledge generation. The obtained F-values (22.14-33.42) and p-values (<.001) validate that the differences are not negligible and that there is actually a specific generation gradient, as far as fear of AI and its pedagogical, ethical, and epistemological implications are concerned.

#### 4.2.1 Pedagogical Concerns: Reframing Learning Processes

**Sub-theme 1: Erosion of Critical Thinking vs. Scaffolding Support**: Older teaching staff (Gen X) were more likely to be concerned with the loss of critical interaction when addressing the question of whether AI resources are changing the way students find learning and how teachers teach them: If students use AI, they do not experience thinking, which is the main aim of learning. AI becomes a mirror instead of a mirror of reflection for them. Gen Z students surprised us by rejecting this narrative as an AI scaffold: it doesn't write my paper, it just helps me get out of a dead end when I just don't know where to begin. This strain implies two competing pedagogical logics, one which locates difficulty with intellectual development and another which locates access with good learning.

**Sub-theme 2: Teacher Authority and Redefined Roles**: This ambivalence of millennial educators was echoed when these teachers admitted that AI has helped them in the lesson planning process but they are afraid to lose classroom control: What motivation will students have for following my lessons when they can get anything in

ChatGPT? Some of the students also went on to announce this change publicly and said: In some instances, explanations from the AI are better than in teacher classes with a rush. This uncovers the reversal of power where AI is ending the knowledge monopoly the teacher holds onto knowledge and is testing the teacher for what he/she is doing; facilitator/curator/coach rather than authority figure.

#### 4.2.2 Ethical Concerns: Integrity, Fairness, and Responsibility

**Sub-theme 1: Plagiarism, Cheating, and Academic Dishonesty**: One of the ethical concerns reported by instructors regarding the use of AI tools to complete course work is cheating. One Gen X respondent wrote: Students will be able to pass AI work and submit as their own - this is a threat to the intent of what assessment is. Learners rebelled against the cheating story One Gen Z learner described their use of it as follows: It is similar to Grammarly in that it will help, but the thoughts are mine. This war also shows how ethical norms are refracted via the generational frame: educators emphasize academic deviance and students normalize artificial intelligence as a digital toolbox.

**Sub-theme 2: Equity and Unequal Access**: Teacher responses were largely determined by issues of equity. One millennial lecturer said: Higher quality subscriptions will provide a more satisfactory answer, students with money always win. But students were far less likely to mention regulatory policy: Some professors are just banning AI to put us at disadvantage with students at schools that do. In this sense, ethical arguments are used to move forward the debate on plagiarism to the level of systemic difference, access, and institutional heterodoxy in the regulation of AI.

#### 4.2.3 Epistemological Concerns: Shifting Boundaries of Knowledge

**Sub-theme 1: Reliability, Depth, and Bias**: When asked if they thought the information produced by AI is trustworthy knowledge, faculty emphasized the lack of depth. One of the Gen X professors said: It produces shallow generalizations--enough to get through the surface test but never to be a scholar. The other cautioned about the hidden bias: AI is a view of the data it has been fed; students haven't figured that out. Students placed trust in pragmatically clear ideas, however. One of the Gen Z voices explained: I don't care if it is or is not perfect: as long as it can help me get there sooner, it is convenient. We have the specter of an epistemological break between rigor and validity and usability and accessibility.

**Sub-theme 2: Redefining Authority of Knowledge**: Millennials made a compromise sometimes here: It is not peer-reviewed but still helpful to generate ideas or write a first draft AI. Gen Z students were more likely to conflate the explanations of AI with authority: Why should I read this 30-page journal when I can get the answer in 2 minutes on ChatGPT? Here we see a wider generational shift in the locus of epistemic authority: from institutional mediating bodies (journals, professors) to concentrations of short, expedient and useful texts.

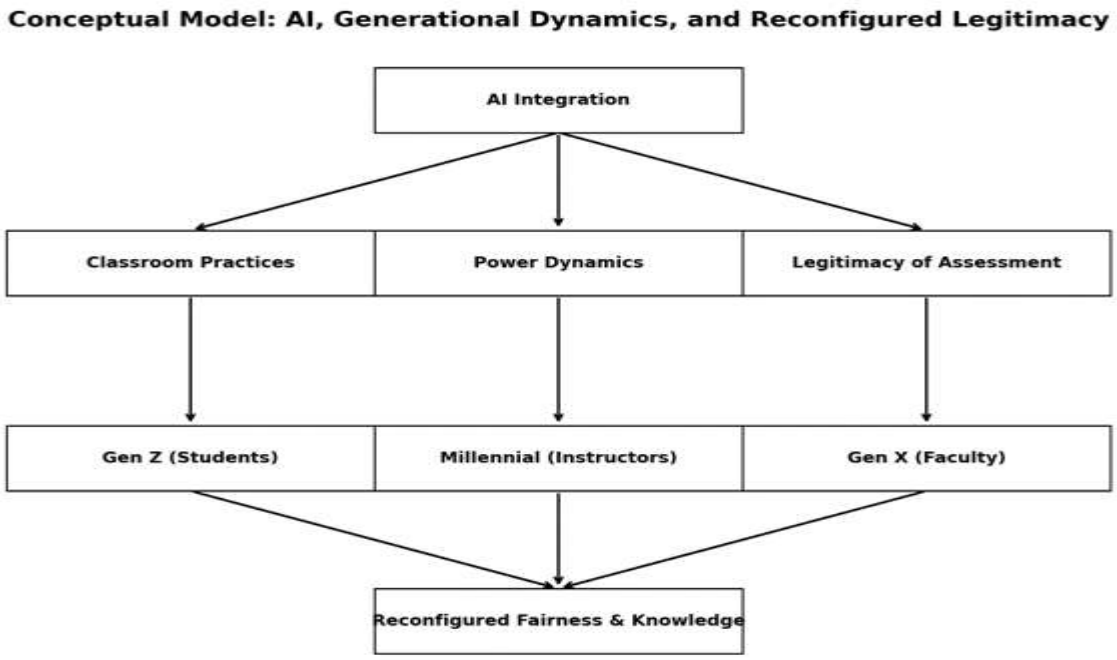
#### 4.2.4 Cross-Cutting Tensions: Academic Futures and Institutional Adaptation

**Sub-theme 1: Fear of Academic Redundancy**: This overarching theme emerged from teachers in all interviews and in the focus group, that the teachers would be overshadowed by the emphasis on these children. The danger is that once AI becomes the primary purveyor of learning, one of the senior faculty members will overwhelm the teachers. Rather, children described this change as something unavoidable: We'll always have teachers, but we won't have information. It re-invents the purpose of education as information sharing and competency training and coaching.

**Sub-theme 2: Calls for Policy, Training, and Integration**: The two groups also expressed a need for guidelines because of these concerns: One of the teacher-millennials commented: We can't just ban it, we need institutional strategies to learn how to use it responsibly. Students' responses reflected this sentiment: Don't punish us for using AI, show us how to use it in an ethical way. The intersection reveals a generational truth: AI is here to stay, and higher education must be as agile as possible in the creation of assessment, curriculum and digital literacy frameworks to address it.

**Interpretive Synthesis**: Overall, the review presents AI as a generational mirror: for Gen X and most millennial educators, the technology is a threat to rigor, equity, and authority; Gen Z students find the technology liberating, effective, and democratizing. Such positions are not simply a matter of attitude, but are founded on antagonistic pedagogy, ethical orientation, and epistemological commitments. The generational split is then not simply a question of technology acquisition, but what counts as knowledge, integrity and, indeed, education in the post-AI university.

### 4.3: Generational Attitudes, Classroom Practices, Power Dynamics, and Legitimacy of Assessment




This conceptual model, titled **"AI, Generational Dynamics, and Reconfigured Legitimacy"**, illustrates how the integration of Artificial Intelligence (AI) into education reshapes classroom interactions, power structures, and the legitimacy of assessment practices, while also influencing different generational groups within academia.
At the top, **AI Integration** serves as the central driving force, which branches into three key domains:

1. **Classroom Practices** – the way AI tools are used in teaching and learning activities.
2. **Power Dynamics** – shifts in authority, control, and relationships between students, instructors, and faculty due to AI adoption.
3. **Legitimacy of Assessment** – how valid and fair academic evaluations remain when AI is involved in knowledge production and testing.

These three domains directly affect different generational cohorts within the educational ecosystem:

- **Gen Z (Students)** – who are often early adopters and experimenters with AI tools.
- **Millennials (Instructors)** – who balance between digital adaptation and traditional pedagogical roles.
- **Gen X (Faculty)** – who often oversee institutional policies and uphold academic traditions.

The interactions among these groups, mediated by AI-driven changes in classroom practices, power relations, and assessments, ultimately converge toward **Reconfigured Fairness and Knowledge**. This final outcome reflects a transformed understanding of what counts as legitimate learning, equitable evaluation, and authoritative knowledge in an AI-enhanced educational landscape.

#### 4.3.1 Theme 1: Classroom Practices and AI Integration

**Sub-theme 1.1: Differential Adoption in Learning Activities**: Student observations showed that Gen Z students are performing classroom tasks using AI without even consulting with the instructor and, in most instances,

without hesitation. During the reading of set readings, it was noted that in one of the seminars, students were cross-checking AI generated summaries as the readings were being read. One learner commented: When ChatGPT gives me a clear breakdown, I will be able to contribute more than I would during a discussion period. In contrast, Gen X faculty appeared to be less encouraging to use AI in real-time, since they believed students had to learn to work with primary texts before they could be allowed to do so. This opposition made AI the enemy of actual learning.

**Sub-theme 1.2: Teacher-Led vs. Student-Led AI Practices**: Millennial teachers were partial adopters of AI, who used AI during the classroom session to generate quiz questions or brainstorming examples, but did not allow the students to use it during their writing work. One teacher said: AI is useful for preparing the prep more quickly but I want my students to work mentally apart from one another. However, students were somewhat frustrated by this imbalance: On the one hand, the professors can do this, and, on the other hand, when we do so, we are accused of cheating. This two-ways norm is an indicator of trouble within authority that has the right to use AI within learning.

**Interpretation:** The classroom practice pattern indicates that Gen Z, who see technology as a continuation of school, are more likely to use it, than millennials, who see it as a substitute and who are likely to adopt it less (though not much less) than gen X who are much less likely to adopt technology. These rituals inhabit and enforce subjugation of tensions triggered by what counts to be considered as doing real work in academics.

### 4.3.2 Theme 2: Power Dynamics and Authority Negotiation

**Sub-theme 2.1: Shifting Knowledge Hierarchies**: Instructors on interviews have confessed that they were put to test on their power. Sometimes even a student will come back to ChatGPT and reference me, one Gen X lecturer remarked, when I am the one who is being challenged by a machine and I am the one doubting my own knowledge. In their turn, learners discussed AI as a leveler: I can ask AI to tell something to the teacher, they will equal the forces. That means the authority is not concentrated anymore but is decentralized between human and machine sources.

**Sub-theme 2.2: Generational Interpretations of Respect and Legitimacy**: Teachers interpreted student reliance on AI as a lack of respect or failure to pay attention to them: they would rather listen to ChatGPT than to me: why do you even have me here? Students frame it differently as it is efficiency-oriented: not a question of substituting professors, but the least path to knowledge. Respect of authority that was once inherent to the position of the institution, became conditional and was mediated by perceived usefulness in relation to AI.

**Interpretation:** Authority in the classroom is becoming a negotiable and relational one, and AI is an unspoken third party. Teachers are now expected to demonstrate their professionalism, and students start to think about intellectual respect in a new way due to the introduction of AI.

### 4.3.3 Theme 3: Institutional Legitimacy and Assessment Practices

**Sub-theme 3.1: Policy Ambiguity and Teacher Discretion**: The institutional positions examined in the document revealed a quilt. One of the policy documents warned: AI-driven work is a form of academic misconduct, unless specifically identified, and others encouraged responsible AI technology use. In practice, the teachers were discretionary. One of the millennial teachers confessed: I do not even know what the official policy is, I just make up my rules. The consequence of this discrepancy was to confuse students: in one course it is forbidden, in another it is allowed--but how can it be just?

**Sub-theme 3.2: Assessment as a Contested Site of Legitimacy**: Essays or literature reviews especially were dangerous. The teachers were worried: When an AI writes half your essay, it is the tool that gets the grade, not you. But students responded: it must be graded on how well we can utilize new tools- AI is one of the new tools. This impossibility exemplifies two counter-conceptualizations of the validity of evaluation, the one that is

associated with effort and innovation, and the one that is associated with adaptability and capability of the tools that were used.

**Interpretation:** Institutional ambiguity presents stressors and carrying out the judgment to asymmetrical actions of legitimacy. Policy inequities are regarded as inequity by students, and policy ambiguities are regarded by teachers as a threat to academic integrity.

**4.3.4 Theme 4: Emerging Reconfigurations of Fairness and Knowledge Production**

**Sub-theme 4.1: Fairness as Equal Access vs. Fairness as Equal Effort**: The gen Z respondents associated fairness with accessibility: responders said that the existence of AI means that everyone should have equal rights to use it. However, the educators associated fairness with effort: as AI minimizes the intellectual effort, it will dismantle fairness in the grading. It is the tension of these competing fairness logics that much of it is founded on.

**Sub-theme 4.2: Knowledge Production in Transition**: In the data sources, we found evidence that the concept of legitimate knowledge is shifting into the meaning. The teachers presented the knowledge as tested with other teachers, originality and critical human thinking. Students have described knowledge as valid and clear, actionable and applicable even if it is generated by AI. One student wrote: It doesn't matter who wrote, but I would like to know.

The story is one of generational epistemic transformation in higher education: the values of rigor, originality, and institutional authority have been supplanted by the values of clarity, speed, and usability. This new distribution of authority is breathing life into old notions of evaluation and pedagogical authority.

**4.3.5 Overall Interpretive Statement**: The results reveal that AI does not just alter the tools used in the classroom - it alters the ecology of authority, legitimacy, and equity. As it is pointed out, practices are asymmetric (teachers control, students internalize), there is confusion around policies which stem from inconsistency, and interviews reveal profound intergenerational differences on what is considered fair and the nature of knowledge. AI can provide equity and efficiency for Gen Z; rigor and authenticity for Gen X and much of the millennial generation. These are not cosmetic differences, but represent a deeper shift in the academic culture whereby legitimacy is once again being determined at the intersection between pedagogy, power and policy.

## 5. Discussion

To help illuminate the acute generational inferiority in adopting AI in higher education, this paper shows that the adoption, resistance, and negotiation of generative AI tools are not simply decisions made by individuals about technology but are also situated within generational academic cultures. These results are in line with the previous researches about generation differences in learning preferences, technological literacy and interests in pedagogical interference (Hernandez-de-Menendez et al., 2020; Wiedmer, 2015; Shatto and Erwin, 2016).

Only 96% of Gen Z students have positive thoughts on AI as something that supports learning, and they have already integrated AI in their lives since they see that it's something that feels immediate, available, and personalized for them. This is consistent with Granitz, Kohli and Lancellotti (2021) who note that Gen Z learners can scan and synthesize large amounts of information and with Issac et al. (2020) who affirm their willingness to use AI-based technology to self-study. Millennials emerge as optimistically cautious but fully closed-marketed AI adopters and as ambivalent digital natives comfortable both with innovation and professionalism (Bencsik et al., 2016). The Gen X professors are pessimists and see AI as a threat to intellectual rigor and academic integrity, following Shamma (2011) and Wiedmer (2015), who label this generation digital immigrants and who are socialized to learning in a structured and disciplined way.

It is analyzed that AI has stratified moral economy. Students are also pragmatic about AI and do not see it as any different as other online learning aids, such as online tutors or virtual tutors (Alam, 2022; Celik et al., 2022). Loss of originality, superficial learning, and plagiarism are some of the ethical risks that faculty expect to encounter

(Bisdas et al., 2021; Gillissen et al., 2022). The generation gap in faculty and students is more extreme in terms of its epistemology: faculty are less willing to trust what AI produces and students are more likely to consider them knowledge artifacts, not supplements, which aligns with the findings of Mosca et al. (2019) that Gen Z believes digital resources are a part of, not a complement of, knowledge.

The observation and interview findings suggest that the difference in generational attitudes will make considerable material difference on the classroom ranks and assessment. More defiant of traditional authority, believing that AI is an equal source of knowledge, and that suits the thesis of Turner (2015) and Hampton and Keys (2017) that Gen Z possesses the aggressive self-directed learning style. Millennials are more of a hybrid and use AI in a guided way as opposed to Gen X who use a ban or limit approach. The traditional norms of authorship and originality are backed by older generational institutional policy (Oblinger and Oblinger, 2005), which further increases the intergenerational conflict between behaviors of students and administrative validity.

The findings support the view that AI implementation in higher education transcends the technological to the cultural and generational levels. Similar to earlier works, the presence of AI in Gen Z correlates with their digital-first cognitive orientation, capability to multitask and wish to receive instant feedback (Eckleberry-Hunt et al., 2018; Schwieger and Ladwig, 2018). The analogy of older generations refers to studies of the Baby Boomers and Gen X generation, who are much more organized, enjoy teacher-led learning, and fear technological encroachment (Zemke et al., 2000; Shamma, 2011). Furthermore, the ethical and epistemological conflicts uncovered can be linked to the works of Bencsik et al. (2016) and Hernandez-de-Menendez et al. (2020), in which the authors state that academic integrity, knowledge, and fairness are generated generationally.

### 5.1 Implications

This article describes AI as not the technological revolution, but a generation-level reorganization of scholarly values. Universities are at the edge: until they re-structure the policies and pedagogies to make AI a valid co-player in the academic process, schools risk continuing the cycle of generational dissociation, trust, participation and educational irrelevance. The personalization of learning and ethical digital literacy and collaborative knowledge creation might be complemented with AI-informed and generational-conscious approaches, quite on the contrary (Chen et al., 2023; Daniel, 2015; Terzopoulos and Satratzemi, 2019).

## 6. Conclusion

By highlighting a generation gap in university teaching-the willingness and reluctance of generative AI tool adoption, this paper shows that generation gaps constitute more than a technical choice and that generational aspects are embedded within intergenerational academic cultures.

The findings showed that Gen Z learners see AI overwhelmingly as an educational tool and use it as an integral part of their day-to-day learning process and value the immediacy and convenience of its use. Conversely, millennial faculty straddle the fence of optimism with boundary-setting while Gen X faculty are quite cynical and perceive IA as a threat to rigor and intellectual discipline. Sometimes, the result of these competing visions is a clash between institutional conservatism and digital-native enthusiasm, between the two generations.

Pedagogical, ethical, and epistemological issues were analyzed to identify a complex moral economy of AI in education. Students view the application of AI as pragmatic and comparable to other digital learning support and teachers and faculty predict ethical threats of plagiarism, loss of originality, and shallow learning. Notably, epistemological issues, concerning what would be referred to as knowledge in the post-AI world, became the fault line with the most profound generational depth. Faculty interpret AI outputs as unjustified imitations, whereas students tend to accept them as legitimate and valuable input to the learning process.

These paradoxical attitudes are tangibly redefined by classroom practices, power dynamics and assessment legitimacy through the integration of classroom observations, discourse analysis and interview narratives. The Gen Z students are becoming more disruptive of the established hierarchies through placing AI as a parallel authority

that sometimes directly conflict with the teacher judgments. Millennial are ambidextrous people who incorporated the use of AI in a regulated structure, yet Gen X prefers restrictive action. Traditional standards of authorship and originality that are often codified in institutional policies tend to reproduce a generation gap between older and newer generations, as institutional policy tends to be written with the older generations in mind.

The research concludes that the arrival of AI in higher education is a technological shock, but also an intergenerational reordering of academic values. Justness, rigor, legitimacy become inaccessible to everyone, but the object of debate between generations. Results show that tertiary learning is in a post-AI transition period during which control and credibility is being re-negotiated. This is a serious choice universities must make: redefine policies that consider artificial intelligence as a legitimate co-participant in the experience of education, or persist in furthering the generational dissonance that confirms distrust, interaction, and the irrelevancy of education.

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