

CULTURE OF UZBEKISTAN’S YOUNG GENERATION IN RELATION TO IT AND AI EDUCATION

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Abstract

This paper examines the cultural orientations of Uzbekistan’s youth in the context of IT and AI education, based on a survey of students at Inha University in Tashkent. The findings are compared against broader cultural trends (e.g. Hofstede’s survey) to understand how the young generation’s values may influence and enhance digital competencies. Results indicate that these students exhibit a blend of traditional and modern values: relatively low power distance and individualistic leanings alongside enduring collectivist tendencies, a feminine outlook, moderate uncertainty avoidance with adaptability, and a balanced approach to change. These cultural traits have practical implications for education – suggesting that teaching strategies should leverage youth’s openness to critical thinking, collaboration, and future-oriented learning. The paper provides recommendations to align educational environments and curricula with these cultural dispositions, in order to strengthen digital skills and effectively prepare Uzbekistan’s youth for the demands of the digital economy.

Keywords: youth culture, digital competencies, IT education, AI education, Uzbekistan, Hofstede dimensions, educational strategy, critical thinking, collaboration, digital literacy

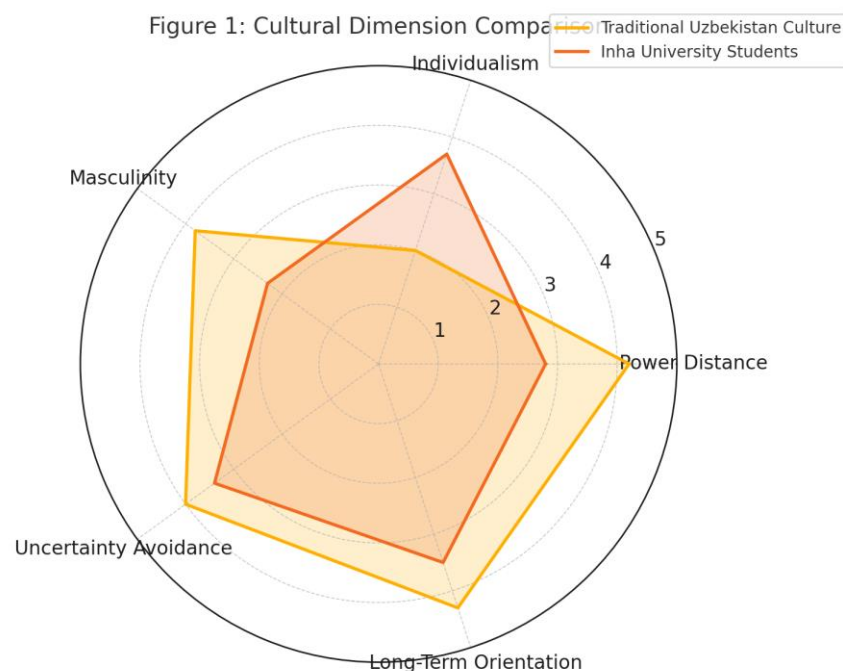


Figure 1: Cultural Dimension Comparison between Traditional Uzbek Culture and Inha University Students.

Introduction

Uzbekistan is undergoing a rapid digital transformation, with nearly 60% of the population under 30 years old [15†L1009-L1017]. National initiatives like “Digital Uzbekistan 2030” underscore

the importance of IT education and digital literacy for empowering young people and driving socio-economic development 【15†L1012-L1020】 【15†L1024-L1032】 . Digital skills are now essential for the modern job market, yet many graduates lack adequate preparation in technology, contributing to high youth unemployment rates 【46†L78-L86】 . To harness the potential of this large youth cohort, it is crucial to enhance digital competencies through education that not only transfers technical knowledge but also fosters critical thinking and adaptability 【47†L7-L10】 . However, educational reforms must account for the cultural context of learners. Culture influences how students learn, interact, and adapt to new technologies. Uzbekistan’s society has deep-rooted traditions and values, which have been characterized in prior surveys of national culture. According to Hofstede’s cultural framework, Central Asian cultures (including Uzbekistan) generally exhibit high power distance (strong respect for authority and hierarchy) and collectivism (priority to group harmony and loyalty) 【22†L68-L75】 . They also tend to be more masculine (as

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traditional gender roles), have moderate-to-high uncertainty avoidance (preference for stability and clear norms), a long-term orientation valuing perseverance and heritage, and a tendency toward restraint over indulgence 【22†L69-L76】 . These cultural patterns, often reflected in older generations and rural communities, can shape attitudes toward education and technology adoption. At the same time, globalization and increased connectivity are influencing the young generation’s values. Today’s youth in Uzbekistan have grown up with the internet and exposure to global ideas, which may lead them to adopt different perspectives than their parents. For instance, interest in digital technology is very high among youth – 86.9% of young people express a strong desire to learn more about computers 【33†L1-L4】 . This openness to technology and information may correlate with more open, egalitarian cultural attitudes. Understanding these emerging cultural shifts is important for designing effective IT and AI education strategies. If the young generation is more inclined to question authority, favor meritocracy, or embrace change, educational approaches should leverage those traits. Conversely, any persistent traditional values (such as preference for clear structure or group-oriented learning) should also be respected in the learning environment.

Research Aim: This study aims to analyze the culture of Uzbekistan’s youth in relation to IT and AI education. We use survey data

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ity students to gauge their cultural attitudes across several dimensions, and we contextualize the results with references to a known cultural survey (Hofstede’s framework). By comparing the youth’s responses to broader cultural expectations, we identify key areas where the younger generation’s mindset may facilitate or hinder digital learning. Ultimately, we provide practical recommendations on how to transform the educational environment** and teaching methodologies – in line with Direction 3, “Prospects for enhancing digital competencies of education participants” – to better suit the cultural profile of today’s students.

Methodology

Survey Design: A questionnaire was developed to measure students’ comfort level with various cultural and societal statements. The survey instrument was inspired by Hofstede’s cultural

dimensions, covering aspects such as authority relations, individualism vs collectivism, gender roles, uncertainty tolerance, and attitude

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hange. It consisted of 50 Likert-scale items divided into five sections (10 statements each), with responses from 1 (Strongly Disagree) to 5 (Strongly Agree). Each section presented paired or contrasting statements reflecting

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two sides of a cultural dimension. For example, one section on power distance included statements like “Children should never question their parents’ authority” vs “Children should have their opinions valued as much as their parents”, and “People should question the decisions of their bosses” vs “The boss’s decisions should be accepted without question.” Another section on individualism/collectivism posed items such as “Promotions should be based on loyalty and seniority” vs “Promotions should be based on competence, regardless of age.” This design allows us to see not only the prevalence of certain beliefs but also any internal inconsistencies or ambivalence in respondents’ cultural outlook.

Participants: The survey was administered in April 2024 to students at Inha University in Tashkent via Google Forms. A total of 123 responses were collected. The sample covered a range of demographics within the university: 72% of respondents were male and 28% female, reflecting the male dominance in IT-related fields at the university. Ages ranged roughly from 18 to 23 for the vast majority (over 9

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out of 24), aligning with freshman to senior undergraduate students. Participants came primarily from two schools: about two-thirds from the School of Computer and Information Engineering (SOCIE, i.e. IT majors) and one-third from the School of Logistics/Business (SOL/SBL). Most respondents (around 80%) had completed their secondary education in local Uzbek schools (with a few from Russian-medium or international schools), and almost all were unmarried. This profile indicates a cohort of young, predominantly undergraduate-level students in an urban, technology-focused university environment.

Data Analysis: Survey results were exported to a spreadsheet for analysis

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contributions and mean scores for each question and each thematic section. For interpretation, certain items were reverse-coded to align on the same scale (e.g. in the power distance section,

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where a pro-authority statement indicates the opposite orientation of agreement with a pro-equality statement). We then

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the index for each cultural dimension (Power Distance, Individualism, Masculinity, Uncertainty Avoidance, Long-Term Orientation) as represented by the survey. These indices

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esponding to the Likert scale) were compared qualitatively to Hofstede's reported national values for Uzbekistan or Central Asia [22†L68-L75] . Given that the Hofstede data for Uzbekistan in literature is limited, we relied on published descriptions of regional trends as a point of reference rather than exact numeric scores. The analysis focuses on general tendencies (e.g. "higher" or "lower" relative orientation) rather than precise measurements.

Additionally, we note specific statements where there was strong consensus or notable divergence among students, since these can reveal the practical mindset of youth. For example, we pay attention to statements that a majority strongly agreed or strongly disagreed with, as these highlight clear cultural leanings. Conversely, if responses clustered around the neutral midpoint or if opposing statements both received high agreement, it suggests ambivalence or a transitional state in values. Such nuances are important for crafting nuanced educational strategies.

Results

Overview of Cultural Orientation: The surveyed students' responses reveal a distinctive blend of cultural values. In summary, Inha University youth tend to have lower power distance, more individualistic and feminine values, moderate uncertainty avoidance, and a balanced (mixed normative–pragmatic) outlook compared to traditional Uzbek cultural norms. Figure 1 illustrates a comparative profile of these dimensions, contrasting the students' average scores with the typical national culture profile reported in literature.

【52†embed_image】 *Figure 1: Comparison of cultural dimension scores – "Typical" Uzbekistan culture (yellow, based on Hofstede-inspired literature) vs. Inha University youth survey results (orange). Higher values correspond to stronger presence of that trait (e.g. higher power distance or higher individualism). The radar chart shows that, relative to traditional expectations, these students score much lower on Power Distance and Masculinity, higher on Individualism, and somewhat lower on Uncertainty Avoidance and Long-Term Orientation (indicating a slightly more short-term normative focus).*

Examining each dimension in detail:

Power Distance (Authority Relations): The youth display a notably lower power distance orientation than what might be expected in Uzbek culture. For instance, only a minority of students agreed that "*Children should never question their parents' authority,*" with a mean rating of 3.26/5 on that statement (where 3 = neutral). In contrast, there was very strong agreement (mean 4.03/5) that "*Children should have their opinions valued as much as their parents.*" Similarly, while many acknowledged "*Children should accept the authority of older people*" (3.59/5), an even larger number felt "*people should be able to define their own roles in an organization*" (4.20/5). Strikingly, 70% of respondents (approximate) disagreed that a boss's decisions must be accepted without question (this statement had a low mean of 2.45), and many supported the idea that "*people should question their bosses' decisions.*" This indicates a generational shift toward a more egalitarian and question-friendly attitude. Students respect authority to an extent but expect their voices to be heard. They endorse clear structure (they agreed that roles should be clearly defined), yet they don't believe in blind obedience. Even in political context, most prefer change through debate and elections (mean 3.85) but a considerable number also agreed that "*drastic measures are sometimes necessary to replace current leaders*" (3.74). This ambivalence suggests that while they value orderly, democratic processes, they are not entirely averse to challenging authority if needed. Overall, compared to older norms of deference, these youth are more inclined to challenge hierarchy and value participatory decision-making.

Individualism vs Collectivism: The surveyed students lean more individualistic than the traditional collective ethos, though some collectivist values persist. On one hand, they strongly believe promotions and rewards should be based on merit: *“Promotions should be based on competence, regardless of age”* had a high agreement (mean 4.03), and an overwhelming majority rejected nepotism – most disagreed with *“It is wrong for a boss not to hire a relative”* (mean only 2.21) and tended to agree *“hiring a relative can be unethical.”* They also prioritized personal freedom over group norms (3.84) and made decisions based on personal principles (3.52) relatively strongly. These responses highlight a meritocratic and individual-rights mindset. On the other hand, certain collectivist inclinations remain: students still rated *“Strong loyalty to one’s group is important”* at 3.55 and *“Concern about others’ opinions is important”* at 3.27, indicating moderate agreement. They did not completely dismiss influence of group expectations (*“The rules of my group influence my behavior”* scored 3.25, around neutral). This suggests that while personal achievement and fairness are paramount, youth also value belonging and harmony to some extent. We can infer that these young Uzbeks are navigating a balance between individual ambition and community loyalty. They diverge from the stereotypical tight collectivism of Uzbek society by emphasizing independent choices (e.g. career based on one’s own interest and merit, not family pressure [32†L139-L145] [32†L109-L117]), yet they maintain respect for group relationships. In practical terms, they might prefer collaborative environments that still recognize individual contributions.

Masculinity vs Femininity (Competitive vs Nurturing Values): The data indicate a strong tilt toward the feminine end of this cultural dimension among the students. They expressed high empathy and egalitarian views. For example, there was broad disagreement with the competitive notion that *“success should be admired and failure criticized”* (mean only 2.38, a clear rejection of this harsh view). Instead, students moderately agreed that *“Empathy for non-winners is important”* (3.35). They also showed preference for a supportive work environment: while they appreciate clear objectives and evaluation (4.40, one of the highest scores, reflecting a desire for transparency and feedback), they also like a *“relaxed work environment”* (3.74) and believe *“work decisions should be consensus-driven”* (3.58). They are not fond of conflict – most did not agree that conflict at work is beneficial (2.91). Perhaps most telling are their views on gender roles and relationships: an almost unanimous agreement that *“A good quality of life is important for both genders”* (very high mean 4.67) and strong rejection of the stereotype *“Men should focus on success, and women on community well-being”* (only 2.65). This is a progressive stance favoring gender equality in personal and professional life. Furthermore, they highly value love, affection (4.18), and mutual support in relationships (4.58), highlighting a nurturing outlook. In summary, the young respondents place more emphasis on cooperation, quality of life, and equality than on competition or traditional patriarchal norms. This is a significant cultural shift – traditionally, Uzbekistan has been described as having a more masculine, assertive culture with defined gender roles [22†L71-L75] , but these youths are challenging those norms. For the educational environment, this means students may thrive better in collaborative, inclusive settings rather than overly competitive or authoritarian ones. They respond well to encouragement and teamwork, and expect equal opportunities regardless of gender.

- Uncertainty Avoidance (Tolerance for Ambiguity): The survey suggests a moderate level of uncertainty avoidance, with students valuing both structure and flexibility. They seem to recognize the importance of planning and order, yet also prize adaptability. For instance, they agreed that *“Organizational skills are essential to avoid ambiguity”* (4.01) and that

“Children must be taught to be organized to avoid ambiguity” (3.82). They also strongly agreed *“Expertise and leadership should be highly valued”* (4.20), implying they appreciate having knowledgeable guidance in uncertain situations. These points reflect a desire for clarity and prepared systems, consistent with relatively higher uncertainty avoidance. On the other hand, they equally endorsed statements that indicate comfort with uncertainty: *“Children should learn to manage chaos”* scored 3.98, and *“Adapting to various environments is valuable”* was very highly rated (4.39). They even leaned towards *“Few societal rules are preferable”* (3.27) while also modestly agreeing *“strong societal rules must be respected”* (3.36), revealing an interesting split. Additionally, they were lukewarm about strict regulatory measures like carrying ID at all times (both statements about ID had low agreement around 2.6–2.8, meaning many disagreed with such strict rules). Finally, they felt *“expressing emotions in public should be acceptable”* (3.47), indicating openness as opposed to a restrained, strictly regulated demeanor. Putting this together, the youth appreciate order but not rigidity. They prepare for uncertainty by being organized and relying on expert guidance, yet they want the freedom to improvise and the ability to tolerate the unexpected. This balanced approach is slightly lower in uncertainty avoidance than one might expect traditionally – Uzbek society has usually favored avoiding uncertainty via strict rules and rituals – but the difference is not extreme. It appears these students are learning to live with uncertainty, likely a necessary adaptation in the fast-changing tech world. In educational terms, they may prefer a learning structure that provides clear goals and mentorship (so they feel secure), but within that structure they enjoy open-ended tasks, creative problem-solving, and the ability to “learn by doing” even if outcomes aren’t certain. They are unlikely to be comfortable with complete chaos or lack of guidance, but they also dislike excessive micro-management.

- Long-Term Orientation vs Short-Term Normative Outlook: The responses showed a mixed orientation, combining respect for tradition and stability with an openness to change and future-thinking. Students clearly value some traditionally “normative” ideals: they want *“understanding of good and bad to be clear”* (3.97) and believe *“stability and continuity are valuable”* (4.02). They also strongly feel *“coherence in information is necessary”* (4.25), which implies they prefer consistency and clear truths rather than contradictions. These points align with a more normative (short-term oriented) culture that upholds fixed guidelines and societal continuity. Yet, simultaneously, the same students strongly endorsed more pragmatic, long-term oriented attitudes: *“Embracing change and relativism is beneficial”* scored 3.78, *“Children should be taught to question why”* was very high at 4.24, and *“Future-oriented actions are important”* equally high at 4.24. They generally agreed that achieving common practical goals can matter more than abstract moral debates (3.47). They also indicated some ability to handle complexity, with many saying *“contradictory information is manageable”* (3.41, slightly above neutral). This combination of responses suggests that young Uzbeks are trying to reconcile their cultural heritage with modern flexibility. They do cherish clear moral values and the continuity of their culture, but they also realize the importance of questioning old ways and adapting to new circumstances for the sake of future progress. For example, a student might simultaneously believe in holding on to core ethical principles (clear right and wrong) *and* believe in being open-minded that different contexts might require different approaches (“relativism”). The relatively high score on questioning “why” indicates an educational

shift – traditionally, rote learning without questioning was common, but these youth see value in understanding underlying reasons. Likewise, their strong future orientation (planning ahead) coexists with acknowledging the influence of cultural roots (3.84). We interpret this as a transitional mindset: they neither fully reject tradition nor fully cling to it. Instead, they seek to modernize within their cultural framework. This nuanced outlook can be very beneficial if leveraged in education: students will respect lessons about past knowledge and ethics, but they are eager to connect those lessons to future innovation and real-world application. Educators can expect them to respond well when the curriculum links new technology (AI, IT) with practical improvements for society, as opposed to learning tech in isolation or purely for theoretical debate.

In summary, the survey data portrays the young generation at Inha University as culturally more progressive and open than the stereotype of Uzbek society in areas like hierarchy, gender equality, and meritocracy, while still retaining a measure of traditional caution and community values. The youth want a voice and autonomy, but also guidance; they value teamwork and fairness; they are compassionate yet goal-oriented. These attributes bode well for their capacity to learn and excel in IT and AI – fields that require creativity, collaboration, and continuous learning.

It is important to note that our sample is somewhat specialized (university students in an urban, tech-oriented environment), so their cultural attitudes may not represent all Uzbek youth. Urban students often report more liberal attitudes than rural youth 【34†L1-L4】 【46†L78-L86】. For instance, rural young people (especially females) have less internet access and tend to stick more to traditional norms 【34†L1-L4】. In our educated sample, we see the leading edge of cultural change. Even so, these findings offer valuable insight into how the upcoming generation – likely future IT professionals, engineers, and tech-savvy leaders – think and what they value.

Discussion

The above results indicate that Uzbekistan’s young generation is in the midst of cultural transformation, which has direct implications for how they learn and engage with digital technologies. Here we discuss some key implications and the underlying factors:

1. **Shifting Authority Dynamics in Education:** The lower power distance observed means that traditional teacher-centric methods may be less effective with today’s students. In a typical Uzbek classroom of the past, the teacher was an unquestionable authority and students tended to passively absorb knowledge. Now, however, students are more willing to question and interact. This is a positive development for fields like IT and AI, where inquisitiveness and critical questioning are crucial. Students’ comfort in challenging ideas can lead to deeper understanding (for example, debugging code or questioning an algorithm’s output). However, if educators remain very authoritarian, students might either withdraw or lose interest. It will benefit teachers to embrace a facilitator or mentor role – guiding discussion rather than just lecturing. The respect for expertise is still there (students do value knowledgeable leaders), so they are likely to respond well to teachers who demonstrate competence *and* encourage dialogue. Essentially, the classroom culture can evolve into a more collegial atmosphere, aligning with what is seen in Western or East Asian education systems that promote questioning. This change might face some friction in more conservative settings, but our findings show that students are ready for a more open, two-way learning process.

2. **Individual Merit and Motivation:** The strong preference for meritocracy and personal achievement suggests that young learners are motivated by opportunities to excel based on their own skills. Unlike a pure collectivist setting where students might be reluctant to outshine peers

or where nepotism might demotivate hard work, these youth want fair recognition for their accomplishments. This is highly advantageous in an educational context: it means students will respond to clear, merit-based incentive structures – such as hackathon competitions, skill certificates, or transparent grading rubrics. They want to know that if they put in effort (e.g. learn a new programming language or complete an AI project), they will be rewarded objectively. Additionally, their moderate individualism means they appreciate having some personal autonomy in learning (choosing project topics, pursuing their own interests in tech). At the same time, because they have not entirely discarded collectivism, they often enjoy working in teams and value peer feedback. This duality can be harnessed by structuring learning as cooperative competition – for instance, team-based projects where each individual has a role to shine. Another point is that since they strongly oppose nepotism and favoritism, educational administrators should ensure fair access to resources like internships, scholarships, and advanced courses. Any perception of unfair advantage (for example, selection based on connections rather than talent) could demotivate students who otherwise are eager to prove themselves.

3. Shifting Gender Dynamics and Inclusivity: A particularly encouraging finding is the youth's rejection of rigid gender roles and their emphasis on equality. In the tech field globally, gender imbalance is a known issue; in Uzbekistan, traditionally fewer women enter IT due to cultural expectations. Our data indicates that the new generation is supportive of women engaging in technical careers – they see no reason why success should be gendered. This cultural shift creates a ripe opportunity to increase female participation in IT and AI education. University programs and tech clubs can capitalize on this by actively encouraging mixed-gender collaboration and by highlighting female role models (for example, successful women in tech from Uzbekistan or abroad) without fear of cultural pushback from the students. Moreover, the generally caring and supportive ethos means male students are likely to be accepting teammates and allies to their female peers (a critical mass of respondents agreed on the importance of empathy and support in relationships). Educators should still be mindful that outside the university bubble, some gender biases might linger (e.g. from older family members), and thus mentorship and support networks for female students remain important. Overall, the trend points to a more inclusive educational environment where diversity is valued. This will help in building collaborative classrooms and labs that reflect a range of perspectives – vital for creativity in AI solutions and for avoiding gender bias in tech development.

4. Desire for Structure vs Creativity: The youth's moderate uncertainty avoidance implies they thrive when there is a balance between structure and freedom. They appreciate clarity – evidenced by their strong desire for clear objectives and coherent information. This suggests that in IT/AI courses, it is helpful to clearly outline learning goals and provide structured guidance, especially for complex topics. For instance, in a programming course, providing a well-defined problem statement and success criteria will satisfy their need for clarity. At the same time, because they also value adaptability and don't want excessive rules, the path to reach those goals should be flexible. Students likely enjoy open-ended tasks such as a capstone project where they can choose their own approach or a research question in AI that doesn't have a single correct answer. They can tolerate ambiguity in *how* to get to the solution, as long as they know *what* they are aiming for. This resonates with modern pedagogical approaches like project-based learning and inquiry-based learning, which give students room to explore. One practical implication is to reduce overly rigid curricula – e.g. allow some elective modules, encourage creative solutions in assignments (multiple correct answers or implementations), and incorporate ungraded exploratory activities

(like hackathons or innovation challenges) where failing is acceptable. Because students still have some uncertainty avoidance, completely unstructured learning (total self-directed study without support) might overwhelm them. So the role of the teacher or the curriculum is to provide a safety net of structure – regular check-ins, guidelines, and learning resources – while leaving room for student-driven exploration. Given that these youth are digital natives to an extent, they may quickly use online resources and communities to navigate ambiguity if they are empowered to do so.

5. **Balancing Tradition and Change:** The mixed normative-pragmatic outlook of students means they value their cultural identity and stability, yet are open to change and innovation. In educational practice, this can be leveraged by contextualizing IT and AI education within local relevance. Students might respond better when instructors draw connections between technological concepts and real societal needs in Uzbekistan. For example, explaining how AI can be used to preserve the Uzbek language or improve agriculture links future-oriented tech with cultural heritage. This approach satisfies their forward-looking mindset (seeing how tech drives progress) while respecting continuity (solving problems that matter at home). Additionally, since they uphold clear ethics (good vs bad), discussions on tech ethics, responsible AI, and digital citizenship will resonate with them. They are likely to engage seriously with topics like the ethical implications of AI, data privacy, and how technology should align with human values. In fact, their tendency to insist on coherence and clear morality could be channeled into developing a strong ethical foundation for future IT professionals – something critically needed worldwide in the AI era. On the other side of the coin, their openness to “relativism” and questioning means they won’t simply accept something as true because it’s tradition; they will want logical or evidence-based explanations. Educators should be prepared to handle probing questions, such as “Why do we use this algorithm?” or “Is there a better way to solve this problem?”. This inquisitiveness is beneficial for deep learning and should be encouraged by giving thoughtful answers or guiding students to discover answers themselves.

6. **Influence of Globalization and Exposure:** The observed cultural trends among these students are likely influenced by their exposure to global media, internet culture, and possibly education models from other countries. Inha University itself is a collaborative institution with South Korea, so students might be influenced by Korean educational styles (which combine structured rigor with modern content) as well as international peers. The willingness to question authority and focus on merit could also be an effect of interacting in global online communities (such as programming forums, social media) where young Uzbeks engage as equals with others regardless of age or status. As Uzbekistan continues to open up, especially after the mid-2010s reforms, the youth have been getting more opportunities for exchange programs, online courses, and interactions that broaden their horizons. This leads to a form of cultural hybridization – they retain core values (respect, family, etc.) but adopt global attitudes about work, success, and innovation. The education system should recognize this and avoid treating students as if they live in a cultural vacuum of the past. Instead, incorporating international best practices and content will meet their expectations. For example, using English as a medium in IT courses, introducing global case studies or coding standards, and encouraging participation in international contests would align with their worldview and aspirations. Notably, since English proficiency and openness to the world are likely higher in this group, leveraging that can further enhance their learning (through access to global knowledge resources).

7. **Variation among Youth and Inclusivity:** While our focus is on university students, we should acknowledge disparities among youth. Urban university students are ahead in terms of digital

access and progressive values, whereas rural youth may still face a digital divide and hold more conservative views [34†L23-L30] [46†L78-L86] . As Uzbekistan’s goal is to elevate the digital competence of all education participants, strategies must also address those who are not yet in such a modern environment. This means that some recommendations (e.g. promoting questioning in class) might need more gradual implementation in a traditional village school where students are shy and teachers older. The findings from Inha University students can serve as a vision of where Uzbek education can head in the near future, but bridging the gap will require targeted efforts (discussed in recommendations). Fortunately, the government and international partners are already prioritizing digital literacy and internet connectivity even in remote areas [15†L1047-L1055] [15†L1055-L1063] . Over time, as infrastructure and teacher training improve across the country, more youth will likely develop cultural outlooks similar to those we studied – confident, tech-savvy, and adaptable.

In conclusion of this discussion, the culture of Uzbekistan’s young generation is generally conducive to developing strong digital competencies. Traits like lower power distance, readiness to question, and individual initiative are aligned with the demands of learning complex, innovative subjects like artificial intelligence. Their collectivist streak ensures they can work in teams, and their caring values help build supportive learning communities. The main caution is that they still desire some structure and clarity, reflecting that educational changes should be implemented thoughtfully rather than chaotically. By understanding these cultural predispositions, policymakers and educators can craft learning experiences that motivate students and play to their strengths, ultimately accelerating the transformation of Uzbekistan’s educational environment in the digital age.

Recommendations

Based on the survey insights and discussion above, we propose the following recommendations to enhance digital competencies among Uzbekistan’s youth, tailored to their cultural characteristics:

1. **Adopt Student-Centered, Mentor-Like Teaching Methods:** Educators should shift from authoritative teaching to a student-centered approach. Given youth’s lower power distance, teachers can act as facilitators or mentors who encourage questions and open discussion. This can be implemented through interactive classes, Q&A sessions, and office hours where students feel comfortable approaching instructors. Training programs for teachers should include modern pedagogical techniques (e.g. the Socratic method, project-based learning) to help them manage a more democratic classroom. Over time, this will nurture critical thinking and creativity, as students will practice questioning assumptions – a key skill in programming and troubleshooting. Encouragingly, such changes align with global best practices and will make classrooms more dynamic and engaging.
2. **Integrate Critical Thinking and Problem-Solving in Curriculum:** To leverage the students’ willingness to question “why,” the curriculum for IT and AI courses should explicitly incorporate critical thinking exercises. Rather than solely teaching technical facts or asking students to memorize code, educators should pose open-ended problems and case studies. For example, in an AI ethics module, present a dilemma and have students debate it. In a coding class, give a malfunctioning program and let students debug in teams, explaining their reasoning. These activities satisfy their curiosity and moral clarity needs by letting them apply concepts and see cause-effect. They also impart the skill of learning how to learn, which is vital in the ever-evolving tech field. The Ministry of Higher Education and secondary schools can work to infuse such

methods even in earlier grades, so that questioning and problem-solving become ingrained from a young age.

3. **Emphasize Merit-Based Opportunities and Transparent Evaluation:** To keep students motivated, academic and extracurricular opportunities should be transparently merit-based. Universities and colleges should establish clear criteria for grades, awards, and selections. For instance, if selecting students for an international IT Olympiad, use objective coding tests and publish the selection process, so everyone knows it was fair. In classes, use rubrics that outline how students will earn points for projects, and share these at the start. This approach resonates with the youth's individualist and meritocratic values – they will put in effort if they trust the system is fair. It also combats any remnants of favoritism; over time this can help diminish the culture of “pripiska” or informal favoritism that might exist. Additionally, promoting meritocracy encourages all students, regardless of background or connections, to engage with digital learning. Talented youth from less privileged families, for example, will feel they have a fair shot, which can increase overall participation in advanced IT programs.

4. **Leverage Collaborative Learning and Peer Support:** In line with their collectivist remnants and feminine values, students appreciate working together and supporting each other. Educational programs should introduce more group projects, peer programming, and study circles. For instance, a course could include a team-based software development project where 3-4 students build an app together, taking on different roles. This teaches not 4. **Leverage Collaborative Learning and Peer Support:** Uzbekistan's youth value teamwork and mutual support, so educators should incorporate group-based learning. Assignments can be done in teams, encouraging students to learn from each other and collectively solve problems. For example, introduce pair programming exercises or group projects in which students collaborate to design a software application or train a machine learning model. This not only builds technical skills but also strengthens communication and project management skills. Schools and universities can facilitate peer mentorship programs (e.g. study groups or coding clubs) where senior students coach juniors. Such initiatives tap into the collectivist aspect (loyalty to group) by creating a positive “learning community” culture. They also align with the students' preference for consensus-driven work and low conflict – peers working together in a supportive manner. By learning collaboratively, students gain confidence and tend to persist longer in challenging tasks. This approach mirrors the workplace in IT companies, where teamwork is essential, thereby better preparing them for future employment.

5. **Foster an Inclusive and Supportive Environment (Gender & Diversity):** Given the strong egalitarian and caring values observed, educational institutions should actively promote inclusion in IT/AI programs. This includes encouraging more young women to pursue STEM through scholarships, outreach, and role models, as well as supporting students from various regions or backgrounds. Setting up supportive networks – such as women-in-tech forums, or first-year experience groups – can help maintain the “family-like” positive atmosphere students value. Teachers and administrators should explicitly discourage any form of discrimination and emphasize that talent knows no gender or ethnicity. Luckily, the current generation of students largely shares these beliefs, so such messages will resonate rather than conflict. A practical step could be highlighting contributions of Uzbek women in tech and hosting events that celebrate diversity in innovation. An inclusive environment ensures every student feels “seen” and supported – which aligns with youths' high importance on quality of life and support in tough times. This emotional security can improve academic performance and willingness to take risks in

learning. Moreover, inclusivity drives up overall participation in digital fields, expanding the talent pool to meet the country's needs.

6. Provide Clear Structure with Flexible Pathways: To address the moderate uncertainty avoidance, educational programs should offer a clear structure but allow flexibility. Teachers should give students syllabi with well-defined objectives, timelines, and evaluation criteria (students appreciate knowing what is expected and having coherent information) [46†L48-L55]. At the same time, within those guidelines, allow students some choice – for instance, letting them choose their own project topics or research questions, and encouraging creative or alternative solutions to problems. In practice, a course might outline the core competencies (e.g. by semester's end, build a functional website or implement a basic AI model) but permit students to select which domain or problem to apply it to (one student might develop a website for e-commerce, another for a cultural archive, etc.). This structured flexibility satisfies the students' desire for order (they have clear goals and grading rubrics) while feeding their adaptability and personal initiative. It also caters to both “practical what/how” (they do hands-on tasks) and “question why” (they explore reasons and applications) impulses. Educational authorities can also introduce modular learning paths – for example, a standard IT curriculum augmented with elective modules (robotics, data science, etc.) that students can opt into based on interest. Such options empower learners to take ownership of their education. Overall, the motto should be “freedom within a framework.” This will keep students engaged and accommodate different learning styles, thus enhancing competency development.

7. Strengthen Digital Infrastructure and Teacher Training Nationwide: Finally, to ensure these enhancements reach all education participants, investment in infrastructure and faculty development is crucial [46†L48-L55] [15†L1055-L1063]. The government, with support from organizations like UNDP and UNICEF, should continue expanding high-speed internet and modern computer labs to *all* schools and universities, especially in rural areas. Closing the urban-rural digital gap will allow culturally diverse youth across Uzbekistan to benefit from innovative learning (as of recent surveys, over half of rural youth never use the Internet [34†L1-L4] – a statistic that must improve for equitable progress). In tandem, teacher training programs must be updated. Many current teachers grew up in a more traditional system; they need training not only in technical digital skills but also in new pedagogical approaches (student-centered learning, use of e-learning tools, etc.). Workshops, certifications, and incentives can be provided for teachers to upgrade their skills. A teacher who can confidently use digital tools and adopt a facilitative teaching style will effectively impart digital literacy to students [46†L49-L57]. Additionally, incorporating community engagement – for instance, inviting IT industry professionals for guest lectures or partnering with tech companies to provide internships – can bridge theoretical learning with practical skills [46†L50-L58]. These systemic improvements ensure that the prospects for enhancing digital competencies are realized uniformly, creating a pipeline of digitally-skilled, culturally-aware young professionals throughout Uzbekistan.

Conclusion

In conclusion, the young generation of Uzbekistan – represented in this study by university students – exhibits a cultural mindset that both departs from and builds upon the nation's traditional values. Their greater inclination toward equality, meritocracy, collaboration, and open-mindedness forms a strong foundation upon which modern IT and AI education can thrive. At the same time, their continued appreciation for structure, ethical clarity, and community can guide educators in providing the right support framework. By understanding these cultural nuances, policymakers

and educators can transform the educational environment in a way that resonates with students, thus vastly improving learning outcomes. The recommendations outlined (from pedagogical shifts to structural investments) are aligned with these insights and supported by global best practices in digital education 【46†L48-L55】 . Implementing these changes will help nurture a generation of tech-savvy youth who are not only competent in digital skills but also equipped with critical thinking, creativity, and a sense of responsibility – exactly the qualities needed to drive Uzbekistan’s innovative development in the coming years. In essence, when educational strategies honor the evolving culture of learners, students are empowered to fully engage with digital technologies and become proactive architects of their own and their country’s future.

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