

Research Article

Sustainable National Learning in Turbulent Times: The Role of Universities

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Purpose of the paper: This paper explores how sustainable national learning could be understood and developed in times of political and technological turbulence.

Methodology: The starting points are the national needs of a country aspiring to be sustainable and how this should be supported by learning. Business Process Reengineering (BPR) is used to construct the benchmark processes that do the right thing, in the right way over time. The part of Diagnosing in the Sustainability Opportunity Study (SOS) practice is used, in combination with the Process-Based System Model (PBSM) to provide ideas of opportunities and threats. The part of Analysing in the SOS is based on various change theories such as Parkinson's law, disruptive innovation, functional stupidity and organisational agility reflecting on the situation in Sweden as a case.

Main Findings: National learning can be divided into knowledge and competence. Universities have historically had a strong grip on both. However, like the church in Sweden has lost its monopoly on faith, universities might lose their monopoly on knowledge and competence based on the proposed law of: "From Good to Gone".

Research limitations/implications: The findings are indicative.

Practical implications: The SOS practice in combination with the PBSM could support national and university leaders in making sense of societal knowledge and competence management needs.

Originality/value: The paper shifts the unit of analysis from university needs centered performance to national learning needs, highlighting a potential gap.

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1. Introduction

Contemporary societies face several interacting threats, including climate change, challenges to democracy and human rights, the rapid development of artificial intelligence (AI), geopolitical conflict, and intensifying international competition. These developments create a turbulent environment in which nations must continually reassess the knowledge and competence required to remain sustainable, democratic, secure, and economically competitive. This can be described with VUCA – Volatility, Uncertainty, and Ambiguity^[1]. Turbulent times drive disruptions which could become national and organisational opportunities and threats.

In “The Fifth Discipline: The Art and Practice of the Learning Organisation”, Senge^[2] argues that an organisation’s sustainable competitive advantage depends on its ability to learn faster than its competitors. Extending this argument to the national level suggests that a country’s future success depends partly on how effectively and rapidly it can learn and adapt. National learning can consequently be understood as a prerequisite for sustainable citizen well-being and for maintaining a stable societal system without depleting its natural, social, human, or economic capital.

The paper applies the concept of the perfect process, understood as a process that does the right thing in the right way over time. Applied to national learning, this raises three fundamental questions:

1. What learning should a sustainable society manage?
2. How should identified knowledge and competence be acquired, developed and used?
3. How should these processes to acquire, develop and use knowledge and competence be continually revised as societal conditions change?

These questions imply that national learning management should be guided by an explicit societal mission before the roles of universities and other institutions are considered. Its mission is to develop and continually renew the knowledge, competence, values, and judgement needed to create a sustainable country. Isaksson et al.^[3] suggest for Sweeden: “At least having satisfied citizens with their needs being provided while being carbon neutral and taking global responsibility for sustainability, with focus on extreme poverty and peace keeping”. From this perspective, the “right thing” concerns the knowledge, competence, and values a sustainable society needs. These include capabilities required for responsible citizenship, sustainable employability, innovation, democratic participation, security, international competitiveness, and the intelligent and ethical use of AI. The “right way” concerns how these

capabilities are acquired, developed, validated, shared, and applied across the population and throughout life. The national process may involve schools, universities, employers, public institutions, professional organisations, civil society, digital platforms, and AI-supported individual learning. In this paper the focus is placed on Higher Education Institution (HEIs). The national mission should therefore not be defined as maintaining institutions or existing educational structures. These are means rather than ends. The desired outcomes are knowledgeable and responsible democratic citizens, sustainable well-being, minimised national and imported footprints, effective and innovative organisations, and a positive contribution to sustainable development beyond national borders. The role of HEIs should subsequently be derived from these societal needs.

AI can be understood as both an opportunity and a threat to HEIs. The knowledge problem extends beyond the efficient transfer of facts. Governments, public-service media, universities, and scientific institutions have traditionally served, with varying degrees of success, as authorities for determining what constitutes credible knowledge. Their authority is increasingly challenged by a fragmented digital environment in which scientific findings, political opinions, commercial messages, deliberate disinformation, and so-called “alternative facts” circulate through the same channels. GenAI further reduces the cost of producing persuasive but inaccurate text, images, audio, and video.

The OECD argues that disinformation can cast doubt on factual evidence, deepen societal divisions, obstruct public policy, and undermine trust in democratic institutions. The threat to democracy is not only that citizens may encounter false information, but that the distinction between credible knowledge and political assertion may gradually become blurred. This can create favourable conditions for populism: complex problems can be reduced to emotionally persuasive explanations, experts and institutions portrayed as untrustworthy elites, and political mobilisation built around identity and resentment rather than evidence. National knowledge management must therefore do more than make information available. Citizens need the capacity to evaluate sources, distinguish evidence from opinion, recognise manipulation, tolerate disagreement, and revise their beliefs when confronted with credible evidence. Media literacy, critical thinking, scientific understanding, ethical judgement, and democratic competence consequently become integral parts of national resilience^[4].

AI creates substantial opportunities. It can make knowledge and guidance available on demand, adapt explanations and exercises to individual needs, translate material across languages, and support learning independently of time and place. This could make lifelong learning more accessible to people who need to update their competence, change occupation, return to employment, or respond to rapidly changing

workplace requirements. National competence management may therefore increasingly shift from front-loaded education—completed mainly before working life—to continuous cycles of learning, application, and competence renewal throughout life.

The third question is especially important because neither the “right thing” nor the “right way” remains constant. In university education, the “right thing” concerns what is taught and should therefore be reflected in programme and course syllabi, learning outcomes, and assessment criteria. As AI changes professional work and societal needs, curricula must be continually revised to include relevant disciplinary knowledge alongside AI literacy, critical thinking, ethical judgement, source evaluation, problem formulation, and human–AI collaboration. The “right way” concerns pedagogy: how students acquire, develop, demonstrate, and apply this knowledge and competence. AI creates opportunities for more individualised learning through explanations adapted to the student’s prior knowledge, immediate feedback, personalised exercises, translation, simulation, and support available beyond scheduled teaching. It may therefore enable students to follow different learning paths while working towards shared learning outcomes. However, individualisation must not eliminate collaborative learning, independent judgement, or valid assessment. The challenge is consequently to align changing societal competence needs with programme content, course syllabi, pedagogy, and assessment—and to revise this alignment continuously as AI and working life develop.

The continuous revision of both the “right thing” and the “right way” substantially increases the demands placed on organisational and personnel agility. Universities must be able to revise programmes, course syllabi, learning outcomes, pedagogy, and assessment methods as AI capabilities and societal competence needs evolve. At the same time, teachers must continually update their disciplinary knowledge, AI competence, teaching practices, and understanding of how students learn with AI. This requires more than isolated curriculum revisions or individual experimentation. It requires organisational structures, leadership, resources, incentives, and professional-development systems that enable coordinated and continuous adaptation. The speed of educational renewal may therefore depend not only on recognising what should change, but also on whether universities and their personnel possess the agility and capacity to implement that change. The overall view from inside, as researchers, is that universities are built for a slow-moving world where there is plenty of time for bureaucracy and where it could take more than a year to create a new course syllabus and several years to create a new program. Changing the way things are done could be difficult. Based on experiences from Sweden, the established governance systems are very change resistant. Change of the system hinges on the system

and its stakeholders collectively questioning old practices which in a situation of denial of the needs seems unlikely.

Governance, democracy, and agility are areas which need to be discussed. National adaptation presents a governance dilemma. Highly centralised or autocratic systems may be able to implement strategic decisions rapidly. An obvious risk is that the decisions are not the right ones, but if they are then there is an advantage. At the opposite extreme, distributing veto power too widely can prevent action. The historical liberum veto of the Polish-Lithuanian Commonwealth illustrates this problem: an individual member of the Sejm could interrupt proceedings and prevent collective decisions. The example demonstrates how a system intended to protect liberty and constrain arbitrary power can become incapable of reform when agreement is required from virtually everyone and eventually self-destruct as the Polish-Lithuanian Commonwealth. Democratic systems seek a balance between these extremes. Participation, accountability, institutional autonomy, and legal safeguards protect citizens against arbitrary authority and permit competing perspectives to be heard. However, distributed authority can also make rapid and coordinated change difficult. Democracies commonly possess exceptional mechanisms for acute emergencies, such as war, but may find it harder to mobilise around slower-moving disruptions whose consequences remain uncertain. From the perspective of international competition, the theoretically most agile arrangement might appear to be an "enlightened dictator": a decision-maker who possesses extensive authority but consistently makes informed, ethical, and socially beneficial decisions. This could be what democratic societies are competing with.

A company can be described—somewhat provocatively—as a "temporary dictatorship": management has the authority to set priorities and direct resources, while dissatisfied employees may leave and owners can eventually replace management. A country is fundamentally different. Citizens cannot realistically be treated as employees, national objectives are contested, and political leaders exercise coercive power over people who cannot simply opt out. This is why business experience does not automatically qualify someone for democratic leadership. Donald Trump's business background and willingness to override established practices may be interpreted as evidence of decisiveness but could also be seen as signs of increasing authoritarian rule.

In an environment where countries compete economically, technologically and geopolitically, national governance must combine democratic legitimacy with the capacity for timely collective action. China represents the attraction—and danger—of concentrated decisiveness, while the Polish-Lithuanian Commonwealth represents the danger of institutionalised obstruction. Arguably, the sustainable position

lies between these extremes: a state must be sufficiently decisive to identify threats, establish priorities and implement change, but sufficiently democratic to obtain reliable information, accommodate legitimate disagreement, hold leaders accountable and correct mistakes. The objective is therefore neither authoritarian efficiency nor unlimited veto power, but **democratic decisiveness**.

China is aspiring to become the world leader and could therefore be used as a comparison. Chinese universities have moved rapidly to integrate institutionally controlled AI systems into education. In 2023, Tsinghua University began introducing university-developed AI teaching assistants across approximately 117 courses, covering 40 departments and ten fields. These assistants draw on course-specific knowledge bases and provide students with explanations, feedback, exercises, and guided questioning^[5]. In 2024, Tsinghua introduced its university-developed "Xiaoda" AI assistant to all incoming students^[6]. This is close to a "university-based AI shell": an institutionally designed environment through which students can use AI from the beginning of their studies, while the university retains greater influence over knowledge sources, pedagogy, privacy, and acceptable use. Following the emergence of DeepSeek in 2025, universities including Shenzhen University, Zhejiang University, Shanghai Jiao Tong University, and Renmin University introduced courses or institutional applications based on its models. These examples show an ability to move from technological development to institutional experimentation relatively quickly^[7]. China has also strengthened university-industry integration and emphasised research connected to strategic technologies, industrial development, and practical application. When it comes to competence development China might already be ahead of other countries. If students in some countries learn to use AI critically and productively earlier than students elsewhere, the resulting advantage may become cumulative. The frequently expressed proposition that AI may not replace individuals, but that individuals using AI may replace those who do not, can be extended cautiously to organisations and nations. Countries that learn to use AI effectively may develop knowledge, competence, innovation, and productivity faster than countries that respond slowly or primarily defensively. China's rise in clean technologies provides a potentially important parallel for higher education. China has established leading positions in solar photovoltaics, electric vehicles, batteries and, increasingly, wind-power technologies. A similar development in higher education is conceivable. Just as Western companies underestimated China's capacity to progress from low-cost manufacturing to technological leadership, Western nations and universities may underestimate the possibility that faster institutional learning and AI adoption could shift global leadership in competence development.

National learning is complex and could be a challenge for sensemaking. The Cynefin framework helps by distinguishing between clear, complicated, complex, and chaotic situations and the extent to which the current system is understood by introducing the concept of disorder (Snowden & Boone, 2007). This means that we could be in a complex system by acting as if we were in a clear or complicated one. This would mean that our responses are misdirected. A complex system is here interpreted as one where there is no clear agreement on the “what”, i.e. the dependant variable or the so-called y-value^[3].

The role and mission of universities might have to be reviewed with the purpose of improving national learning. Universities have historically occupied a central position through education, research, innovation, and knowledge dissemination. However, AI could challenge the traditional division of responsibilities between universities and other actors. Universities are expected to serve students, employers, governments, professions, and society more broadly. Nevertheless, these expectations do not always constitute a clear, prioritised, and measurable societal mission. University performance is commonly evaluated through internal or intermediate outputs such as credits awarded, graduation rates, publications, citations, research income, and rankings. Although these indicators provide relevant information, they do not necessarily demonstrate whether universities are developing the needed societal learning. Educational programmes may respond slowly to changes in working life. Employability and lifelong adaptability may receive less attention than established disciplinary content. Research success may be measured through academic production without adequately assessing contributions to innovation or societal problem-solving. Organisational boundaries, regulatory requirements, academic traditions, professional interests, and internal incentive systems may further reduce the capacity for coordinated change. Universities can consequently be successful according to established academic indicators while remaining less effective in supporting national learning and adaptation. Goodhart’s law^[8] warns that when an indicator becomes a target, it tends to lose its value as an indicator. Credits, graduation rates, publications, citations, research income, and rankings may therefore become objects of optimisation rather than evidence of societal learning. The organisation can improve its measured performance while losing sight of the purpose the measures were originally intended to represent.

Losing focus can happen also in organisations with highly educated persons. Alvesson and Spicer’s^[9] concept of functional stupidity describes organisational practices that discourage reflection, critical questioning, and consideration of broader purposes while maintaining efficient routine operations. In this interpretation, highly educated individuals may contribute competently to a system without examining whether the system itself is producing the outcomes society needs. This could be a

symptom of a larger problem described in Parkinson's law, which suggests that bureaucratic activity tends to expand independently of the amount of substantive work that needs to be performed^[10]. Growing procedures, reporting requirements, committees, quality systems, and administrative specialisation may absorb resources and slow decision-making without necessarily improving educational or societal outcomes.

Systems do not understand themselves and organisations often defend the status quo. Kotter's^[11] work on organisational change draws attention to complacency and the absence of a sufficiently strong sense of urgency. Indicators include extensive "happy talk," reliance on favourable internal performance measures, and a tendency to interpret the absence of an immediate crisis as evidence that fundamental change is unnecessary. Kotter's idea could be applied both on nations and universities.

Nations and universities might not change before change pressure increases due to competition or disruption. Disruption theory raises the possibility that leading established universities may continue with existing models for education and research while new actors develop different, initially less prestigious but more accessible, flexible, and user-oriented alternatives (Christensen & Eyring, 2011). Solutions with focus on competence for employability and organisational innovation could provide attractive alternatives. Extending the thought to national governance could mean that nations that manage to adapt quicker to external requirements could become more competitive resulting in higher GNP/capita. The sustainable nation focuses on citizen happiness which could be assessed using the World Happiness Report and the Human Development Index. Both have a strong correlation with GNP/capita^[3].

Sustained economic failure can erode confidence in democratic institutions and increase support for populist and authoritarian movements. The Great Depression of the 1930s illustrates this risk: although it was not the sole cause, widespread unemployment, insecurity and social unrest contributed to democratic breakdown in several countries and intensified the political forces that ultimately led to the Second World War. Similar tendencies can be observed—although in less extreme forms—in several established Western democracies. In the United States, deindustrialisation, inequality and dissatisfaction with inflation and living costs have likely strengthened support for populist and increasingly authoritarian politics, even when aggregate economic indicators have remained relatively strong. In the United Kingdom, regional decline, austerity and dissatisfaction with established political parties contributed first to Brexit and subsequently to the growth of Reform UK, which received 14.3% of the vote in the 2024 general election. France's prolonged economic and political dissatisfaction has strengthened both the populist right and radical left, with the National Rally receiving 32.1% of the second-round vote

in the 2024 parliamentary election. In Germany, industrial uncertainty, high energy costs and economic stagnation have coincided with the rapid growth of the Alternative für Deutschland, which increased its vote share to 20.8% in the 2025 federal election. Italy's long period of weak growth and political instability has similarly contributed to the rise of successive populist movements and the election of a government led by the right-wing Brothers of Italy. These developments do not establish a simple causal relationship between economic weakness and democratic decline. They nevertheless demonstrate how prolonged economic insecurity, perceived unfairness and declining institutional trust can undermine established political parties and make populist or authoritarian alternatives more attractive. Sustainable national economic performance should therefore be regarded not only as a matter of prosperity, but also as an important foundation for institutional trust, democratic resilience and peace.

From this perspective, national and institutional agility become important performance dimensions: how quickly can countries and universities recognise major change, decide on a response and redesign processes? In this study we focus on how universities support the learning needs of a sustainable country. Sweden provides an instructive case for this. It currently combines democratic governance, an extensive welfare state, strong formal commitments to equality and human rights, internationally recognised universities, a substantial industrial base, and a prominent sustainability agenda. Sweden can therefore be viewed as representing a wider group of Global North countries that understand themselves as occupying a form of moral high ground: democratic, egalitarian, socially responsible, environmentally aware, and guided by good intentions. Swedish universities have substantial operational autonomy and place considerable value on academic freedom and collegial decision-making. These qualities protect inquiry and enable local experimentation, but they do not necessarily produce coordinated system-level change. Early university responses to GenAI have often emphasised academic integrity, cheating detection, and restrictions. Such concerns are legitimate and are not unique to Sweden. However, a predominantly defensive response risks diverting attention from how AI could transform learning, teaching, research, innovation, and societal knowledge development. There could be too much focus on threats to the current system and too little focus on the opportunities for better national learning.

The purpose of this paper is to explore how national learning can be understood in turbulent times and how to examine the future role and requirements of Higher Education Institutions (HEI) within this system. The study addresses the following research questions:

- RQ1: How could we understand, define and measure the perfect processes for sustainable national learning?

- RQ2: How could we understand the main organisational causes for the identified opportunities and threats in HEI processes for providing national competence?
- RQ3: How is the overall opportunity for national learning using the SOS of Diagnosing, Analysing and Solving?

2. Theoretical background

This section describes some conceptual elements needed to understand, define and assess sustainable national learning. Quality for Sustainability (Q4S), the Process-Based System Model (PBSM), the Sustainability Opportunity Study (SOS) and Business Process Reengineering (BPR) provide the normative and process-oriented foundation. A second group of theories—Kotter’s change theory, Goodhart’s law, functional stupidity, Parkinson’s law, disruptive innovation and organisational agility—provides complementary lenses for critical inquiry.

2.1. *Quality for Sustainability, PBSM and SOS*

Quality for Sustainability (Q4S) provides the normative foundation^[3]. Its basic proposition is that a purposeful system should understand, define and measure its performance relevantly. It should do the right thing in the right way over time. At the national level, “the right thing” concerns the value the system should create: a good life for citizens, democratic and social stability, sustainable employability, innovation, security and the capacity to maintain these outcomes. “The right way” concerns how this value is created while limiting harm to people and nature and using resources responsibly. “Over time” introduces resilience and adaptability: a system that performs well under yesterday’s conditions but cannot respond to AI, climate change or geopolitical disruption is not sustainable.

The Process-Based System Model (PBSM) makes the system explicit by highlighting all key system elements^{[12][13]}. The PBSM also supports analysing causes to identified opportunities and threats. A business process transforms repeatedly inputs through outputs with the help of resources^[12].

The Sustainability Opportunity Study (SOS) structures the inquiry through the improvement stages Diagnosing, Analysing and Solving, crossed with Understanding, Defining and Measuring^[14]. In this paper, Understanding–Diagnosing identifies the national system, its context, stakeholders and indicative mission. Defining–Diagnosing specifies the vital few values and harms that describe desirable performance. Measuring–Diagnosing compares observed performance with this desired state to estimate opportunities and threats. In Understanding–Analysing, causes for Opportunities and Threats

highlighted in Diagnosing are discussed with the help of known theories dealing with systemic change. Defining–Analysing proposes main resources as potential explanations to the identified improvement potential. BPR supports Solving by permitting the process to be reconsidered from first principles.

2.2. Business Process Reengineering

Business Process Reengineering argues that established processes should sometimes be fundamentally reconsidered rather than incrementally improved^[15]. Its relevance increases when technology alters what is possible, when stakeholders' needs change, or when an established process has become detached from its purpose. AI potentially creates all three conditions. It changes access to knowledge and expertise, affects the capabilities required in working life, and challenges university-centred arrangements for teaching, assessment, research and certification. BPR begins with purpose and outcomes. For national learning, it asks what society needs citizens and professionals to know and be able to do. The unit of analysis is providing learning for the sustainable country. A limitation is that classical BPR often appears to presuppose that the desired output—the y-value—is sufficiently known and that a process can be deliberately designed to produce it. This assumption is more plausible for complicated problems than for complex ones. Under turbulent conditions, future competence needs and the effects of AI cannot be specified with certainty. BPR therefore needs to be combined with experimentation, feedback and continuous learning. At this stage researcher competence and certain boldness is needed to propose an indicative mission with the critical few values and harms as a starting point. The “perfect process” should not be interpreted as a fixed blueprint. It is an ideal process capable both of producing currently needed value and of repeatedly reassessing what the right thing and the right way have become.

2.3. A framework for critical inquiry

The following theories form a progressive framework. Kotter examines whether change is recognised and emotionally mobilised. Goodhart examines whether measures represent or displace the mission. Functional stupidity examines whether reflection and challenge are suppressed. Parkinson examines whether resources and bureaucracy grow independently of external value. Disruption examines whether alternative providers can satisfy needs differently. Agility examines whether the system can sense, decide, act and learn quickly enough.

2.3.1. Kotter: Urgency, complacency and the heart of change

Kotter^[11] presents a genuine sense of urgency as a precondition for major change. Kotter and Cohen^[16] further argue that successful change commonly follows a see–feel–change logic. Evidence and rational argument matter, but behaviour changes when people experience the issue as meaningful and emotionally credible – the heart comes first followed by mind. The “heart” does not make analysis irrelevant; it shapes which evidence people accept and whether they are prepared to act on it. In universities, apparently rational objections to AI may therefore contain both legitimate academic concerns and less visible fears about professional identity, loss of expertise, assessment credibility or institutional status. Conversely, uncritical enthusiasm for AI may also be emotionally driven. The analytical task is to distinguish evidence-based concern from rationalisation of either fear or excitement. University complacency could be indicated by repeated reliance on rankings, historical reputation or formal quality assurance as proof that the system remains fit for purpose; limited comparison with new learning providers; and little measurement of employability, competence gain or societal impact.

2.3.2. Goodhart’s law and mission–measurement alignment

Goodhart’s original observation concerned the instability of statistical relationships once they were used for control. Its widely used organisational formulation is that when a measure becomes a target, it tends to cease to be a good measure. The problem is not measurement itself. It is the substitution of a proxy for the purpose and the predictable adaptation of behaviour to improve the proxy. This is particularly relevant where outcomes are difficult to observe. Universities can readily count applicants, credits, degrees, publications, citations and research income. It is harder to measure learning gain, sustainable employability, useful innovation, democratic competence or long-term societal value. Easily measured outputs may consequently dominate management even when the mission concerns difficult-to-measure outcomes. Publication targets may encourage fragmentation into multiple papers, strategic citation and preference for fashionable questions. Completion targets may create pressure to lower barriers without demonstrating competence gain. Ranking targets may redirect resources towards reputation variables rather than local or national needs. The sequence “what we do not understand, we do not measure; what we do not measure, we struggle to improve” is useful, but it must be balanced by Goodhart’s warning. Absence of relevant outcome measures may indicate an unclear mission. A mature university measurement system therefore links resources and activities to societal impacts.

2.3.3. Functional stupidity

Alvesson and Spicer^[9] define functional stupidity as an organisationally supported absence of reflexivity, substantive reasoning and justification. Highly capable people may narrow their thinking to assigned tasks, accepted assumptions and locally rewarded behaviour. This can be functional in the short term because questioning is costly: limiting doubt can facilitate coordination, commitment and smooth routine performance. It becomes dysfunctional when the organisation cannot recognise that its assumptions, mission or environment have changed. Possible university manifestations include treating disciplinary tradition as sufficient justification for curriculum content; equating publication with useful knowledge without asking who benefits; repeating the language of excellence, sustainability or student-centred learning without defining observable outcomes; and discouraging questions that threaten established professional identities or resource allocations. A university may therefore contain extensive intelligence while showing limited collective capacity to question its own purpose and effects. Alvesson and Spicer refer to findings from Arum and Roksa's study of more than 2,300 US undergraduates. In that study, 45% showed no significant improvement in selected critical-thinking, complex-reasoning and writing measures after two years, and 36% showed little or no measurable improvement after four years. These results should not be generalised to all students, countries or usable skills, and they do not show that university education has no value. They are relevant because they demonstrate the importance of measuring competence gain rather than assuming it from enrolment or graduation. Functional stupidity may reinforce Parkinsonian growth: when broader purpose is not questioned, additional procedures, roles and reporting can be accepted as inherently useful.

2.3.4. Parkinson's law, bureaucratisation and mass higher education

Parkinson^[10] provocatively proposed that work expands to fill the time available and that administrative staffing can grow independently of the substantive work performed. His satire identifies mechanisms that remain analytically useful: officials create work for one another, organisational importance becomes associated with staff and budget, and internal coordination expands as organisational complexity grows. Parkinson's law is not a universal empirical equation, but a warning that internal activity, workload and growth do not by themselves demonstrate external value. The distinction between activity and delivery is central. Staff may experience genuine overload from meetings, documentation, compliance, procurement and internal reporting while the external process becomes slower. Universities face legitimate requirements for accountability, ethics, inclusion, data protection and quality assurance. The

issue is whether administrative growth remains proportionate to the value it protects or creates. Possible symptoms include increasing reporting and committee loads; multiple control systems requesting similar information; long approval times for curriculum revision; declining academic time for teaching and research; and quality systems dominated by procedural compliance rather than demonstrated learning and societal outcomes. The scale of higher education also changes the system. Tertiary education has moved from an elite model towards mass participation: OECD data indicate that 48% of young adults now complete tertiary education, compared with 27% at the beginning of the century (OECD, 2025). This is a major achievement in access, but it makes it unreasonable to assume that the structures designed for a small academic elite remain optimal for diverse learners and societal needs. Expansion of degrees and doctoral training can create value, but qualification growth should be assessed against competence gain, employability, innovation and useful research rather than treated as value.

2.3.5. Disruptive innovation

Disruptive innovation explains how incumbents can be displaced even while improving the products and services valued by their established stakeholders^[17] (Christensen & Eyring, 2011). Disruption generally begins when a new actor offers a simpler, cheaper or more accessible solution to users who are over-served, excluded or poorly served by the incumbent model. For universities, potential alternatives include AI tutoring, online and modular learning, micro-credentials, employer academies, professional certification, project-based training and competence assessment independent of a conventional degree. These alternatives do not yet reproduce all university functions, such as independent research, scholarly communities, laboratories, social development and trusted certification. Disruption does not require them to do so initially. Pressure for disruption rises with two gaps. The first is the need–performance gap: the distance between rapidly changing societal or employer needs and what universities deliver. The second is the accessibility gap: the difference between the cost, duration and rigidity of established degrees and the speed, affordability and flexibility of alternatives. AI can widen the first gap by accelerating competence change while narrowing the second by making personalised instruction and assessment cheaper.

2.3.6. Organisational and curriculum agility

Organisational agility is the capacity to sense relevant environmental change, make timely decisions and implement an effective response. For a university, agility includes sensing changes in technology and

working life, interpreting their consequences, revising priorities, changing curricula and assessment, developing staff competence, implementing new practices, evaluating effects and institutionalising what works. The sensing–deciding–acting sequence can be expanded with learning. Sensing requires systematic contact with students, employers, professions, public bodies, research frontiers and alternative providers. Deciding requires clear responsibility and the ability to resolve competing interests. Acting requires resources, teacher capability, appropriate technology and manageable approval processes. Learning requires rapid feedback, comparison of outcomes and willingness to reverse or revise decisions. Curriculum agility should be particularly important under AI. The relevant questions are not only whether AI content is added, but whether learning outcomes, teaching methods and assessment are reconsidered. If AI changes what professionals can delegate to machines, programmes may need to place greater emphasis on problem formulation, verification, ethical judgement, systems thinking, domain knowledge and effective human–AI collaboration. Evidence of agility would include the time from detecting a need to changing a programme; the time from approval to implementation; the proportion of programmes testing new AI-enabled pedagogy and assessment; staff competence development; stakeholder involvement; and measured learning from pilots. University autonomy has an ambiguous role. It can enable rapid local experimentation, but fragmented responsibility and collegial veto points can impede coordinated change. The relevant variable is therefore not autonomy itself but effective distributed agility: local freedom combined with common direction, transparent learning and mechanisms for scaling successful practice.

2.3.7. The Cynefin framework

The Cynefin framework (Snowden & Boone, 2007) is a sensemaking framework that distinguishes between five domains of decision-making: clear, complicated, complex, chaotic, and disorder. In the clear domain, cause-and-effect relationships are obvious and best practices apply. In the complicated domain, relationships are knowable through expert analysis. In the complex domain, cause and effect become apparent only in retrospect, requiring experimentation, learning, and adaptation. In the chaotic domain, no discernible relationships exist, making rapid action necessary to establish stability. Disorder represents situations where it is unclear which domain applies, often leading decision-makers to respond using familiar but inappropriate approaches.

This means that we could be operating in a fundamentally complex system while acting as if it were clear or merely complicated. Consequently, our decisions and interventions may be systematically misdirected

because they are based on an incorrect understanding of the nature of the system. The Cynefin framework therefore recommends different modes of response depending on the domain. In clear situations, managers should sense–categorise–respond by applying established best practices. In complicated situations, they should sense–analyse–respond, relying on expert knowledge to determine appropriate solutions. In complex situations, however, no predetermined solution exists; managers must probe–sense–respond by conducting safe-to-fail experiments, observing emerging patterns, and adapting accordingly. In chaotic situations, immediate action is required to restore stability through an act–sense–respond approach.

A particular challenge arises in the domain of disorder, where decision-makers do not recognise the true nature of the system. In such situations, there is a natural tendency to apply familiar bureaucratic procedures, predefined standards, and existing governance structures, effectively treating the problem as if it were clear or merely complicated. This can disguise the underlying complexity and prevent the experimentation, learning, and adaptation that complex challenges require. For example, the question of how universities should contribute to sustainability or respond to the transformative impact of generative AI is often approached through committees, policies, quality assurance systems, and incremental revisions of existing programmes. Such responses assume that the problem is already well understood, whereas it may instead require fundamental rethinking of the university’s mission, educational processes, and role in national knowledge and competence management. There is an obvious risk that universities deal with AI as it were a clear or complicated problem and not as a potentially complex or chaotic problem which could significantly assess the university mission. This means that we might have to redesign the Sense → Decide → Act → Learn Sequence to Understand → Sense → Decide → Act → Learn.

3. Methodology

The study is conceptual and exploratory. Its principal aim is to theorize: to construct a coherent way of understanding, defining and indicatively assessing sustainable national knowledge and competence management in the age of AI. Sweden is used as an illustrative case through which the usefulness of the proposed framework is examined. The work is positioned within Innovation Action Research^[18]. The researchers do not only apply an established model but develop the SOS-based model while using it on a societally relevant problem. This iterative movement between conceptualisation and application is considered appropriate because both the desired national outcomes and the effects of AI remain partly

uncertain. The output is consequently a set of provisional constructs, relationships and assessment questions.

The primary unit of analysis is the end-to-end national learning process. The process includes the creation, validation, dissemination, acquisition, certification, mobilisation and renewal of knowledge and competence. The Swedish application is conducted at two linked levels: (1) the national level, covering societal mission, policy and aggregate outcomes; (2) the higher-education-system level.

The conceptual development follows the SOS logic, with primary emphasis on Diagnosing and its three parts: Understanding, Defining and Measuring. In addition, parts of Analysing are discussed as well as Solving on a superficial level.

Diagnosing consists of Understanding-Diagnosing, Defining-Diagnosing and Measuring Diagnosing. Understanding-Diagnosing implies making sense of the system studied. The PBSM is used to identify stakeholders, inputs, resources, activities, outputs and intended outcomes of national learning. Based on the national mission for sustainability the mission of national learning is discussed. BPR logic together with the perfect-process approach are used to formulate an indicative mission and to identify the critical values, harms that should characterise a sustainable national learning process.

Understanding-Diagnosing provides input for Defining-Diagnosing. National learning is defined and performance indicators and targets are proposed.

Understanding-Measuring proposes how to use the proposed indicators. To the extent possible, the proposed indicators are used to assess the current improvement potential in terms of opportunities and threats.

Understanding-Analysing proposes how we could explain the identified gaps. This is done using different models explaining why gaps could occur.

Defining-Analysing speculates in how identified causes could be measured and how hypotheses could be tested. This is where the work ends and further work with Measuring-Analysing and most parts of Solving are left for future research. Solving is discussed on a superficial level. The entire work is then reflected upon under the section Discussion.

4. Results

The Results chapter follows the conceptual paper development logic and starts with the part of SOS-Diagnosing and Understanding-Diagnosing, followed by Defining-Diagnosing and Measuring

Diagnosing. Then we look at Understanding–Analysing and Measuring–Analysing focusing on the Ms of Mission and Measurement. Solving is briefly discussed.

4.1. Understanding–Diagnosing of the processes for national knowledge and competence management

Understanding–Diagnosing has focus on sensemaking where the start is in the chosen system and its needs. The needs are defined by the needs of the sustainable nation. The mission of a sustainable nation, which could be formulated as: “*At least having satisfied citizens with their needs being provided while being carbon neutral and taking global responsibility for sustainability, with focus on extreme poverty and peace keeping*”^[3].

Once the mission of the nation has been defined, the question becomes what citizens need to understand and what they need to be capable of doing to fulfil that mission. Within this logic, national learning is a critical support process. Knowledge supports responsible citizenship, democratic judgement, social cohesion and the ability to distinguish evidence from manipulation. Competence enables citizens and organisations to convert knowledge into employability, innovation, public service, production and societal problem-solving.

Knowledge management and competence management should therefore be viewed as complementary but distinct societal functions. This paper distinguishes between these two closely related processes:

- National knowledge management concerns the knowledge, values, and judgement citizens need to participate responsibly in society. It includes democratic values, equality, human rights, sustainability awareness, critical thinking, media literacy, and willingness to support and, when necessary, defend the institutions and values on which society is based.
- National competence management concerns society’s ability to develop and mobilise the capabilities required for employment, innovation, research, entrepreneurship, technological development, public administration, and international competitiveness. It includes both sustainable employability among the wider population and advanced capabilities among researchers, innovators, professionals, and decision-makers.

These two dimensions are interdependent. A country may possess strong technological capabilities without maintaining democratic values, human rights, or social cohesion. Conversely, democratic values alone may be insufficient if the country lacks the competence, productivity, innovation capacity, and

economic strength required to maintain and defend them. A sustainable society therefore requires both responsible citizens and competent societal actors.

National knowledge management concerns the purposeful development, preservation, evaluation, and dissemination of the understanding required for citizens to interpret reality, distinguish reliable evidence from misinformation, understand the institutions and values on which society is founded, and make informed personal and democratic decisions. In a democratic society, this includes scientific literacy, critical thinking, media literacy, constitutional principles, cultural heritage, human rights, sustainability, and an understanding of global challenges. The objective is not to prescribe citizens' opinions but to provide the knowledge necessary for informed and independent judgement. The objective is to enable citizens to become decent sustainable members of society.

National competence management concerns the purposeful development and utilisation of citizens' capabilities to apply knowledge, skills, judgement, and available technologies to create value for themselves and society. From the perspective of a sustainable nation, competence management seeks to ensure that citizens possess the capabilities required to maintain a prosperous, innovative, and resilient economy. Competence management therefore supports the nation's capacity to generate the economic and social value necessary to achieve its mission.

National Knowledge and Competence Management are sub-processes to the process of managing a sustainable nation. With focus on managing national knowledge and competence management we can present these as main processes using the PBSM. External resources consist of the national context with the national Mission of a sustainable society. This then needs to be translated to educational policies which form the Mission resources for providing citizen knowledge and national competence. The PBSM in Figure 1 should be seen as the first of several iterations with the main purpose of sensemaking.

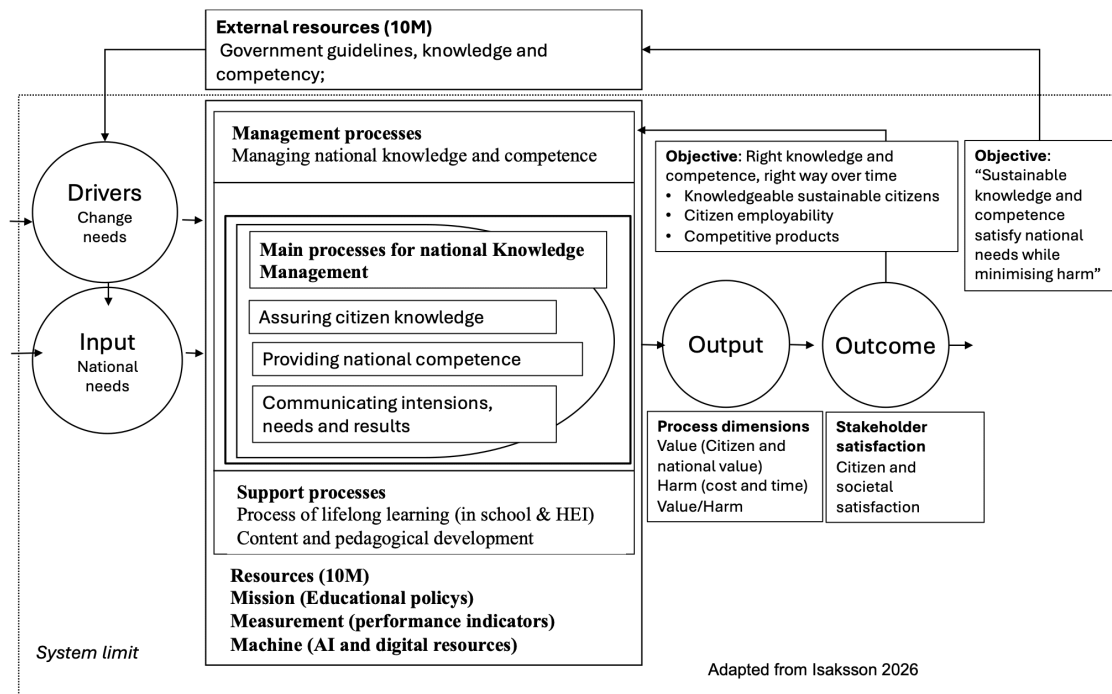


Figure 1. A proposed PBSM interpretation of national knowledge and competence management. Based on Isaksson^[13].

The proposed objectives are: Knowledgeable sustainable citizens, competitive products and citizen employability. Particularly citizen sustainability can be discussed. How do Swedes want to be. Hofstede's cultural dimensions characterise Sweden by low power distance, high individualism, exceptionally low masculinity, relatively low uncertainty avoidance, and high indulgence^[19]. In Hofstede's terminology, Sweden's unusually "feminine" culture indicates a preference for cooperation, equality, quality of life, consensus, and care for weaker members of society rather than hierarchy, assertiveness, and overt competition. These characteristics can support trust, participation, academic freedom, and social sustainability. However, they may also create tensions when rapid and contested change is required. Consensus seeking can delay decisions; low power distance can make it difficult to establish clear ownership; institutional autonomy can complicate coordination; and confidence in established institutions can contribute to complacency. Should any of this change? We do not have the answer for this but suggest that this should be part of a national discussion and that there should be a Mission that guides Swedish knowledge management. Democracy is an integral part of sustainability. Democracy relies on respecting principles such as free expression a free press and following agreed UN declarations.

With the anonymity of digital platforms hate speech has increased as have threats and actions against politicians and journalists. Laissez-fair knowledge management could come with risks to democracy.

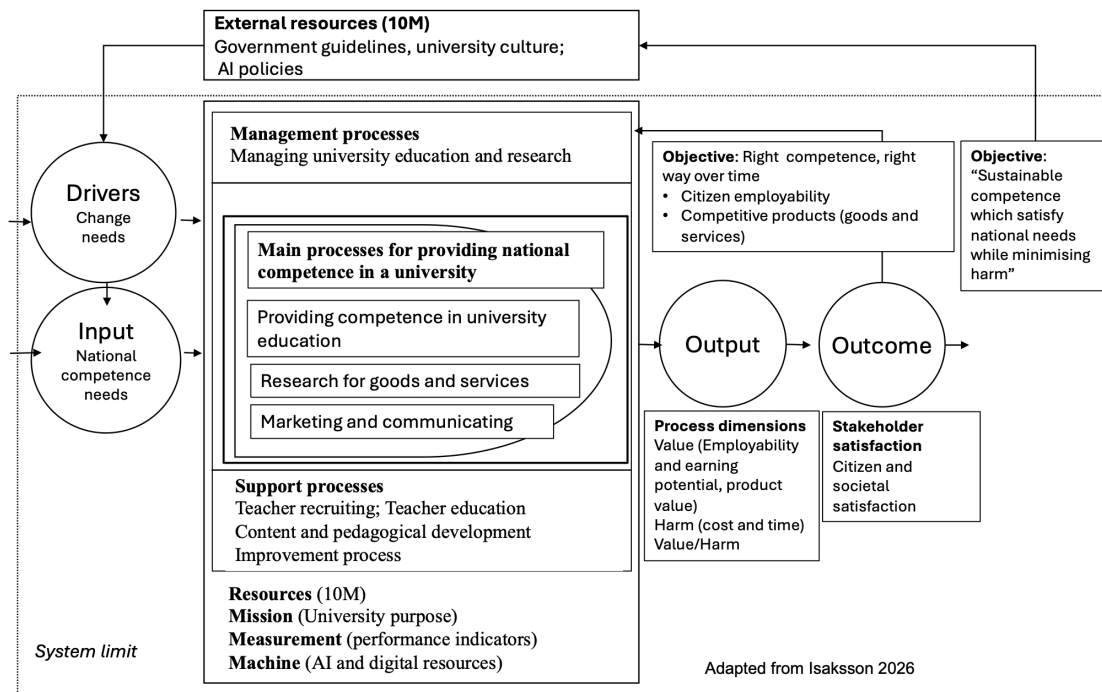


Figure 2. A proposed PBSM interpretation of university competence management.

The proposed definition for National Knowledge Management is:

“The national process that continuously aligns society’s collective knowledge with the knowledge required to achieve its mission. It identifies what citizens need to know, ensures that reliable knowledge is created and validated, enables its dissemination and continually adapts this knowledge base as societal conditions change.”

Universities oversee both Knowledge Management “Bildung” and Competence Management. For many years Swedish higher education policy has been guided by an ambition that **around 50% of each age cohort should begin higher education before age 25**. For younger adults (25–34), the result is around 50–55% with a completed tertiary education. With half of the population attending HEI most of them will continue to the work market meaning that employability is important. The process of university research and its contribution to competitive products through research is also interesting, but this has

been left for future research. Focus here is on understanding, defining and measuring the process of providing competence, see Figure 2.

This means that the unit of study goes from focus on the national knowledge and competence management to providing competence at the level of a university. The World Happiness Report and Human Development indices are clearly correlated with GNP/capita^[3]. The focus on happy and responsible citizens seems to relate to competence for value adding. This indicates that standard economic indicators form part of measuring the success of citizen competence. In Sweden universities play a main role for both assuring citizen knowledge and for providing competence with university education and university research. In Figure 2 the PBSM model has been used to focus on universities for the process of providing national competence. At this more detailed level we can compare current university mission with a mission derived from national needs for education and research. We can also study how universities measure success and what targets they have compared with what is of interest for competence management.

4.2. Defining-Diagnosing for the process of sustainable competence management

Defining-Diagnosing is here described as proposing a definition for the process and then converting this definition into a proposed indicator with a proposed target. The scope has been narrowed from the needs of national competence management to study how competence management ideally should be done in Higher Education Institutions HEI based on national sustainable competence needs. HEIs includes universities, university colleges, institutes of technology, colleges, and other institutions providing tertiary education. The logic of Business Process Reengineering is used – How would we provide relevant competence for the sustainable nation when starting with a clean slate. With the definition and the proposed KPI we can define the WHAT and to measure the current university performance in Measuring-Diagnosing.

The proposed working definition for sustainable competence management is:

“At least providing decent and sustainable employment over time based on individual prerequisites.”

In the ideal case we would have fulfilment of the Japanese IKIGAI model. The model is a framework for identifying a meaningful and fulfilling purpose in life. It suggests that purpose emerges at the intersection of four dimensions: what you love, what you are good at, what the world needs, and what you

can be rewarded for. When these dimensions are aligned, individuals are more likely to experience meaning, motivation, satisfaction, and long-term well-being. The national challenge is to make full use of everybody while individuals want a happy life. Employability is important both at individual and national level. Work should also be satisfying, and students should be using and further developing the competence they have learnt. Based on the needs of lifelong learning HEIs should provide “after education services” assuring continuous required competence. This leads to five proposed indicators, which could, as an example be measured 6 and 24 months after graduation. These intervals are deemed reasonable for having the knowledge to answer the questions. Doing two measurements will also enable monitoring development of performance with focus on work satisfaction, salary and competence development:

- Rate of employment
- Work satisfaction
- Salary in relative terms (decent work means salary at least over the relative poverty rate, which is defined as the proportion of the population living in households with an equivalised disposable income below 60% of the national median disposable income)
- Education relevance
- Competence development

This implies good Alumni-management, which requires some time and effort, but which also provides important feedback to educational content – to what extent is the HEI doing the right thing?

4.3. Measuring-Diagnosing for the process of sustainable competence management

In Measuring–Diagnosing we want to understand both what the current performance level is compared to the target and how change is taking place. This is done by viewing each y-value, KPI, in terms of average (y), variation (s_y), direction of change (dy/dt) and a prediction based on the extrapolation of the trajectory and finally a prediction (y') based on the change ability in the actual VUCA context in relation to the organisational change ability.

- V – Volatility: The rate and magnitude of change. How fast are competence requirements and educational possibilities changing?
- U – Uncertainty: Lack of predictability about future events. Can we predict what will happen with competence needs?

- C – Complexity: Many interconnected factors and cause-effect relationships. How many interacting variables must be managed such as fields of competence, educator competence, organisational inertia, unclear missions?
- A – Ambiguity: Situations where information can be interpreted in different ways. Do we understand what the available information means and do we measure what matters?

The assessment based on Figure 3 can be used to detect the gap between the competence requirements of a sustainable society and the current delivery by HEIs. This becomes the result of Diagnosing when using the proposed five indicators. The level of education relevance is particularly important. Low education relevance relative to its target level indicates opportunities and threats. Opportunities for all HEIs including new entrants and threats for incumbents with a low change ability. A low change ability in combination with a low performance indicate an increased pressure for disruptive change.

M-D should include an indication of the current performance. This is left for future research. However, the anecdotally based observation is that the gap between the benchmark process for providing competence and the typical Swedish university process is significant while change ability is low.

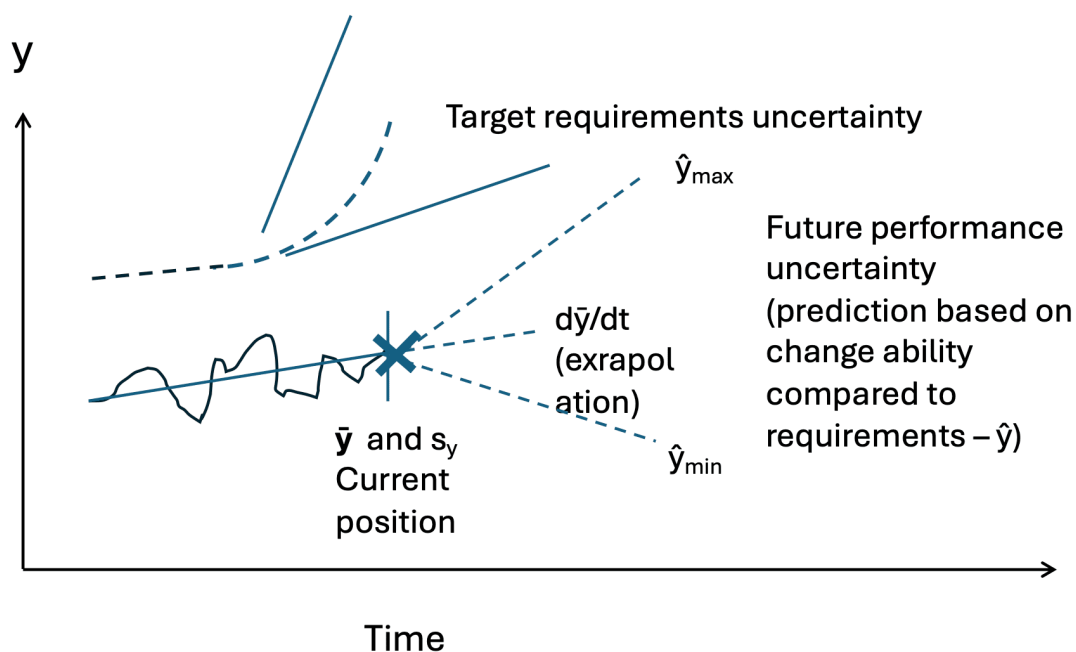


Figure 3. Proposed assessment of critical y:s as a vector consisting of the four parameters average ($\bar{y}$), variation (s_y), prediction based on extrapolation ($d\bar{y}/dt$) and prediction based on an assessment of the organisational change ability ($\hat{y}$).

4.4. Understanding-Analysing Swedish university competence management

Understanding-Analysing (U-A) is about identifying the main independent variable x-es affecting the chosen dependant y-variables. **Change ability is important since the pressure for change might increase increasing the risk of disruptive change.** Just as the Swedish Church gradually lost its exclusive authority over faith, universities may lose their traditional authority over knowledge and competence. Their future relevance may depend less on controlling access to information and more on enabling citizens to critically evaluate, apply, and create knowledge and competence in collaboration with AI, see Table 1.

It is important to remember that focus is on the sustainable society and how to support it. Disruptive innovation explains how incumbents can be displaced even while improving the products and services valued by their established stakeholders^[17] (Christensen & Eyring, 2011). Disruption generally begins when a new actor offers a simpler, cheaper or more accessible solution to users who are over-served, excluded or poorly served by the incumbent model.

Why do systems drift further from what should be their purpose? The common saying is that systems do not understand themselves. Parkinson^[10] proposed that work expands to fill the time available and that administrative staffing can grow independently of the substantive work performed. Why does this happen? Should, highly educated people in universities not see what is happening.

Dimension	Church of Sweden (Historical)	Universities Today	Possible AI Future
Core mission	Develop faith and moral values	Develop knowledge and competence	Develop human capability to work effectively with AI
Primary authority	Religious truth	Scientific knowledge and academic competence	Shared between universities, AI systems, industry, and society
Source of authority	Scripture and theology	Research and peer review	Research, AI, collective intelligence, and real-world evidence
Access to knowledge	Priests as intermediaries	Professors and teachers as intermediaries	AI provides direct access to explanations and learning
Learning model	Sermons and catechism	Lectures, seminars, laboratories	Personalised, AI-supported, lifelong learning
Assessment	Confirmation and religious practice	Degrees and examinations	Continuous demonstration of competence and performance
Credential	Church membership and confirmation	Degrees and certificates	Micro-credentials, portfolios, demonstrated competence
Information monopoly	Dominant interpreter of religious knowledge	Dominant certifier of scientific knowledge and competence	Authority increasingly distributed among multiple actors
Challenge to authority	Enlightenment, secularisation, science	Generative AI, open knowledge, industry learning platforms	Universities must redefine their unique value
Role in society	Central national institution	Central knowledge institution	One of several competence providers within a broader ecosystem
Risk if unchanged	Became socially marginal	May lose relevance as the default gateway to knowledge and certification	Risk of becoming primarily credentialing or bureaucratic institutions

Dimension	Church of Sweden (Historical)	Universities Today	Possible AI Future
Opportunity	Continued role in ethics, community, and culture	Focus on critical thinking, research, ethics, interdisciplinary problem solving, and validating AI-generated knowledge	Become orchestrators of lifelong national knowledge and competence management

Table 1. The Church and the University – disruptive change? Table prepared in cooperation with ChatGPT 5.6.

Alvesson and Spicer^[9] define functional stupidity as an organisationally supported absence of reflexivity, substantive reasoning and justification and as something which universities are struggling with. In addition, John Kotter highlights the role of complacency, which relies on past success, favourable internal comparisons and the absence of an immediate crisis. There is no acute threat to Swedish universities. Universities of today could be characterised as bureaucracies possibly with more focus on doing the thing right than doing the right thing and with a low change ability.

We could study causes for the presumed low relevance by studying three indicators:

- Current relevance – y (only qualitative assessments in Diagnosing)
- Level of understanding current relevance (understanding of y , s_y , $d\hat{y}/dt$ and $\hat{y}$).
- Change ability (part of $\hat{y}$)

In U-A we can use the 10M checklist to identify main Ms to focus on. Mission could be the critical thing to view. The Mission presumably controls what is Measured and thus assessing Measurement maturity could be a way to understand Mission relevance. Goodhart’s observation of that when a measure becomes a target, it tends to cease to be a good measure, could be operationalised as part of assessing measurement maturity.

Change ability depends on the will to change and the perceived urgency. The anecdotal reference from a Swedish university administrator gives a glimpse of what could be a worst case. This came as response to a direct question from the author on adapting to societal needs: “Author, universities teach what researchers research and researchers decide what they research”. This is the ultimate inside out approach based on the belief that knowledge is best created by letting researchers think freely. Instead of focusing

on system needs, focus is on internal ideas of research. A problem is that research of today often is driven by qualification and publication needs not by the search of knowledge. The agile process for acquiring competence requires methods for rapid change of content and pedagogy. Current Method for changing education could be analysed as a proxy for change ability.

4.5. Measuring-Analysing

Based on the first iteration of Understanding-Analysing we could focus on University Mission, Measurement and Method. We could compare Mission statements directly with the proposed sustainability definition for providing nationally needed competence. The Mission presumably controls what is Measured and thus assessing Measurement maturity could be a way to understand Mission relevance. The Measurement benchmark would include indicators proposed under Defining-Diagnosing and Measuring-Diagnosing.

Concerning Method, the actual rate of change and change ability could be studied based on university methods for change of course syllabi, change of programs and how the good the current methods are to identify changing competence needs.

4.6. Understanding-Solving

Some ideas on how to improve agility could be based on Sweden's **Higher Vocational Education (YH)**. YH illustrates an institutional model designed for relatively rapid responses to changing competence needs. YH programmes are developed in response to demonstrated labour-market demand and delivered in close cooperation with employers and industry, frequently including substantial workplace-based learning. This creates a shorter feedback loop between employers identifying a competence gap and education providers developing employable competence^[20]. YH should not necessarily be viewed as a replacement for universities. Universities have broader missions encompassing scientific knowledge, critical inquiry, research, advanced professional education, and long-term competence development. However, YH demonstrates that universities are not the only possible providers of post-secondary learning. For clearly defined and rapidly changing occupational needs, employer-linked vocational education, short courses, micro credentials, workplace learning, and AI-supported individual learning may sometimes respond more quickly than conventional degree programmes. From a national perspective, the relevant question is therefore not which institution should retain responsibility, but

which combination of providers can develop the required knowledge and competence with sufficient quality, accessibility, and speed.

AI may further strengthen this alternative model by helping providers develop and update learning content, diagnose individual knowledge gaps, personalise learning paths, and provide continuous support during workplace-based projects. A future national system could combine the labour-market responsiveness of YH, the scientific and critical foundations of universities, the practical knowledge of employers, and the accessibility of AI-supported learning. This would also increase competitive pressure on universities: if other providers can supply relevant and recognised competence more quickly, flexibly, and affordably, universities will need to demonstrate where their distinctive contribution creates greater societal value.

5. Analysis

The purpose of this paper is to explore how sustainable national learning can be understood in turbulent times and to examine critically opportunities and threats for universities. The purpose is supported by three research questions.

5.1. RQ1: How could we understand, define and measure the perfect processes for sustainable national learning?

Knowledge and competence management are separated as two different processes with different missions – supporting sustainable citizens and providing them with sustainable competence.

National knowledge management concerns the ability to make factually based decisions anchored in national values to support democratic decisions for a sustainable society.

National competence management is about creating the skills and knowledge needed for decent work.

The proposed definition for national knowledge management is:

“The national process that continuously aligns society’s collective knowledge with the knowledge required to achieve its mission. It identifies what citizens need to know, ensures that reliable knowledge is created and validated, enables its dissemination and continually adapts this knowledge base as societal conditions change.”

The work then focused on competence management and how this could be understood at the level of HEIs.

The proposed definition for competence management is:

“At least providing decent and sustainable employment over time based on individual prerequisites”

Five indicators, which could be measured 6 and 24 months after graduation are proposed at the level of the HEI:

- Rate of employment
- Work satisfaction
- Salary in relative terms
- Education relevance
- Competence development

Critical y-values should all be presented with y:s as a vector consisting of the four parameters average ($\bar{y}$), variation (s_y), prediction based on extrapolation ($d\bar{y}/dt$) and prediction based on an assessment of the organisational change ability ($\hat{y}$), see Figure 3.

The actual diagnosing of the current level has not been done. Education relevance is identified as a critical indicator, which indicates the probability of disruptive change.

5.2. RQ2: How could we understand the main organisational causes for the identified opportunities and threats in HEI processes for providing national competence?

The Understanding starts at the complex level of system change where the possibility is presented that Swedish Universities might experience the same faith as the Swedish church and be subjected to a major disruption, see Table 1. This is supported by explanations provided in Parkinson's Law, the functional stupidity of Alvesson & Spicer, and John Kotter's complacency.

It has not been possible to correctly assess the current relevance of contemporary Swedish HEI education. We have assumed that there could be a gap between competence needs and provided competence. We have reasoned what needs to be measured in the HEI to indicate causes for exiting opportunities and threats.

We could study causes for the presumed low relevance by studying three indicators:

- Current relevance (y) by studying HEI Mission maturity by comparing espoused university mission with our proposed definition
- Level of understanding current relevance (understanding of y , s_y , $d\bar{y}/dt$ and $\hat{y}$) **by studying the Measurement system Maturity. A low Measurement maturity correlates with a low Mission maturity. Support from** Goodhart's observation of that when a measure becomes a target, it tends to cease to be a good measure.
- Change ability – by studying Method for changing e.g. course and program syllabi and methods for updating educational content

We have only done the parts of Understanding-Analysing and leave Defining-Analysing and Measuring-Analysing as well as all Solving for later.

5.3. RQ3: How is the overall opportunity for national learning using the SOS of Diagnosing, Analysing and Solving?

Starting with the system needs of the sustainable country, helps understanding the needs of knowledge and competence, seeing them as two interconnected but separate needs. This enables proposing needs-based definitions for an ideal process using the Business Process Reengineering logic of the clean slate. Using the proposed definitions and indicators provides a base for assessing the current situation compared to the ideal one. Focus here is on the national process of providing competence and its application in universities. Diagnosing the potential has not yet been done properly but is left for later research. Despite the lack of reliable facts, the qualitative understanding already signals significant opportunities and threats, including the possibility of major disruption.

Analysing has only been started for the parts of Understanding-Analysing and Measuring-Analysing. In U-A different models have been used to justify the working hypotheses of possible major disruption. Measuring - Analysing is proposed to start with assessing the maturity of Mission, Measurement and Method. The indication is that all could have a low maturity meaning both low performance, poor understanding of the situation and lack of change ability.

Solving has not been worked with. We have mentioned that **Higher Vocational Education is needs focused and might play a larger role in providing competence.** Knowledge management for future national development could be something for the 5-10% of the best brains, maybe not for 50% of the

population. In Sweden the ratio between university students and Higher Vocational Education students is about 4:1. National needs might reverse these figures.

6. Discussion

The paper covers a lot of ground and is mainly conceptual. Work has been done in discussions between researchers but also in discussions with ChatGPT 5-6, which has helped in broadening perspectives, finding evidence and organising an iterative process. This seems to be against rules in some universities and in many journals. This raises a broader question about the purpose of research. Has modern academia gradually shifted its emphasis from *thinking rightly* to *doing research correctly*? The rapid growth in the number of PhD graduates, journals, publication requirements, and evaluation systems may partly reflect genuine scientific progress, but it may also illustrate Parkinson's^[10] observation that institutions tend to expand their activities regardless of whether they improve their core purpose or not. If so, the proliferation of research outputs risks becoming an end rather than a means of advancing knowledge. A parallel can be drawn with Classical Athens. The philosophers, exemplified by Socrates, Plato, and Aristotle, regarded the pursuit of truth as the ultimate objective. Knowledge was valuable because it brought human understanding closer to reality. The Sophists, in contrast, were renowned for teaching rhetoric, persuasion, and argumentation. Their success depended less on discovering truth than on convincing an audience. Socrates repeatedly criticised the Sophists for valuing persuasive reasoning over genuine understanding. Although the comparison is imperfect, it raises an important question for contemporary academia. To what extent have universities and scholarly publishing become increasingly occupied with demonstrating methodological correctness, complying with institutional procedures, and producing publishable outputs, while devoting comparatively less attention to questioning assumptions, synthesising knowledge across disciplines, and seeking fundamental understanding? In the age of artificial intelligence, where information and even technically competent research can increasingly be generated automatically, the distinctive contribution of universities may once again lie less in mastering established methods than in asking the right questions and pursuing the truth. We propose the idea of a generic law which is applicable to several systems such as:

- The church
- The Eastman Kodak Company
- Nokia Corporation
- The Roman Empire

- Universities
- Individuals
- Nations

Good to Gone Law

Every successful system tends to accumulate structures, routines and controls that improve short-term stability but gradually reduce adaptive capability. When environmental change exceeds the system's agility, performance deteriorates and disruptive change becomes increasingly likely.

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