보도자료

미래를 개척하는 지식 공동체
서울대학교
SEOUL NATIONAL UNIVERSITY

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배포일: 2023.12.1.(금)

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서울대 유홍림 총장, '동경포럼 2023' 참석

- 대학총장 세션에 패널로 참가…AI시대 학생들이 갖춰야 할 역량 제시

- 동경대와 공동 프로젝트 등 긴밀한 교류협력도 논의

□ 서울대학교 유홍림 총장은 2023년 11월 29일(수)~12월 1일(금) 일본 동경대와 최종현학술원 공동주관으로 동경대에서 열린 '동경포럼 2023'에 참석하였다.

□ 올해 5회를 맞은 이번 포럼은 'Cultivating Humanity amid Social Divisions and Digital Transformation'을 주제로, 한일 양국의 주요 산학연 관계자들이 대거 참석하여 양국간의 우호관계를 다지며 미래를 논의하는 자리가 되었다.

□ 포럼 마지막날인 12월 1일(금) 'The Role of Universities in the Era of Digital Transformation'을 주제로 열린 「대학총장 세션」에서 유홍림 총장은 패널로 참가하여 AI 및 디지털 전환의 시대에 따른 고등교육의 미래 방향을 제시하였다. 특히, 유 총장은 AI시대에 대학은 활력넘치는 커뮤니티, 광범위한 네트워크, 번성하는 생태계로서의 역할을 강조하며, 학생들에게 요구되는 주요 역량으로 'AI 리터러시'와 AI라는 협력적 도구를 바탕으로 '효과적인 질문하기', '정

보를 지혜로 전환하는 능력' 등 3가지를 제시했다.

□ 대학총장 세션 패널 참석에 앞서 11월 30일(목) 유 총장은 동경대 후지이 테루오(Fujii Teruo) 총장을 접견하여 한일 양국을 대표하는 대학간 향후 긴밀하게 협력하자는 공감대를 형성하고 다양한 공동 프로젝트를 모색하기로 합의하였다.

□ 이번 접견에는 서울대 조승아 국제협력본부장, 동경대 하야시 카오리(Hayashi Kaori) 국제부총장이 배석하여 양교 간 협력 방안에 관한 구체적이고 활발한 논의가 전개되었다.

【대학총장 세션 패널 발표자료(영문.23.12.1.)】

University Presidents' Session at Tokyo Forum 2023:
President Honglim Ryu
Seoul National University

[Discussion Points] 1. University policy and strategy towards advances in AI
How is each university addressing the advances in AI? What abilities do students need to live in the age of digital transformation, and what kinds of education should we offer to them? How should we educate students, and what kinds of individuals should we seek to develop? Please focus on the role of universities as educational institutions, such as developing educational programs, entrance examinations, and research activities.

In the era of AI, it seems that three major abilities have become crucial for students. First and foremost, students must possess the ability to effectively harness AI's power. This skill, commonly referred to as "AI literacy," has become a foundational component of modern education. AI literacy encompasses a wide range of proficiencies, from basic

computer skills and a working knowledge of AI technology to a deeper understanding of AI's capabilities and limitations, as well as ethical considerations. Furthermore, depending on students' interests and proficiency levels, expertise in AI applications and even development skills may become necessary in specialized fields.

Secondly, a crucial skill that our students need to cultivate in the AI era is the art of asking questions effectively. The responses generated by AI can vary significantly based on the phrasing of questions. The skill of crafting questions for AI is known as "prompt engineering," and a proficient prompt engineer excels at communicating with AI in this manner. Our students should learn how to effectively communicate with AI as a collaborative tool, utilizing commands and directives appropriately, while also understanding the advantages, disadvantages, and limitations to achieve their desired outcomes.

Lastly, in the era of AI, it is essential for our students to apply knowledge from various fields contextually and use it to solve problems. The mere act of collecting and memorizing facts and information has become less significant. This is because AI can provide information without a deep understanding of its specific context. What is now more crucial is the ability to transform information into wisdom. This wisdom involves the capacity to tackle complex and open-ended problems by considering multiple contexts, integrating knowledge from various domains, and comprehending both AI and human behavior.

AI technology is poised to create disparities and fragmentation, particularly along regional and gender lines, owing to inherent limitations in its training data. For instance, facial recognition technology heavily relies on data biased towards white and male faces, resulting in difficulties in recognizing non-white individuals' faces. Similarly, AI models like ChatGPT, developed by OpenAI, are predominantly trained on data from English-speaking regions, leaving languages like Korean and Japanese with inadequate training data. Therefore, collaborative efforts, particularly from Asian countries, are a must to ensure an ample supply of diverse data for AI training.

In the past, we expected digital information to divide societies into those with access and those without, creating disparities. However, as digital technology becomes increasingly affordable and user-friendly, there is a growing trend toward more equitable access to technology. High levels of computer and internet penetration, exceeding 90% in utilization rates, suggest that AI might follow a similar path. Nevertheless, we must view AI as a public good, accessible to all, while remaining mindful of its potential societal impact.

AI technology hinges on data and machine learning, which leads to concerns regarding safety and misuse. Ethical dilemmas such as the proliferation of fake information and copyright violations can be mitigated through a combination of technological solutions and regulatory measures. However, more complex challenges arise in dealing with issues like illegal content creation, particularly in the realm of deepfakes, where the faces and voices of political figures can be manipulated. While society has mechanisms to filter out certain forms of information, covertly disseminated content, such as explicit material, poses a greater risk. In light of the increased potential for individuals to generate and share information, the ability to discern the authenticity of information becomes indispensable. Beyond digital literacy, there is a pressing need to emphasize AI ethics education, including

AI literacy, in this evolving landscape.

Seoul National University is actively addressing these challenges through its commitment to education and research. As a comprehensive university offering a wide array of majors, Seoul National University has incorporated essential elements of AI into its general education curriculum. Recently, the university has introduced a new three-stage computing curriculum as part of its general education program. This curriculum not only covers traditional computing education but also emphasizes data literacy and AI literacy. The introduction of an introductory AI course in the general education offerings has attracted significant student interest, with over 1,800 students regularly attending the computing curriculum each semester. Additionally, there are ongoing efforts to establish prompt engineering education as a regular course to enhance students' ability to effectively formulate questions.

Building upon the foundation of computing and AI education, Seoul National University is also conducting **Explainable AI (XAI) education**, which extends problem-solving methods across various majors. Many students have shown a keen interest in related courses such as AI journalism and AI in healthcare. Furthermore, the university offers in-depth AI core technology and AI development education, primarily through the College of Engineering, catering to aspiring AI developers.

In anticipation of the demands of the AI era, Seoul National University is proactively preparing for educational innovation by establishing the new **College of Education**. This initiative involves redefining the ideal graduate profile and breaking down traditional major-based silos. The university aims to deconstruct the rigid categorization of knowledge requirements across different majors and years in favor of fostering common core competencies and interdisciplinary skills. Encouraging collaboration among professors from diverse academic fields is a key aspect, providing students with enriching interdisciplinary educational experiences. To foster true convergence, we are getting rid of departmental barriers, and the university is designing educational content and teaching methods that promote active learning and real-world experiences outside the traditional classroom setting.

SNU researchers are actively engaged in fundamental AI technology research, supported by the establishment of the AI Research Institute. This institute is dedicated to advancing various AI technologies, including generative AI, language models, and explainable AI, with a mission to promote inter-disciplinary research aimed at achieving human-level AI with practical real-world applications.

Moreover, within the AI Research Institute, the AI ELSI Research Center has been established to conduct interdisciplinary research addressing the ethical, legal, and social issues associated with AI. SNU researchers in natural and biomedical sciences are also collaborating to harness the power of AI for the development of innovative biological therapeutics, facilitated by the establishment of the AI-Bio Research Cluster.

[Discussion Points] 3. The role of universities in the era of digital transformation

Can universities survive in the age of AI? What roles does society expect universities to play? What should we change and what should remain the same?

The advent of the AI era is bringing about significant social changes, and this inevitably leads to a transformation in the skills and abilities required of individuals. This paradigm shift calls for a corresponding redefinition of education, particularly in higher education. Universities must adapt by establishing new values and embrace their evolving role as dynamic platforms.

Traditionally, universities have functioned as bastions of knowledge, leading the way in the accumulation of human intellect. In the past, intelligence was predominantly regarded as the product of individual cognitive processes, based on memorization and comprehension of knowledge. However, intelligence is now undergoing a transformation into a concept known as "distributed cognition," characterized by its networked and decentralized nature. This transformation necessitates the acquisition of novel forms and dimensions of intelligence, primarily through networking and collaboration. Universities must grasp the essence of these shifts and prepare students to harness this emerging distributed intelligence. They should operate as institutions that facilitate the creation of distributed intelligence and values that transcend mere academic degrees.

In the AI era, collaborating with AI may become more convenient than traditional peer collaboration. As this trend unfolds, universities should fortify their role as vibrant communities, expansive networks, and thriving ecosystems. They need to offer human networks, resource networks, data networks, and networks fostering wisdom and innovation.