

From rapid adoption to institutional capability: Meso-level system mediation of generative AI in a Chinese university

Liying Rong, Zhen Zhong and Ken Spours
College of Education, Capital Normal University, Beijing, China

Abstract

Generative artificial intelligence (GenAI) can spread through universities faster than formal institutional arrangements because academics can access large language models independently. This study examines how professional uptake can become shared organisational capability. Drawing on primary research with academic staff at a Chinese public university in January and March 2025, we analyse a period in which individual ‘distributed experimentation’ was extensive while university-wide guidance, support and resourcing were still becoming visible. During this period and since, Chinese higher education institutions are characterised as facing a triple GenAI challenge – the ‘defence’ of academic integrity, the ‘adaptive’ construction of university systems and the ‘development’ of new modes of knowledge production and pedagogy. In relation to these challenges, the article develops a connective version of ‘organisational actorhood’ through the elaboration of forms of ‘meso-level institutional mediation’ - strategic translation, enabling conditions, boundary connection and iterative learning - and the development of ‘GenAI innovation ecosystems’. The findings show that academics had already developed practical knowledge about teaching, research, verification and responsible use of GenAI, but that its institutional value depended on arrangements that could connect, evaluate and retain experience across organisational boundaries. The article contributes to international higher education research by distinguishing technology uptake from organisational capability and by showing how universities can convert distributed experimentation into collective learning under rapid technological change.

Keywords: generative AI; higher education; organisational actorhood; institutional mediation; university governance; institutional ecosystems; China.

Part 1. GenAI adoption – the emergence of distributed experimentation

New patterns of technological engagement

Generative artificial intelligence occupies a distinctive position in the historical evolution of educational technology. Earlier innovations, including learning management systems, virtual learning environments and other digital infrastructures, were typically introduced through institutionally led implementation processes. By contrast, large language models became available directly to individual users through publicly accessible interfaces, enabling rapid and largely autonomous experimentation by academics and students alike. As a result, GenAI has tended to diffuse through higher education from the bottom up, with institutional policies,

governance arrangements and professional guidance frequently emerging in response to established patterns of use rather than directing them from the outset (Dempere et al., 2023; Liu and Bates, 2025).

By 2025, some three years after the public availability of LLMs in the Chinese context, research found that over 70 per cent of university students were active users of GenAI, while only around one per cent reported never having used AI in their studies or work (Xiao et al., 2025). Given these trends, and comparable findings from other higher education systems where student AI use has exceeded 90 per cent by 2025 (e.g. Freeman, 2025), it is reasonable to assume that by 2026 the use of GenAI among Chinese students has become near universal, even if patterns of use may vary in frequency, sophistication and purpose (Chen, 2025). Patterns of faculty adoption exhibit both parallels with and differences from student use. Students have primarily employed GenAI to support learning activities and assessment-related work. In contrast, academic staff increasingly utilise these tools for teaching preparation, assessment design, feedback production, research support and administrative efficiency (Zhao, 2026). While the patterns of adoption by students and faculty raise distinct but related issues, in both cases early engagement with GenAI has been driven by individual experimentation, self-directed learning and online knowledge-sharing platforms (Arum et al., 2025; Xiao et al., 2025), referred to here as ‘distributed GenAI experimentation’.

Distributed GenAI experimentation – strengths and limitations

Distributed GenAI experimentation should not, however, be viewed uncritically. Its strengths lie in its proximity to practice, enabling academics and professional staff to develop situated forms of knowledge that can stimulate creativity, pedagogical innovation and professional learning (Baytas and Ruediger, 2025). At the same time, distributed experimentation possesses fragmenting characteristics. Knowledge generated through local practice is often uneven in quality, difficult to evaluate beyond its immediate context and can reflect existing inequalities in expertise, workload capacity and access to resources (Robert and McCormack, 2025).

Much of this knowledge is also tacit and experiential in character. As Polanyi (1966) famously stated, individuals often ‘know more than they can tell’. Practical knowledge is frequently embedded in action, routines and judgement rather than being fully articulated, pointing to the importance of complementary ‘vertical’ structures and processes capable of engaging with and developing ‘horizontal’ tacit forms of knowledge, the combination of which has been referred to as ‘45-degree knowledge production’ (Spours, 2025). Educational research, institutional guidance and governance arrangements, disciplinary communities and professional development programmes, all have a role in making practical knowledge more explicit. Rather than viewing experiential and formal knowledge as competing forms of expertise, they are better understood as mutually dependent.

Part 2. Evolving institutional responses to the ‘triple GenAI challenge’

Despite this potential, much of the early literature on generative artificial intelligence (GenAI) in higher education approached the technology primarily as a governance problem, as universities have been confronted with a rapidly evolving and highly accessible technology whose implications for teaching, learning and assessment remained uncertain (e.g. Moya et al., 2024). As Korseberg and Elken (2025) observe, institutions encountered ChatGPT, the first widely adopted public LLM, as a fluid and unstable object whose organisational meaning had yet to be defined.

The organisational challenge has been compounded by the extraordinary pace of technological development. Since the public release of ChatGPT in late 2022, universities in both China and the West have witnessed the emergence of an increasingly crowded GenAI ecosystem comprising multiple competing LLMs, including both proprietary and open-weight models (Stanford HAI, 2025). As access has broadened and capabilities advanced, institutions have faced a continuously evolving landscape of tools, platforms and applications (Yakefu, Apolinário and Solaiman, 2026). This time-compressed diversification has made the object of governance itself a moving target, forcing universities to adapt continually to successive waves of technological innovation (Rosa, 2022).

Viewed retrospectively, the short history of the widespread LLM use in higher education more broadly, and also relevant to the Chinese case, reveals three broad and interrelated phases of institutional challenge and response – ‘defensive’, ‘adaptive’ and ‘developmental’ - referred to here as the ‘triple GenAI challenge’. These modes should not be interpreted as an evolutionary sequence but rather as a condition of coexistence, reflecting an uneven, layered, and ongoing process of institutional response.

Defensive phase - assessment and protecting academic integrity

The first phase of institutional response can be characterised as ‘defensive’. Initial concerns centred on student use of GenAI and its implications for academic integrity, assessment validity and the reliability of existing evaluation practices, with early literature focusing on plagiarism, assessment security and the risks posed by AI-generated text to traditional forms of academic evaluation (e.g. Dempere et al., 2023; Moya et al., 2024; Tlili et al., 2024). During this period, faculty engagement with GenAI was often viewed through the lens of risk management. As Dai et al. (2025) observe, however, these concerns quickly expanded beyond issues of assessment to encompass broader questions of pedagogy, workload management, professional autonomy and the relationship between machine-generated capabilities and academic judgement. The debate therefore began to shift from protecting existing practices towards reimagining how teaching, learning and assessment might operate in AI-enhanced environments (Baytas and Ruediger, 2025).

Adaptive phase - governance, policy and institutional frameworks

As GenAI became increasingly embedded within everyday academic practice, institutional responses entered a second, more ‘adaptive’ phase. While concerns regarding academic integrity remained important, attention has broadened towards the development of policies, governance structures and operational frameworks, capable of guiding both students and academic staff (Hou, 2025; Jin et al., 2025). This adaptive phase has been characterised by the emergence of institutional guidelines, AI literacy initiatives, disclosure requirements, ethical frameworks and staff development programmes designed to support the responsible integration of GenAI into teaching, learning and research practices (e.g. Fudan University, 2026; Tsinghua University, 2025).

However, these examples should not be assumed to represent the sector more widely. Recent research on Chinese higher education and GenAI suggests that while select elite universities have increasingly developed ‘integrated GenAI ecosystems’, most non-elite institutions continue to operate within conditions of uneven infrastructure, limited expertise and constrained organisational capacity, with the challenge of developing institutional capabilities to move beyond a ‘low-technological-baseline equilibrium’ (Spours and Rong, 2026).

Developmental phase - rethinking knowledge, pedagogy and expertise in the GenAI era

More recent scholarship suggests the emergence of a third, ‘developmental’ phase, with the focus shifting beyond immediate governance concerns and towards a rethinking of pedagogical design, assessment practices, academic roles and the relationship between human and machine intelligence in the production of knowledge (Yusuf, Pervin, and Román-González, 2024; Buele and Llerena-Aguirre, 2025). This shift resonates with wider research on digital transformation, which argues that technological innovations become institutionalised through changes in governance structures, professional practices, infrastructures and external relationships in which GenAI becomes a potential catalyst for organisational and epistemic change (Komljenovic et al., 2025).

Part 3. From individual adoption to organisational capability

GenAI integration as an organisational project

Artificial intelligence in higher education has frequently been discussed through the dual discourses of inevitability and risk. Bearman et al. (2023) show how AI is often presented as a transformative force to which universities must adapt, while subsequent GenAI scholarship has focused on concerns relating to assessment, academic integrity, authorship, pedagogy and student learning (e.g. Jin et al., 2025). As the previous discussion has shown, institutional responses are gradually evolving from defensive concerns about academic integrity, through adaptive governance frameworks, and towards more developmental questions concerning knowledge, expertise and academic work. Yet the emergence of this developmental agenda raises a further question of what is meant by the integration of GenAI into academic life.

The accessibility of LLMs complicates conventional understandings of technological integration. A university may experience widespread GenAI use among students and staff without ever having made a coherent organisational decision to adopt the technology. Hou (2025) helps clarify this ambiguity by distinguishing among AI as pedagogical infrastructure, curricular and professional content, and a broader sociotechnical context. This distinction is important because institutional integration may refer to very different projects, ranging from the provision of AI tools to curricular reform, to the reshaping of academic practices and organisational routines. However, even when these elements are clearly identified, a further question remains - what enables them to become connected within a coherent institutional framework?

Policy research highlights a similar issue from the perspective of governance. Comparative analyses reveal considerable variation in institutional guidelines and significant differences in how universities address teaching, research, assessment, administration and ethical practice in relation to GenAI challenges (An et al., 2025; Jin et al., 2025; Moorhouse et al., 2023). While these frameworks are important, organisational responsiveness should not be conflated with organisational capability. Universities may produce policies, guidelines and training programmes that demonstrate institutional awareness of GenAI without necessarily developing the connective organisational routines, professional networks and support infrastructures required for effective development (Komljenovic et al., 2025; Jin et al., 2025). Viewed in this way, GenAI integration becomes less a question of technological implementation and more an organisational project, with the focus shifting from the presence of AI within institutions to the development of structures, relationships and learning processes into a new strategic capability (Baytas and Ruediger, 2025).

The development of the organisational project involves a change of mindset in that GenAI adoption is not only viewed as a governance challenge, but also a potential reservoir of locally generated knowledge and innovation through the experimentation of self-directed exploration and peer networks (Xiao et al. 2025; Arum et al. 2025). The movement from defensive responses, through adaptive governance, and towards developmental rethinking reflects a broader shift from managing a technological disruption to harnessing a new source of organisational and intellectual capacity (Burneo-Arteaga et al., 2025; Liu and Bates, 2025).

Ecosystemic actorhood

As a response to the ‘GenAI triple challenge’, the concept of ‘organisational actorhood’ is both adapted and developed. Organisational theorists have argued that contemporary universities have increasingly moved beyond a traditional dispersal of relatively autonomous activity to become organisational actors, characterised by the development of a distinct identity, strategic capacity, formal decision-making structures and the ability to act purposefully in pursuit of collective goals (e.g. Krücken and Meier, 2006; Hwang, Colyvas, and Drori, 2019; Fumasoli, Pinheiro, and Stensaker, 2020).

Existing accounts of university actorhood have focused primarily on the structural capacities that enable institutions to act strategically, including governance arrangements and decision-making authority (Krücken and Meier, 2006; Meyer and Bromley, 2013). While these remain important, particularly in relation to the defensive and adaptive GenAI challenges, the emergence of distributive experimentation suggests the need for a more ecosystemic conception of actorhood, capable of operating both structurally and as generative force under conditions of rapid technological change and continuous organisational learning. The structural function concerns the development of frameworks of governance, regulation, support and strategic coordination in relation to a rapidly evolving technological field, while the generative function relates to the cultivation of experimentation, connecting communities of practice, supporting knowledge-sharing networks and establishing feedback processes through which local innovation can be identified, refined and scaled.

The challenge of distributed GenAI experimentation leads to a double elaboration of the concept of university actorhood through the complementary concepts of meso-level mediation and GenAI innovation ecosystems. The intermediary position of universities between macro-level forces, such as state policy, governance frameworks and technological change, and the micro-level practices of academics and students gives rise to the concept of ‘meso-level mediation’ (Fumasoli et al., 2020; Spours, 2024). This refers to the institutional capacity to interpret, translate and reorganise external developments through the creation of new organisational structures, relationships and processes (Bruckmann and Carvalho, 2018). However, effective mediation requires more than isolated interventions, depending on the development of interconnected and mutually reinforcing layers of governance, support, experimentation, collaboration and organisational learning.

Following Finegold (1999), ‘institutional innovation ecosystems’ can be understood as configurations of mutually reinforcing factors that support capability formation, collective learning and sustained innovation over time, rather than as the product of individual organisational initiatives alone (Heaton, Siegel and Teece, 2019). See Table 1 for a list of key GenAI ecosystemic mediation elements (Spours and Rong, 2026).

Table 1. GenAI mediation ecosystem elements

Ecosystem element	Function in meso-level mediation	Indicative sources
1. Leadership and mission-led innovation	Establishes institutional direction and provides the capacity to translate and rearticulate external factors and forces into strategies that make sense within a particular university.	Mazzucato (2018); Fumasoli et al. (2020)
2. Material catalysts	Creates widespread access to the technological, financial and organisational resources required for institutional action and capability development.	Finegold (1999); Liu and Bates (2025)
3. Supportive environment	Develops governance frameworks, infrastructures and enabling conditions through which new practices can be translated into everyday institutional activity.	Finegold (1999); Bruckmann and Carvalho (2018)
4. Nourishment through feedback loops	Facilitates the circulation of experience from practice to inform subsequent decisions concerning strategy, guidance, resource allocation and external relationships.	Argyris and Schön (1978); Senge (1990)

5. Collaborative inter-dependence	Creates collaborative arrangements, including GenAI communities of practice and cross-boundary networks, through which knowledge, skills and professional capacity are shared and developed.	Finegold (1999); Liu and Bates (2025)
6. Chrono-system development	Aligns organisational timescales to enable the sequencing of experimentation, reflection and institutionalisation while recognising the continuing evolution of GenAI technologies.	Rosa (2022)

The development of a GenAI version of institutional innovation ecosystems is particularly important for non-elite universities seeking to move beyond what has been termed a ‘low-technological-baseline equilibrium’ (Spours and Rong, 2026), with the ability to respond simultaneously to the defensive, adaptive and developmental challenges posed by accelerating technological change.

Part 4. China as a developmental and theory-generating context

China provides a productive setting for examining this complex developmental process. National policy has given artificial intelligence an increasingly prominent role in educational modernisation, while universities retain differentiated missions, disciplinary strengths and connections to regional and national innovation networks (Appelbaum et al., 2018; Yi et al., 2021).

The ‘Education Power Development Plan’ (2024–2035), the ‘2025 guidance on education digitalisation’, the 2026 ‘AI + Education Action Plan’ and the ‘Education Development Fifteenth Five-Year Plan’ further clarified expectations for curriculum, infrastructure, teaching reform and talent development (Central Committee of the Communist Party of China & State Council, 2025; Ministry of Education of the People’s Republic of China [MOE], 2025, 2026; State Council of the People’s Republic of China, 2026). This combination of clear system-level direction and institutional diversity makes China a useful theory-generating context for studying how strategic ambitions are developed into university-level capability.

China’s higher education system makes the relationship between strategic direction and institutional capability particularly visible. National policy can establish priorities, support investment and define broad regulatory frameworks, while universities translate these directions through their own missions, governance arrangements and disciplinary profiles. Research on Chinese higher education has long shown that this relationship is dynamic rather than mechanical. Han and Xu (2019) trace changing combinations of governance instruments and institutional autonomy, while Ruan et al. (2024) show how university leaders work through institutional relationships and professional communities in shaping organisational action.

The national AI agenda has developed quickly and with increasing specificity. The Education Power Development Plan (2024–2035) explicitly links artificial intelligence to educational transformation. The

‘April 2025 digitalisation guidance’ encouraged integrated AI education across sectors, university-level AI general education and intelligent course development. The 2026 ‘AI + Education’ Action Plan and the ‘Education Development Fifteenth Five-Year Plan’ subsequently extended this agenda across curricula, infrastructure, teaching reform and talent development (Central Committee of the Communist Party of China & State Council, 2025; MOE, 2025, 2026; State Council of the People’s Republic of China, 2026). These policies create a strong developmental framework within which universities can adapt AI initiatives to their own missions and areas of strength.

Most of these later measures post-date the fieldwork in the institutional case, so they are not treated as causes of the behaviour observed in early 2025. They do, however, provide added significance to the institutional moment captured by the study. As GenAI becomes more firmly embedded in national education strategy, universities have greater opportunities to connect policy direction with their own teaching, research and organisational development. The early 2025 case therefore provides a useful baseline for observing a stage at which user practice was already advancing and university-wide mediation was still becoming more visible and coordinated.

This contextual analysis also seeks to avoid a simple China-West binary. Different higher education systems combine state steering, institutional autonomy, market relationships and professional authority in diverse ways, generating distinctive opportunities and constraints for organisational adaptation and innovation (Magalhães and Veiga, 2022; UNESCO IESALC, 2024). The Chinese approach to GenAI development is characterised by strong state coordination, mission-led investment and a commitment to harnessing artificial intelligence for broader public and national goals rather than solely for commercial advantage (Xue and Zhao, 2024; Zou and Zhang, 2025). Its strengths lie in strategic direction, rapid mobilisation and large-scale implementation (Arenal et al., 2023), while weaknesses stem from uneven institutional capacity, the concentration of resources in elite centres and challenges in diffusing innovation across the wider higher education system (Dong et al., 2025). Strengthening the mediating role of China’s 3000 non-elite universities may, therefore, be crucial for transforming national AI ambitions into broad-based innovation and improved organisational learning.

This introductory analysis leads to two related conceptual questions.

1. How are defensive, adaptive and developmental responses to GenAI simultaneously enacted across the institution?
2. How does distributed experimentation become translated into organisational capability through processes of ecosystemic and connective actorhood?

Part 5. Research approach

Research questions in context

The fieldwork in a Chinese public university captured a relatively early stage. GenAI adoption was already extensive, while university-level arrangements for guidance, professional development and resources were still becoming more visible to participants. The two interview waves also coincided with a rapid change in the model ecology: DeepSeek was absent from the January interview corpus but highly salient in March. Because the two waves involved different participants, this contrast is treated as a time-stamped change in the technological environment rather than evidence of individual switching.

Two immediate research-based questions guide the analysis:

1. How did academic staff use and make sense of GenAI while institutional arrangements were evolving?
2. What does the case reveal about the meso-level organisational work through which external expectations and local experimentation can be developed into shared institutional capability?

The article makes a conceptual contribution to higher education studies by separating technology uptake from organisational capability and specifying four mediation functions—strategic translation, enabling conditions, boundary connection and iterative learning—through which universities can convert distributed experimentation into collective learning. The argument is not that China represents a bounded national exception, but that the case makes visible a broader organisational problem likely to recur across higher education systems in which technological change moves faster than ordinary institutional cycles.

Case selection and participants

The study used a qualitative single-case design to examine GenAI use and institutional mediation in context. Case-study research is particularly useful when the boundary between a contemporary phenomenon and its organisational setting is difficult to separate, and when the aim is analytical rather than statistical generalisation (Flyvbjerg, 2006; Yin, 2018). The institutional case was a public university in a first-tier Chinese city with a strong teacher-education profile and academic units in education, technology and engineering. The university has nationally recognised strengths in selected disciplines and substantial teaching and research activity, but the study was not centred on a university selected for national prominence in AI. This made it useful for examining how a research-active university outside the most obvious AI flagship settings was encountering GenAI.

Participants were recruited purposively to provide variation in disciplinary background, academic rank, age and familiarity with LLMs. Initial recruitment was supplemented by snowball recommendations from participants who identified colleagues actively exploring new technologies in teaching or research. The final interview sample comprised 20 academic staff: eight from education and twelve from engineering/technology-related fields (see Table 2). The sampling strategy deliberately included active users, so the study is better suited to analysing how use is mediated than to estimating the prevalence of GenAI use across the whole university.

Table 2. Profile of interview participants

Characteristic	Education (n=8)	Engineering/technology (n=12)	Overall (n=20)
Gender	Male 4; Female 4	Male 6; Female 6	Male 10; Female 10
Age	31–40: 4; 41+: 4	31–40: 8; 41+: 4	31–40: 12; 41+: 8
Academic rank	Professor 1; Associate professor 2; Lecturer 5	Professor 3; Associate professor 1; Lecturer 8	Professor 4; Associate professor 3; Lecturer 13
Data collection	Interviews across Jan./Mar. 2025	Interviews across Jan./Mar. 2025	20 interviews; 5-person focus group - Apr. 2025

Data collection and temporal design

Data were collected at three points in early 2025. Eleven semi-structured interviews were conducted in January and a further nine in March. Interview questions moved from professional background and model awareness to use in teaching and research, perceived benefits and risks, institutional policies, access to resources, training and expectations for future development. Five participants with relatively high levels of engagement were then invited to a focus group in April. The focus group revisited themes from the interviews and explored the kinds of guidance, training, resourcing and institutional arrangements participants considered necessary.

The staggered design became especially useful because the Chinese model landscape changed noticeably between the two interview waves. DeepSeek was not mentioned in the January interview corpus but was highly salient in March. Since the January and March interviews involved different participants, the design does not establish individual-level switching or behavioural change. Instead, the two waves provide a time-stamped cross-sectional contrast showing how quickly the technological environment could change during the study.

Lury’s (2021) notion of evolving ‘problem spaces’ informed this sensitivity to movement over time; here it serves as a methodological sensibility rather than as a separate explanatory theory. Although the data were gathered in early 2025, subsequent developments appear to have been characterised more by technological

acceleration than by a fundamental reconfiguration of organisational responses. The expanding range of LLMs and AI-enabled applications has increased the scale and diversity of opportunities for use, but there is limited evidence of a corresponding transformation in the underlying institutional dynamics examined in this study. The analysis therefore treats the findings as indicative of a continuing phase of organisational adaptation whose core features remain visible in 2026.

Analytical strategy and ethics

The analysis was organised in two stages. The first retained the empirical categories used to organise the initial analysis: awareness and model use; applications in teaching and research; perceived technical and ethical challenges; institutional policies, resourcing and training; and future expectations. The second reorganised these patterns around the policy–capability problem developed above, using a structured interpretive matrix to examine evidence of four mediation functions: translation, enablement, connection and iterative learning. The analysis was abductive, moving iteratively between empirical observations and the conceptual framework (Timmermans & Tavory, 2012). The framework directed attention to organisational relationships, while the empirical material was used to qualify what could legitimately be claimed. In particular, participants’ lack of awareness of a policy or support activity was treated as evidence of low visibility or reach, not as proof that the formal arrangement did not exist.

Two forms of triangulation were available within the design: comparison of the two time-stamped interview corpora, and comparison of individual interviews with the April focus-group discussion. Disciplinary differences between education and engineering/technology were also treated as analytically important rather than as noise. The small count of model mentions reported below are descriptive only. Participants could mention several models and could refer to the same model more than once; moreover, the two interview waves involved different participants. The figures therefore indicate shifts in corpus salience, not user prevalence, market share or individual change.

The research involved minimal-risk interviews with adult academic staff. The researchers’ institution, therefore, did not issue a formal ethics approval number for this study. Participants were informed of the research purpose and procedures, participation was voluntary, withdrawal was permitted, and informed consent was obtained before data collection. Identifying information was removed from reporting and quotations are presented using participant codes.

Part 6. Findings - rapid adoption and emerging institutional mediation

Individual adoption was extensive and initiative-driven

A notable feature of the case was the breadth of academic experimentation at a time when collective arrangements were still emerging. Participants used LLMs for both routine and intellectually substantive tasks. In teaching, they described organising course content, generating examples, developing lesson plans, supporting student questioning and using model outputs as material for critical discussion. In research, they used LLMs for preliminary literature searching, information extraction, idea generation, translation, language refinement, coding and plotting. These practices appeared across both disciplinary groups, although their depth and purpose varied.

Several participants described their early engagement as self-initiated. One academic explained, *'I started using them on my own and learned as I went along'* (T-M-W). Another reported *'learning through online resources and beginning to use ChatGPT before it became widely popular'* (T-F-Y). These accounts illustrate the agency of academic users: they developed practical repertoires through experimentation, online materials and peer exchange while formal support arrangements were still developing.

The educational value participants attributed to GenAI was also practical rather than abstract. One teacher used it to organise course content and identify classic cases and recent research; another asked their students to interrogate ChatGPT answers in class as a way of cultivating critical judgement. In research, participants described using models to accelerate preliminary literature work and language refinement while maintaining a boundary around intellectual ownership. As one participant put it, *'For writing papers, I might ask it to help refine or organize the concept... Content is always my own'* (T-M-Y).

Participants combined this willingness to experiment with considerable professional caution. Hallucination and unverifiable content were mentioned repeatedly, as were plagiarism, over-reliance and the possibility that students might not recognise fabricated information. A participant from engineering stressed that formal academic work still required careful verification (T-M-W). The picture was therefore more nuanced than one of simple enthusiasm, with academics actively working out locally appropriate boundaries for use while institution-wide guidance was still developing.

A changing model ecology highlighted the importance of organisational timing

The second finding concerned the speed with which the technological environment itself has changed. In the January interview corpus, ChatGPT was the most frequently mentioned model, followed by Doubao, Kimi and Wenxin Yiyan. In the March corpus, DeepSeek was mentioned far more often than any other model, while ChatGPT remained salient and several earlier domestic tools were mentioned less often. Because the two

waves involved different participants, Table 3 should be read as a contrast in the salience of models across two time-stamped corpora, not as a longitudinal measure of individual switching.

Table 3. Model mentions in the January and March 2025 interview material

Rank	January 2025	March 2025
1	ChatGPT – 17 mentions	DeepSeek – 31 mentions
2	Doubao – 9	ChatGPT – 15
3	Kimi – 9	Doubao – 2
4	Wenxin Yiyan – 7	Wenxin Yiyan – 2
5	iFlytek Spark – 3	Kimi – 1

Note. Counts refer to mentions in the interview material, not unique users or market share. Participants could mention multiple models.

The contrast matters less for identifying a ‘winning’ model than for what it reveals about organisational timing. The tools academics regarded as relevant changed within a matter of weeks, while curriculum approval, procurement, staff development and policy review necessarily operate on longer institutional cycles. Guidance developed around one set of tools may therefore need to be revisited as the practical environment changes. The case gives empirical substance to a broader organisational challenge - universities are working with a portfolio of technologies whose accessibility, cost and perceived capability can shift quickly. It could therefore be anticipated that the GenAI model mix will be even more diverse in 2026.

The March salience of DeepSeek also broadens an access-based explanation of institutional capability. Participants welcomed the availability of open-source or lower-cost Chinese models, and one noted that *‘there is a lot of support now that there is open source and free to use’* (T-F-G). Wider access is an important enabling condition, but its educational value is strengthened when it is accompanied by shared standards, pedagogical design, research protocols and opportunities for collective learning. The changing model ecology therefore expanded the scope for experimentation while increasing the value of meso-level coordination.

Institutional mediation was emerging but not yet consistently visible

Participants’ accounts suggested that policy communication, training and resourcing were at an early stage of becoming consistently visible to academic users. When asked about institutional rules, one participant replied, *‘No, I haven’t heard of any policies at our school’* (T-M-Z). Others described learning through self-study, online videos or occasional expert lectures. One college had already offered a session on AI for teaching and research, although demand exceeded the available places. These accounts do not establish the absence of institutional policies or activities. Rather, they indicate that, for this group of active users, the reach and visibility of emerging support arrangements varied across the institution.

For organisational capability, visibility and usability matter as much as formal existence. A policy has greater mediating value when academics can connect it to the decisions they make in teaching and research, just as training becomes more useful when it forms part of an ongoing learning pathway. Participants themselves pointed towards this developmental direction. They asked for practical technical training, stronger prompting and evaluation skills, guidance on data security and ethical use, and clearer standards for students. One academic argued that a standard was needed so that students could use AI ‘*without crossing the line*’ (T-F-W). Another suggested that institutionally supported technical training would strengthen teachers’ questioning skills and their ability to assess model outputs (T-M-R).

Questions of access and resourcing were often managed at the level of individual users. Subscription limits and model availability appeared in interviews as practical concerns, suggesting an opportunity to think about infrastructure in broader socio-technical terms. This finding supports observation of Reyman and colleagues (2025) that, in the Chinese context, approved access, funding, data protection, technical support and clear routes for experimentation can shape how academics work with GenAI. Bringing these elements into more visible institutional arrangements would make user practice easier to support and would create stronger opportunities for the university to learn from it.

Disciplinary differences revealed complementary capabilities and opportunities for connection

The interviews revealed different, and potentially complementary, forms of GenAI capability across disciplinary communities. Engineering and technology participants tended to engage more directly with coding, debugging and the evaluation of model performance. One computer-science participant described using LLMs to test algorithmic ideas and debug code, activities that required understanding ‘*their strengths and weaknesses*’ (T-F-X). Education participants more often discussed teaching preparation, writing and information work, alongside questions of academic integrity and scholarly quality. Together, these perspectives show how disciplinary cultures shape both the uses of GenAI and the forms of expertise brought to its evaluation.

These differences are better understood as complementary forms of knowledge than as a hierarchy of competence. Technical understanding, pedagogical judgement, disciplinary epistemology, research integrity and educational purpose all have a place in responsible GenAI development (Liu and Bates, 2025). The case therefore points to a substantial institutional resource already present in academic communities. Creating more opportunities for these forms of expertise to meet across disciplinary and professional boundaries could strengthen guidance, professional development and evaluation while retaining the advantages of locally grounded practice.

The focus group made this potential especially clear. Participants proposed practical guidance on responsible use, training on ethical citation and data security, financial support for subscriptions, more advanced learning about model generation logic, and integration of LLM-related learning into curricula. Rather than asking simply for permission or restriction, they articulated a constructive agenda for institutional development grounded in their own experience of the technology's possibilities and limits.

Relating the case to four mediation functions

Taken together, the findings show that academic initiative was already carrying a considerable part of GenAI innovation within the institution. The next organisational task is to connect that initiative more systematically so that local learning can travel across courses, departments and professional roles. The four mediation functions provide a way of identifying what was already present in the case, what was still developing, and where participants saw opportunities for further institutional support. Table 4 links these four functions to the GenAI mediation elements contained in Table 1.

Table 4. Empirical patterns, meso-level mediation functions and GenAI innovation ecosystem development

Mediation function	Evidence in the case	Observed condition	Organisational implication
Strategic translation	University-wide guidance was not consistently visible to participants; users also developed locally grounded norms	Emerging	Strengthen communication of institutional purpose, decision rights and adaptable boundaries for use (GenAI ecosystem elements 1 and 3).
Enabling conditions	Self-directed learning, personal/public access, early training provision and varied access arrangements	Developing	Extend trusted access, resources, professional learning and bounded opportunities for experimentation (GenAI ecosystem element 2).
Boundary connection	Complementary technical, pedagogical and integrity expertise was present across disciplinary communities	Available/developing	Create regular connections among academic, technical and administrative expertise and make local experiments collectively visible (GenAI ecosystem element 4).
Iterative learning	Model salience changed noticeably across the two time-stamped interview corpora	Emerging	Develop short review cycles and feedback loops linking user experience to guidance, support and subsequent decisions (GenAI ecosystem element 5).

Part 7. Discussion - from rapid adoption to institutional learning

Adoption and institutional integration develop on different timescales

The central empirical finding is that professional adoption and institutional integration were developing on different timescales. Academics were already incorporating LLMs into teaching and research, establishing local ethical boundaries and adapting to a changing model environment. University-wide guidance was not always visible to them, professional learning opportunities were still expanding, and access arrangements varied. We understand this as a transitional configuration: professional uptake had developed quickly, creating both experience and demand from which more coordinated institutional arrangements could continue to grow.

This finding extends current GenAI research in two respects. First, it reinforces Hou's (2025) argument that 'AI integration' cannot be reduced to tool use and shows why the distinction matters organisationally: professional use can expand without waiting for a single institution-wide adoption decision. Second, it complements Korseberg and Elken's (2025) account of an initially cautious 'wait and see' response in Norwegian institutions. The Chinese case presents another temporal pattern, in which professional practice accelerated while institution-wide mediation was still evolving. Taken together, these studies suggest that universities can follow different pathways as they organise around a rapidly changing technology.

How practice-led adoption can become shared organisational capability

The case helps explain how substantial technological activity can emerge before shared organisational capability is fully developed. What matters is the quality of the relationships through which purpose, infrastructure, expertise, experimentation and feedback are connected. Because GenAI is readily accessible, academics can move quickly and generate valuable local knowledge, the institutional opportunity is to create arrangements through which that knowledge becomes visible, comparable and reusable beyond the settings in which it first emerged.

Local experimentation is especially important in this process. When academics work out questions of access, prompting, verification and pedagogy in their own settings, they keep practice moving and create context-sensitive knowledge. The challenge is not that such initiative substitutes for the institution, but that its full value is realised only when experience can be shared and retained. Meso-level mediation can, therefore, add to local competence by turning dispersed experience into institutional memory and common capability.

This distinction also cautions against maturity models that assume a single linear route from low to high adoption. At least two dimensions may develop at different rates - the intensity of use and the capacity for institutional mediation. The important transition is therefore not simply towards 'more AI', but towards

stronger institutional capacity to connect and learn from distributed use. This provides a basis for comparing universities without ranking them along a single developmental scale.

From the organisational dimension to four mediation functions

Fumasoli et al. (2020) argue that the organisational dimension mediates between environmental forces and institutional action. The case developed here gives that proposition more process detail in the context of rapid technological change. External expectations become useful when they are translated into purposes and boundaries that make sense within the institution. Academics also need workable conditions for practice—trusted access, resources, professional learning and room for experimentation. Connections across technical, pedagogical, disciplinary and administrative communities allow local solutions to travel, while regular review gives experience a route back into guidance, support and later decisions. These are the four mediation functions identified in the analysis.

The four functions are interdependent, but they need not unfold in a fixed order. Professional learning is more effective when participants also have trusted access to appropriate tools; infrastructure gains educational direction when it is connected to institutional purposes; guidance becomes more meaningful when disciplines can interpret it in relation to their own work; and experimentation contributes more fully to organisational learning when experience feeds into subsequent decisions (Liu and Bates, 2025).

Even modest initiatives can therefore have wider developmental value when they are connected—for example, when a bounded pilot informs guidance, professional learning and the next round of resource decisions. Recent international Delphi work on GenAI governance similarly emphasises regular policy review, ongoing professional development, stakeholder communication, evaluation and monitoring of external developments as part of keeping institutional guidance current (Crompton et al., 2026).

Technological change and iterative organisational learning

The time-stamped contrast adds further insight, although its interpretation requires care. The January and March samples were different, so the data cannot conclude that the same academics switched models, but the data do show that the tools prominent in academic discussion changed quickly during the fieldwork period. This matters organisationally because tool-specific guidance may need revision within ordinary institutional planning cycles. Institutional mediation therefore benefits from revisability - shorter review cycles, bounded pilots, timely feedback from active users and principles that remain useful across changing models.

This does not imply permanent institutional improvisation. The purpose of iterative learning is to separate what should remain stable from what must remain revisable. Educational purposes, academic standards, data responsibilities and decision rights may require durable institutional commitments in which lists of approved tools, prompting practices and technical procedures may need frequent review. Organisational capability lies in managing these different temporalities rather than attempting to make technological change conform to conventional planning cycles (Viaene, 2026).

A comparative heuristic for international higher education

The four mediation functions are not specific to China. The Chinese context is particularly informative because national AI ambitions are explicit and the higher education system combines large scale with substantial institutional diversity (Arenal et al. 2020; Han, Zha and Xie, 2023).

Yet the relationship between professional uptake and organisational mediation can take different forms under many governance arrangements. For comparative purposes, it is therefore useful to treat adoption intensity and mediation capacity as analytically separate dimensions (Table 5). Their intersection suggests different organisational configurations without implying a single maturity sequence.

Table 5. Heuristic configurations of GenAI adoption and institutional mediation

Mediation capacity	Lower adoption intensity	Higher adoption intensity
Developing	Exploratory engagement: use remains selective while institutional purposes, support and connective arrangements are taking shape.	Practice-led acceleration: widespread professional experimentation generates experience and demand for coordination while mediation structures continue to develop. This is the configuration most visible in the present case.
More established	Institution-led preparation: governance, support and capability-building arrangements develop ahead of widespread professional use; adoption may be cautious or strategically bounded.	Cumulative integration: extensive use is accompanied by shared support, cross-boundary learning, evaluation and revisable governance.

Note. The four configurations are analytical possibilities, not stages of a universal maturity model. Institutions may move non-linearly between them as technologies, strategies and professional practices change.

The present case is closest to the high-adoption/developing-mediation configuration, which we describe as practice-led acceleration. This also clarifies its relation to Korseberg and Elken's (2025) finding of institutional caution: rapid technological change does not produce a single organisational response. In some universities, institutional preparation may precede widespread use; in others, professional uptake may expand first and provide the experience from which broader coordination develops. Comparative research can therefore focus

on how adoption and mediation become connected under different governance, resource and disciplinary conditions rather than asking which institutions are simply ‘ahead’ or ‘behind’.

Reciprocal layers of mediation: within the institution and beyond

The case has a broader implication for the concept of organisational actorhood. GenAI creates a particularly demanding test because its adoption is driven not only by institutional strategy, but also by widespread experimentation occurring across professional and academic practice before the university can fully define an organisational position.

From this perspective, actorhood is expressed not only through the responsive development of governance structures, regulation and guidelines, but also through the creation of reciprocal layers of mediation that connect external developments with internal practice and local experimentation with institution-wide learning. These layers encompass leadership, resources, support structures, communities of practice, feedback processes and external partnerships that together form a university's GenAI innovation ecosystem (Spours and Rong, 2026).

Actorhood thus becomes simultaneously structural and generative. It is structural in establishing direction and coordination, and generative in creating the conditions through which new knowledge, capabilities and innovations emerge, circulate and scale. The structural/generative relationship can also be viewed as a dialectical action between horizontal experimentalism and vertical formalities, that in their combined forms continually perform the organisational work of translation, enablement, connection and learning under conditions of ongoing technological volatility.

Limitations and conclusion

The study has several limitations. It is based on one institution and a purposive sample that intentionally included academics familiar with LLMs; the findings therefore should not be used to estimate university-wide adoption. The two interview waves involved different participants and provide time-stamped cross-sectional contrasts rather than panel evidence of individual change. The case captures academic staff perceptions rather than the perspectives of students, senior leaders, professional services or technology administrators. Accordingly, our discussion of institutional mediation concerns its visibility and experienced reach among these users, not the formal existence or absence of policies and support structures. The model-mention counts are descriptive rather than prevalence estimates. Finally, the data were collected during an early and particularly fast-moving period, and both institutional arrangements and the wider policy environment have continued to develop since April 2025.

The timing of the study is also part of its analytical value. The fieldwork captures a transitional moment in which professional practice was developing alongside emerging institutional arrangements. The subsequent strengthening of China's AI-in-education agenda makes the organisational question increasingly relevant: how can universities connect strategic momentum and distributed experimentation to shared capability? Comparative and longitudinal research across institution types can examine whether the four mediation functions recur, how they are organised in different governance settings, and how more established mediation supports cumulative forms of institutional learning.

The analysis suggests that the important question is not simply whether academics adopt GenAI. Active users in this case were already incorporating LLMs into teaching and research and developing considerable practical knowledge. The next step for organisational development is to make such distributed practice more visible, supportable, connectable and learnable across the institution. Rapid uptake developed alongside emerging mediation, while the changing model ecology highlighted the need to coordinate technological and organisational timescales. The theoretical contribution lies in specifying meso-system level mediation and GenAI innovation ecosystemic development as the organisational work and networked structure that links strategic direction, professional agency and institutional capability.

For higher education research, this shifts the unit of explanation. GenAI integration is more than the sum of policies, tools or individual attitudes; it also depends on how universities translate external expectations, enable practice, connect distributed expertise and revise arrangements through feedback. Treating adoption intensity and mediation capacity as separate dimensions provides an international comparative lens for examining why similar technologies can lead to different organisational trajectories. GenAI is the immediate case, but the broader question concerns how universities develop connective approaches to actorhood while professional practices and institutional arrangements are evolving together.

Statements and declarations

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Ethics and informed consent

The study involved minimal-risk interviews with adult academic staff. The authors' institution did not issue a formal ethics approval number for this study. Participants were informed of the study purpose and procedures, participation was voluntary, withdrawal was permitted, and informed consent was obtained before data collection. Data are reported in anonymised form.

Conflict of interest

The authors declare no competing interests.

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