## President's Address at the Saitama University Graduation Ceremony for the Academic Year 2024

Congratulations to all of you gathered here today for the Saitama University Graduation and Graduate School Completion Ceremonies. I would also like to extend, on behalf of the entire faculty and staff, our heartfelt gratitude and congratulations to your families and all those who have supported you throughout your journey.

Today, 1,491 undergraduate students, 588 master's program students, and 31 doctoral students are graduating or completing their programs. Among them, 175 are international students who hail from countries such as China, South Korea, and Malaysia.

Now, as you step into a new world after completing your studies here at Saitama University and its graduate programs, I wish to convey a message to you, both as President of the university and as a representative of all the faculty and staff who have been watching over you with care each day.

That message is: "Continue learning, and continue thinking."

At this moment, you may feel a sense of freedom and excitement upon your graduation or completion. However, this does not mark the end of "learning" in your lives. Please continue to consult specialized books not only in your own specialty but also in related fields and access the latest knowledge. By maintaining a practical and ongoing mindset of learning, while also thinking deeply, you will expand your potential and broaden the choices available to you in life.

I have shared the phrase "Continue learning, and continue thinking" with your predecessors on numerous occasions as they set forth from this institution. The reason I feel compelled to repeat it today is that I carry an urgent sense that the act of "learning and continuing to think" will take on entirely new importance in the future. If we fail to develop an attitude of ongoing learning and reflective thinking—if we do not cultivate the ability to discern truth—then we, who live in the modern era, run the risk of stumbling into unforeseen pitfalls.

You have surely witnessed the explosive growth of information in recent years. In the society you are about to enter, the ability to navigate an immense sea of data—some of it true, some of it not—and to recognize what is accurate and fair will be indispensable. Should you neglect to hone this ability, the evolving digital technology that surrounds us may introduce unintended biases in your thinking, without you even realizing it.

Already, we are seeing concerns about the adverse effects of automatic optimization in digital search systems. You may have heard of phenomena such as the "echo chamber," in which individuals only connect with others who share the same orientations, and the "filter bubble," where only one's favored information is displayed. As personal search and follow histories accumulate, a closed-off information environment tailored to each individual begins to emerge.

Even outside the digital realm, people carry personal biases in how they perceive the world—namely, they prioritize what they wish to see and judge as correct only that which aligns with their own values. Neuroscientist Yuji Ikegaya has observed that people deem something "right" because it feels pleasing; that is, because they like it, and repeated exposure to it amplifies that sense of preference. Such intrinsic cognitive bias is further reinforced in digital spaces, increasing the risk that our very beliefs could be altered without our

awareness. In other words, algorithms integrated into these systems repeatedly serve up personalized information in response to an individual's interests or preferences, resulting in a perception that only what feels comfortable is true—while remaining unaware that the system's automatic optimization has introduced bias.

Quietly lurking behind convenience, efficiency, and comfort, digital systems have already begun exerting a profound influence not only on our irreplaceable individuality—our unique ways of thinking and believing—but also on society as a whole. If we remain unaware, the cognitive biases within echo chambers and filter bubbles will grow unchecked, intensifying stubbornness in ourselves and fostering intolerance toward others. It is deeply ironic that digital systems, which allow access to information from all around the world, may end up narrowing an individual's perspective if the user relinquishes autonomy and discernment.

Graduates, we live in such times. Under these circumstances, please remember that it is essential to "continue learning, and continue thinking" so that you can minimize bias and establish your own genuine viewpoints. I hope I have conveyed my sense of urgency about the challenges of our age and the critical importance of actively learning and thinking for yourselves—so that you may preserve diversity, maintain a broader vantage point, and overcome the crises we face.

Finally, I would like to share with you a famous adage that captures the essence of "learning." It comes from the Analects of Confucius: "Learning without thought is labor lost; thought without learning is perilous." This adage means that merely learning without deep thinking prevents one from truly understanding the essence, while merely thinking without making the effort to learn leads to a self-righteous and dangerous way of thinking. "Learning" and "thinking" are inseparable, much like the two wheels of a cart. This adage tells us that without the balance and interplay of both—learning and then thinking—one remains trapped in the narrow darkness of being "lost" and "in peril." Although we live in a cutting-edge digital society, centuries removed from the time of Confucius, the pursuit of learning and deeper thought remains as vital as ever. I truly believe that you have acquired the foundation of this principle during your years of study at this university. Please hold fast to the meaning of "Continue learning, and continue thinking," and take your next step forward from here.

Even after you leave this place today, I encourage you to retain your curiosity and continue discovering new horizons. I sincerely hope you will stay connected with the irreplaceable friends you have made here, as well as those you have yet to meet, and that, carrying hope in your hearts, you will guide both yourselves and the wider world toward a richer future. With these wishes, I conclude my address.

Once again, my warmest congratulations to all of you on your graduation and the completion of your studies.

March 25, 2025 Takafumi Sakai President, Saitama University