PROJECT ABSTRACT

CONTENTS

A DYNAMIC INTERPLAY OF SPACE AND LEARNING

The contemporary educational sphere faces a multifaceted challenge, particularly evident in urban centers like The Hague, the Netherlands' administrative and political heart. This challenge is rooted in the disconnect between key societal sectors that could benefit from close collaboration. The resulting gap in synchronizing academic pursuits with the rapidly evolving demands of politics and industry. For instance, in a lecture at the Harvard Graduate School of Design, Richard Sennett discussed the concept of "The Open City," highlighting how modern cities often work in ways that restrict opportunities and segregate people, contrary to the ideal of cities as places for political innovation and deepening experiences. (Harvard GSD, 2017) This lack of consistent, collaborative engagement represents a missed opportunity for deeper integration and responsiveness in educational models. This disconnect not only hinders the responsiveness of education to real-world needs but also limits the engagement between politics and the public, often resulting in increased activism and protests rather than constructive dialogue and solutions. An example was the climate activism on the A12 highway in Janurary 2023 by Extinction Rebellion (Times, 2023b). Further exacerbating this issue is the need for university education to keep pace with new developments in politics and industry, a task made difficult by the existing separations. The solution proposed in this research seeks to bridge these divides by proposing a new university campus in The Hague that acts as a dynamic forum.

Fig. 1 Extinction Rebellion activists block the Utrechtsebaan of the A12 highway.
Source: Extinction Rebellion

This approach draws from Richard Sennett's concept of dynamic public spaces and Christopher Alexander's vision of universities as marketplaces of ideas. "Concentrated, cloistered universities, with closed admission policies and rigid procedures which dictate who mayteach a course, kill opportunities for learning." (Alexander et al. (1977) By reimagining university campuses as vibrant intersections where education, politics, industry, and public life converge, the proposed model aims to create a more integrated and responsive educational environment. This aligns with the call for a diverse mix of learning methods that emphasise more on active, collaborative and problem/ project based approach to create an effective learning atmosphere. (Kermanshachi et al., 2018)

The benefit of this transformation facilitates faster education adaptation, ensuring that academic programs are immediately relevant and responsive to current industry and political shifts. Secondly, it fosters direct discourse between politics and the public within an educational setting, increasing political participationand legislation that is more aligned with people's interests. Lastly, by positioning universities as central to the problem-solving network and serving as guides and mediators, they become active participants in addressing societal challenges. This role enhances their function beyond traditional educational boundaries. This approach promises a more interconnected and dynamic educational landscape, better equipped to prepare students for the complexities and realities of the modern world.

The notion of fostering direct discourse between politics and the public within an educational setting aligns with the understanding that universities can significantly contribute to societal challenges by collaborating meaningfully with local communities and organizations. This collaboration is not only about imparting education but also about listening to and being guided by community needs, as emphasized by Times Higher Education. ("How Universities Can Build Meaningful Collaborations to Solve Societal Challenges," 2021)

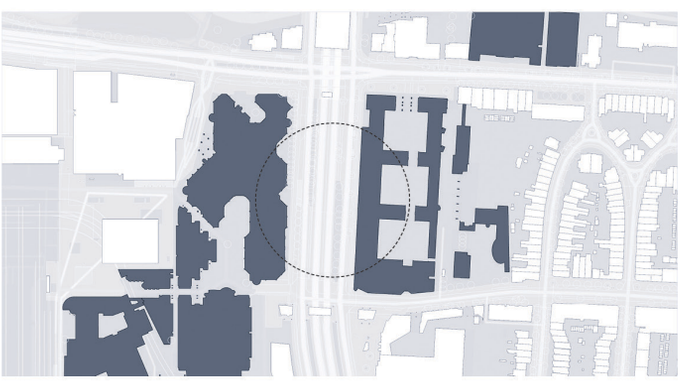

Fig. 2 Governmental and educational institutions (dark grey). The center of the Extinction rebellion protests (circle).
Source: Author

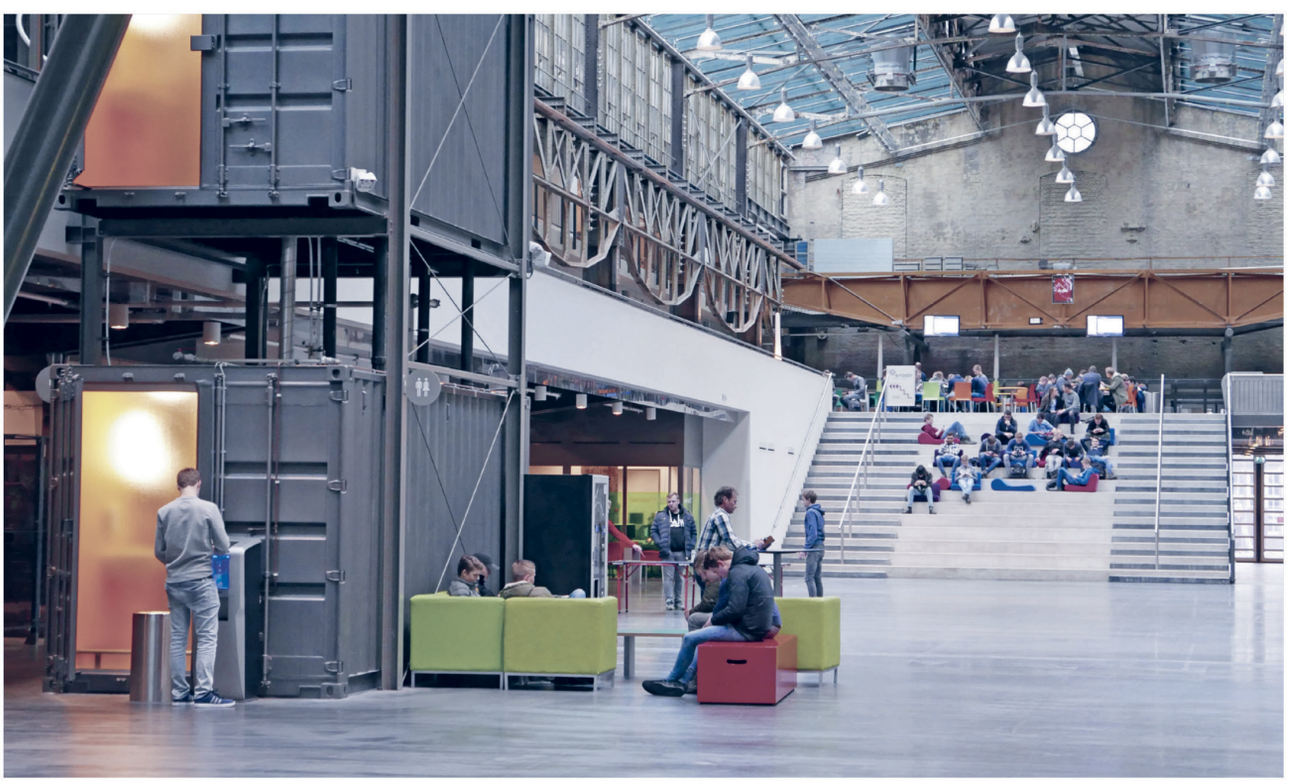

Fig. 3 Regional Training Center ROC van Twente in Hengelo (NL): Central Entrance Hall as a Meeting and Assembly Space, also for the Neighborhood. Architecture by IAA
Source: Schulbauten: Räume zum Lernen und für die Gemeinschaft," Sandra Hofmeister (editor), DETAIL, 2020.

A UNIVERSITY THAT STAYS RELEVANT.

The evolving landscape of education underscores the importance of integrating contemporary and modern learning methods into the spatial and programmatic design of university campuses. The physical design has the key potential to enhance learning experiences and enable networking. Flexible, technology-integrated spaces are proposed to foster environments conducive to active learning, collaboration, and innovation.

As traditional educational approaches become increasingly insufficient in today's digital age, universities can transform into dynamic spaces for interactive learning experiences. With research materials, tutorials, and general knowledge conveniently accessible online, covering more topics than any single university can offer. The role of technology in learning has been greatly emphasized, especially with the advent of tools like augmented reality/virtual reality (AR/VR), AI adaptive course delivery, machine learning–powered teaching assistants, and tools for student progress monitoring. With technologies that enable connectivity and community building, such as virtual study groups and social media–inspired discussion platforms, experiencing the most significant uptick in use. (How Technology Is Shaping Learning in Higher Education, 2022) The shift to more interactive and diverse learning models is expected to continue, further blurring the lines between traditional physical and digital learning environments.

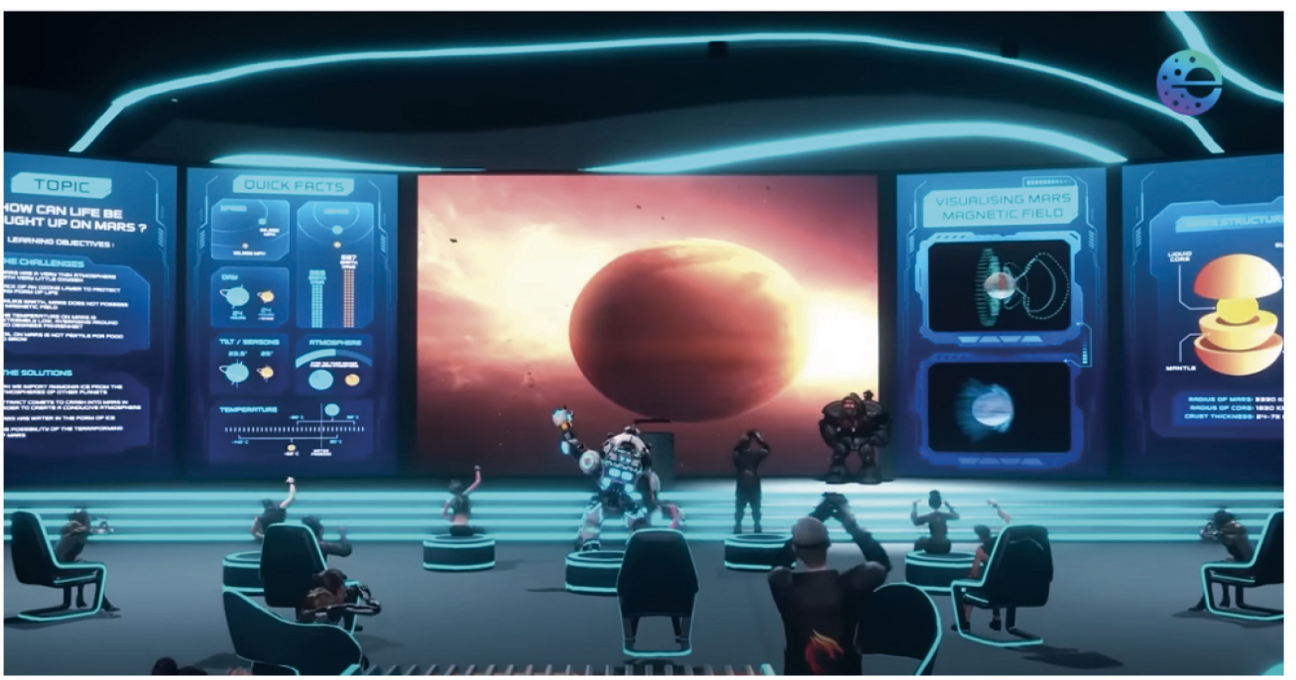

Fig. 4 Metaverse Virtual Classroom
Source: edverse.com

A university can remain relevant by expanding its role as a platform and open forum rooted in the direct context of the city. Ideas can meet opportunities, and discourse can lead to change. This concept aligns with Jürgen Habermas's theory of communicative action, emphasizing the role of dialogue and rational discourse in creating understanding and knowledge in public spaces. Habermas proposes "communicative action" to transmit and renew cultural knowledge, facilitating mutual understandings and coordinated actions. (Baxter, 2011) By fostering an environment where communication is central, universities can become arenas for the exchange of diverse perspectives, echoing the performative school's emphasis on cultural expression and interaction in public spaces.

Furthermore, the COVID-19 pandemic has accelerated the implementation of digital learning, which in some ways diminished the significance of the physical space of a university. However, it also highlighted the importance of developing soft skills in a society with reduced face-to-face interaction. The emphasis on communicative action and cultural interplay in university spaces, inspired by Habermas and the performative school, can help counteract these challenges. Universities are encouraged to leverage physical spaces for more effective teaching methods, transitioning towards environments that facilitate interaction, collaborative learning, and the rich cultural expression central to a thriving, communicative public sphere.

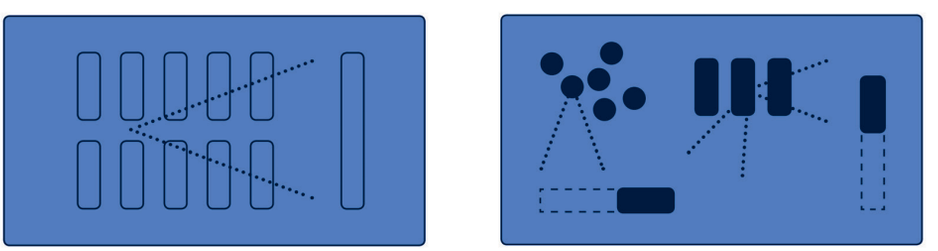

Fig. 5 Space multiplicity: from stage-determined auditorium with aura of festivity, to a versatile assembly and marketplace.
Source: Schulbauten: Räume zum Lernen und für die Gemeinschaft," Sandra Hofmeister (editor), DETAIL, 2020.

RESEARCH QUESTION

"How can the new university campus in The Hague be designed to function as a dynamic, interdisciplinary forum that integrates the city's unique political, educational, and cultural dynamics, thereby fostering an environment conducive to the practical application of ideas, collaborative learning, and real-world opportunities?"

Emphasizing the significance of designing a university campus that not only serves academic purposes but also acts as a dynamic, interdisciplinary forum. The unique position of The Hague, a city with rich political, educational, and cultural landscapes can be leveraged in campus design.

The design will explore the potential of the university campus to go beyond traditional educational boundaries, and will address how architectural and programmatic designs can be merged with the city's dynamics to create a holistic educational environment.

43 UNIVERSITY AS A MARKETPLACE

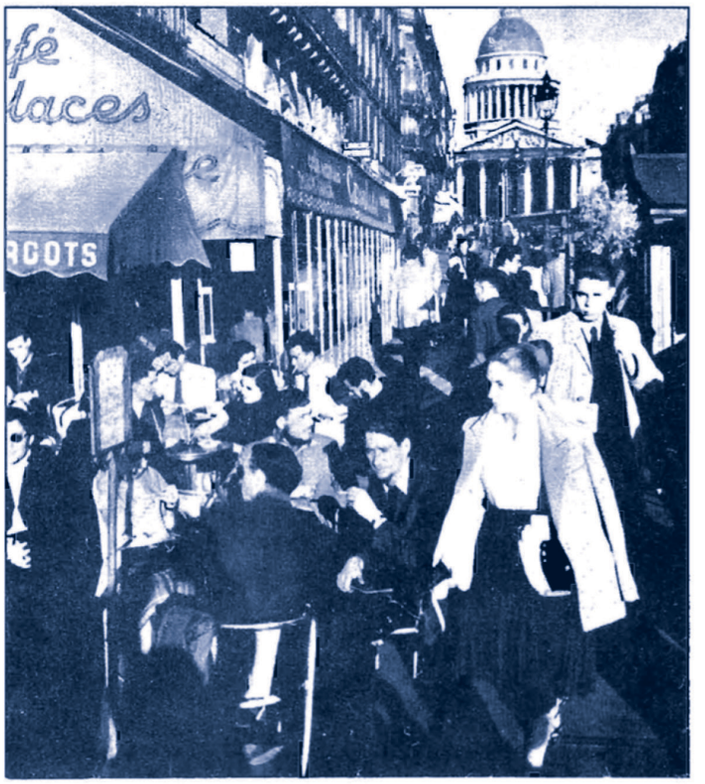

Fig. 6 University as a Marketplace
Source: Christopher Alexander et al., "A Pattern Language" (1977)

INTEGRATED APPROACH FOR UNIVERSITY CAMPUS DESIGN AND EDUCATIONAL METHODS

This chapter outlines the methodologies used to address the research question. The approach includes:

1. Literature Review: A comprehensive analysis of dynamic, interdisciplinary educational models is conducted, focusing on the essential graduate skills needed for current and future professional landscapes. The review also encompasses the integration of The Hague's political, educational, and cultural elements into campus design, exploring a variety of educational methods and identifying the most effective teaching strategies to foster these skills.

2. Interviews: Qualitative insights will be obtained through discussions with a diverse group of stakeholders, including educators, industry professionals, general students, and specifically experts in politics, education, and culture from The Hague. The purpose of these interviews is to understand the vision for an integrated campus and to collect viewpoints on skill development, effective learning methods, and the assimilation of the city's dynamics into campus design.

3. Evaluation of Educational Methods and Campus Design: The efficacy of various teaching methods and campus designs will be appraised, particularly focusing on those that promote practical application, collaboration, and real-world engagement within the university forum. This analysis will determine the most beneficial methods and designs for skill development and for creating a dynamic, interdisciplinary learning environment.

The findings from this methodology will lay the foundation for proposing spatial and programmatic configurations for the new university campus. These proposals will be in line with contemporary educational needs and the unique context of The Hague, with the goal of creating an environment that supports the development of relevant skills and encourages practical, collaborative learning experiences.

LITERATURE, LEARNING METHODS AND CASE STUDIES

In this research, I investigate the application of design principles from Christopher Alexander's 'A Pattern Language' and insights from Richard Sennett's essay 'The Public Realm' to conceptualize a university that is a forum-like public space. These works provide foundational insights into the architectural and social characteristics essential for an effective learning environment, as further explored in this study.

The study examines various learning and collaborative approaches that have been effectively implemented in contemporary educational spaces. These approaches align with the essential characteristics of a university, as proposed in 'A Pattern Language' and Sennett's work, particularly tailored to the context of a university in The Hague. This investigation includes an evaluation of these methods based on their effectiveness in fostering the necessary skill set in university graduates, as detailed in the appendix.

List of learning methods and their spatial implications and case studies that i will further investigate:

1. Learning Theories:
   a. Constructivism (spatial example: Fig. 5):
      Flexible learning spaces that allow for hands-on exploration and collaborative problem-solving.
      Informal gathering areas for group discussions and knowledge construction.

   b. Experiential Learning Theory (Kolb) (spatial example: Fig. 6):
      Spaces for active experimentation and reflection, such as labs, studios, and reflection rooms.
      Easily reconfigurable spaces to accommodate different learning styles and stages of the learning cycle.

   c. Socio-Cultural Theory (Vygotsky) (spatial example: Fig. 7):
      Collaborative spaces that promote social interaction and peer learning.
      Spaces for mentoring and scaffolding, where students can work closely with instructors or peers.

2. Pedagogical Approaches (spatial example: Fig. 8):
   a. Action Learning:
      Collaborative project spaces where students can work on real-world problems.
      Presentation and discussion areas for sharing findings and insights.

   b. Apprenticeship Model (spatial example: Fig. 9):
      Workshop-style spaces for hands-on skill development.
      Mentorship zones where experienced practitioners can guide students.

   c. Critical Pedagogy (spatial example: Fig. 10):
      Flexible and inclusive learning environments that accommodate diverse perspectives and voices.
      Spaces for open dialogues, debates, and critical discussions.

   d. Inquiry-Based Learning (spatial example: Fig. 11):
      Research facilities and resource-rich libraries.
      Interactive spaces that encourage questioning, exploration, and experimentation.

e. Problem-Based Learning (spatial example: Fig. 12):
Collaborative project rooms with access to resources and technology.
Spaces for small-group discussions and problem-solving.

f. Project-Based Learning: (spatial example: Fig. 13)
Multi-purpose project areas with flexible furniture and ample storage for materials.
Presentation spaces for showcasing and defending project outcomes.

3. Innovation and Collaboration (spatial example: Fig. 14):
a. Design Thinking:
Creative and brainstorming spaces with whiteboards and idea-sharing tools.
Prototyping labs equipped with materials and tools for experimentation.

b. Industry-Academia Collaboration Models (spatial example: Fig. 15):
Meeting spaces for industry partners and students to collaborate.
Co-working spaces that bridge the gap between academia and the professional world.


Fig. 5

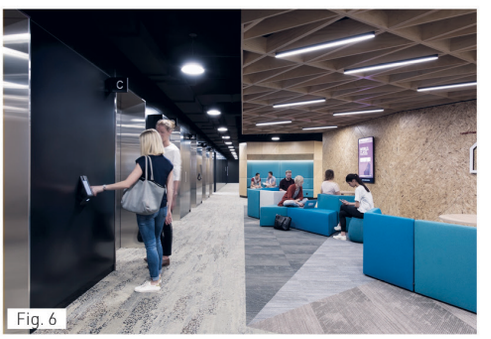
Fig. 6

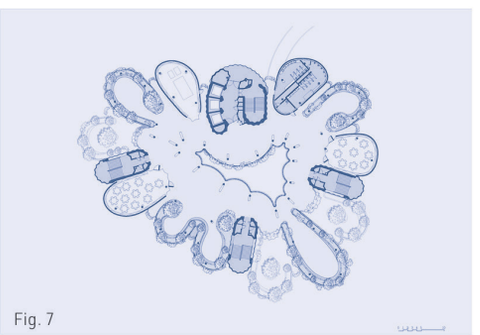
Fig. 7


Fig. 8


Fig. 9

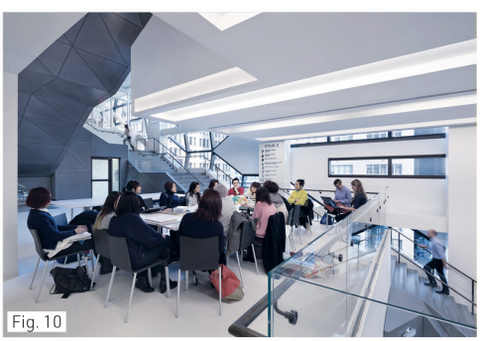
Fig. 10


Fig. 11


Fig. 12


Fig. 13


Fig. 14

Fig. 7 Ørestad Gymnasium in Copenhagen
Fig. 8 Western Sydney University's Parramatta City Campus
Fig. 9 Learning Hub at TU Nanyang, Singapore
Fig. 10 The Edge, University of Bath, UK
Fig. 11 Design Building at University of Massachusetts Amherst
Fig. 12 New School University Center in New York City
Fig. 13 The Francis Crick Institute in London, UK
Fig. 14 James H. Clark Center, Stanford University, USA
Fig. 15 Engineering 5 Building, University of Waterloo, Canada
Fig. 16 The d.school at Stanford University, USA
Fig. 17 Innovation Center, University of Sheffield, UK

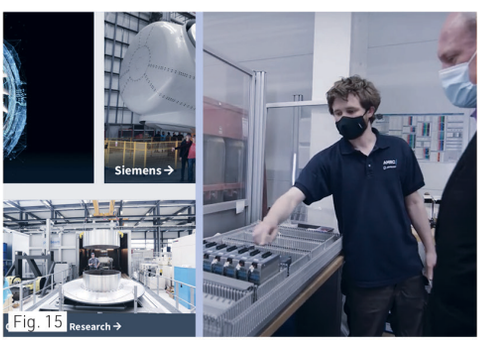

Fig. 15

Objective 1: Assessing The Hague's Educational Landscape

This objective focuses on thoroughly understanding the specific needs of The Hague's educational sector. It involves analyzing how the city's distinctive political and cultural backdrop influences the demands and expectations of students and the workforce. The study will explore the intersection of these needs with the capabilities of higher education in a digitally advanced society.

Objective 2: Design: Exchange Forum of Education, Public and Politics

The second objective concentrates on integrating effective and innovative educational methods to shape spatial designs tailored to The Hague's unique environment. This includes devising educational strategies that are not only theoretically sound but also practically applicable, ensuring they are well-suited to the city's dynamic socio-political context. The primary goal is to create learning spaces that are both intellectually stimulating and pragmatically relevant, fostering a bridge between academic knowledge and real-world application. The design will Investigate how educational environments can serve as platforms for community engagement and activism.

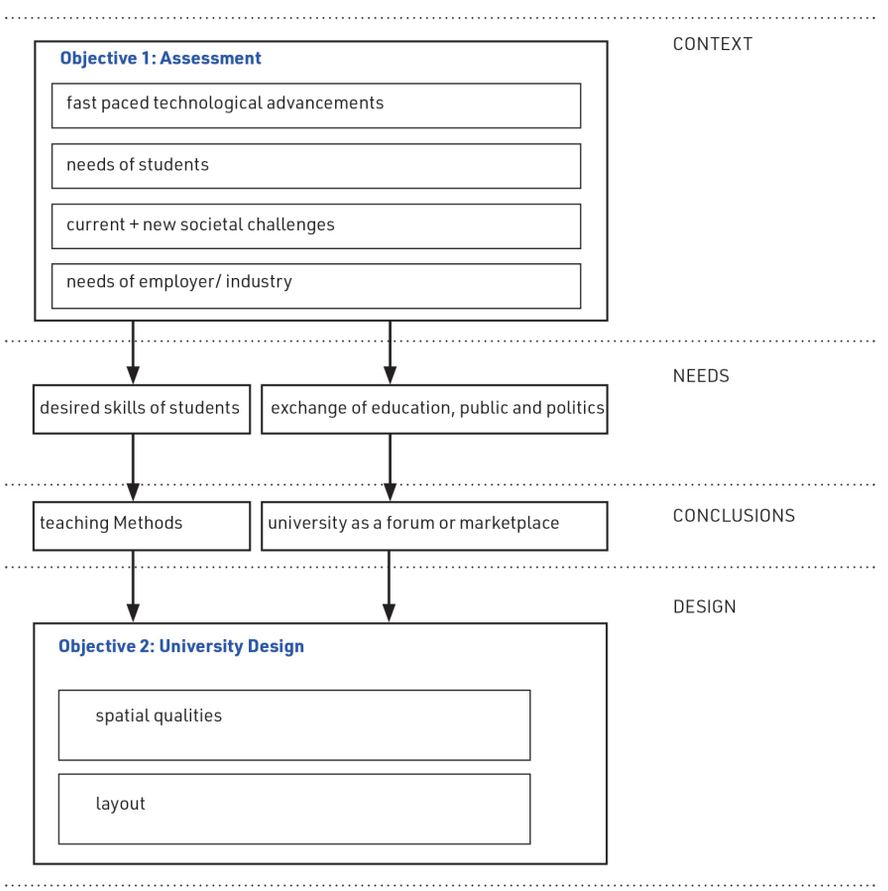

Fig. 18 Diagram: From Context to Design
Source: Author

1. Dynamic and Adaptable Learning Spaces: Emphasizes the creation of versatile, technology-integrated spaces that are adaptable and flexible, fostering active, collaborative learning. These spaces are designed to encourage interaction and cross-disciplinary collaboration, aligning with the demands of a digital society.

2. Bridging Theory with Real-World Application: Focuses on designing spaces that facilitate the practical application of academic concepts and the work with professionals from the industry, thereby bridging the gap between theoretical knowledge and real-world practices. This approach enhances students' preparedness for professional challenges.

3. Interdisciplinary Collaboration and Networking: Advocates for environments that foster collaboration across different fields of study and professions, reflecting the interconnected nature of modern challenges.

4. Cultural and Political Integration: Encourages the creation of spaces and opportunities for students, professionals, and the general public to engage with The Hague's distinct political and cultural elements. This integration allows for a deeper participation in political decision-making and cultural exchanges within the campus environment. This approach reflects The Hague's rich political and protest history, particularly in environmental activism. By providing a platform where community voices can converge and be heard, the campus stands as a potential answer to the public's call for action and involvement in political and ecological matters.

The research can serve as a potential catalyst for change and reflection within its urban environment, reshaping the way educational spaces are perceived and integrated into the fabric of modern cities.

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LSIT OF FIGURES

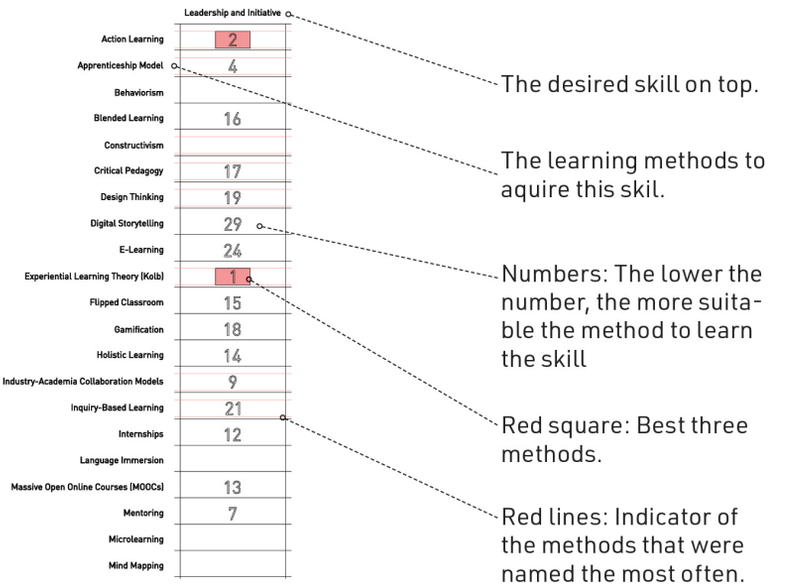
This is the evaluation of learning methods. The methods are considered effective for acquiring the desired, mentioned skills also seen in the table. These methods are aligned with the university that is imagined as a forum or "marketplace". Spatial arrangements can be drawn from architectural examples that follow these selected methods. The architecutral examples were mentioned in chapter "FRAMEWORK"

The evaluation:
1. Interviews with professionals in the field of education, specifically from the Work Research Institute (Arbeidsforskningsinstituttet AFI) of Oslo MET. 2. The number of mentions in online journals related to the specific skill. 3. Ratings according to large language models (LLMs) that utilize extensive databases of articles, publications, and scientific papers.

While each of these methods is prone to subjective error, when combined, it gives a broad overview and helped my understanding of the current state of contemporary educational methods.

	Critical Thinking	Problem-Solving	Communication Proficiency	Teamwork	Adaptability	Information Literacy	Creativity and Innovation	Digital Literacy	Global Awareness	Leadership and Initiative	Ethical Responsibility	Life-Long Learning	Emotional Intelligence
Action Learning	6	4	6	5	4	6	4	10	6	2	4	7	5
Apprenticeship Model	10	9	13	3	11	7	9	18	3	4	6	10	4
Behaviorism	22						28						29
Blended Learning	17	15	19	18	15	16	14	2	13	16	17	18	14
Constructivism	8		2					12			12	1	2
Critical Pedagogy	7	7	10	27	8	4	7	27	17	17	1	9	10
Design Thinking	5	1		14	6		1	20		19		4	
Digital Storytelling	28	21	29	26		22	19	6	26	29	25	28	26
E-Learning	21	18	20	20	17	15	16	1	14	24	18	17	20
Experiential Learning Theory (Kolb)	4	5	3	1	1	5	5	13	1	1	2	2	1
Flipped Classroom	24	17		23	14	19	26		18	15	23	21	13
Gamification		22	24	15	22	25	22	23	25	18	24	24	23
Holistic Learning	16	27		29	23	20	17	29	23	14	21	14	12
Industry-Academia Collaboration Models	23	10	15	11	13	11	12	19	4	9	7	11	16
Inquiry-Based Learning	3	6	9			1	6	15	27	21	13	8	9
Internships		14	17	13	12			25	9	12	15	13	18
Language Immersion	26		27	24	24	24	20		10		27	26	25
Massive Open Online Courses (MOOCs)	18	16	22	19	16	17	13	3	15	13	20	16	19
Mentoring	13		14	9		12			22	7	9	29	
Microlearning		29				28							28
Mind Mapping	27	28	28	25	27	23	21	28	28		29	27	27
Mindfulness Training					26	29	27			26	26		
Mobile Learning		20	23					5		27			
Montessori Method	25	25	12	16	25	21	24	26	24	25	28	25	24
Online Tutorials	19	19	21	21	19	14	15	4	19	28	19	19	21
Peer Coaching	12		8	10	29	13		22	21	8	10		6
Peer Learning	11		7	8	28		29	21	20	23			
Problem-Based Learning	1	3	4	6	2	2	2	8	16	5	3	5	7
Project-Based Learning	2	2	5	4	3	3	3	9	5	3	8	6	8
Service Learning	14	8	11	7	9	9	10	16	7	10	5	15	11
Simulated Environments	29	24	25	22	20	26	18	11	29	20	22	22	22
Socio-Cultural Theory (Vygotsky)	9	11	1	2	7	8	8	14	2	6	11	3	3
Traditional Classroom Learning	20	26	18	17	18	18	25	24	12	22	16	20	15
Virtual Reality (VR) Learning		23	26	23	21	27	23	7				23	
Work-Integrated Learning (WIL)	15	13	16	12	10	10	11	17	8	11	14	12	17

Fig. 19 Diagram 1: Evaluation of learning methods accroding to desired skills.
Source: Author



ractical Skills	Research Proficiency	Time Management	Resilience	Problem Identification	Cultural Competence	Public Speaking	Data Analysis	Technical Skills	Networking	Initiative	Project Management	Environmental Awareness	Conflict Resolution	Interdisciplinary Thinking
3	6	1	2	4	4	2	4	4	8	8	3	4	4	7
2	9		8	11	10	8	10	5	2	5	1	11		16
												23		
16	11	16	10	13	16	17	15	19	17	21	12	25	19	10
13	4	4	5	8	2	13	6	17	22	1	22	22	7	1
24	23	11	7	7	5	11	9	14	13	14	17	10	6	9
15	8			1			7		28	4	15	18		4
29	22	25	25	25	28			25			14	17	22	28
17	20	18	21	27	18	24	17	20	18	27	11	26	18	23
1	5	5	1	6	3	1	1	1	6	2	4	1	1	2
20	12	7	19	12	19	16	22	23	23	20			17	11
21	29	27	23	10	24	26	21	24	27	12	23	19	23	24
23	25	9	22	19	9	19	12		21	23	7	9	16	21
9	10	22	9	15	11	15	11	9	1	19	6	13	12	15
25	3	12	13	5	29	10	5	16	14	13	16	7	5	8
8	16		16	17	13	21	14	10	3	17	5	15	14	
27	24	23	27	23	21	28	28	26		29	28	20	26	
18	14	17	18	18	17	23	16	22	20	18	18	27	20	20
11		14	12	22	14	9	27	12	4	10		12	10	17
							25	29	26		26		28	
28	26	29	28	24	27	29		27	29		27		27	27
	28	10	29		26					24	29	24		29
22		26		26		25				22				
26		24			25			8					29	26
19	13	19	17	28		22	18	21	19	25	21	28	21	19
12	18	8	11	21	15	3	24	13	5	11	25	16	11	18
	16	28					23		25	9	24		9	12
5	1	2	3	2	7	5	2	2	10	6	19	2	2	5
4	2	3	4	3	6	4	3	3	7	7	2	3	3	6
10	27	13	14	20	8	12	26	15	15	15	8	6	15	13
6	21	20	24	14	22		20	6	9	26	13	5	24	25
14	7	15	6	9	1	14	8	18	11	3	20	21	8	3
	17		20		20	18	19	28	24	28	10	29		22
		21	26	29	23	27	29	7					25	
7	15		15	16	12	20	13	11	16	16	9	14	13	14

Fig. 20 Diagram 2 (upper right corner): How to read the table.
Source: Author

	Critical Thinking	Problem-Solving	Communication Proficiency	Teamwork	Adaptability	Information Literacy
Action Learning	6	4	6	5	4	6
Apprenticeship Model	10	9	13	3	11	7
Behaviorism	22					
Blended Learning	17	15	19	18	15	16
Constructivism	8		2			
Critical Pedagogy	7	7	10	27	8	4
Design Thinking	5	1		14	6	
Digital Storytelling	28	21	29	26		22
E-Learning	21	18	20	20	17	15
Experiential Learning Theory (Kolb)	4	5	3	1	1	5
Flipped Classroom	24	17		28	14	19
Gamification		22	24	15	22	25
Holistic Learning	16	27		29	23	20
Industry-Academia Collaboration Models	23	10	15	11	13	11
Inquiry-Based Learning	3	6	9			1
Internships		14	17	13	12	
Language Immersion	26		27	24	24	24
Massive Open Online Courses (MOOCs)	18	16	22	19	16	17
Mentoring	13		14	9		12
Microlearning		29				28
Mind Mapping	27	28	28	25	27	23
Mindfulness Training					26	29
Mobile Learning		20	23			
Montessori Method	25	25	12	16	25	21
Online Tutorials	19	19	21	21	19	14
Peer Coaching	12		8	10	29	13
Peer Learning	11		7	8	28	
Problem-Based Learning	1	3	4	6	2	2
Project-Based Learning	2	2	5	4	3	3
Service Learning	14	8	11	7	9	9
Simulated Environments	29	24	25	22	20	26
Socio-Cultural Theory (Vygotsky)	9	11	1	2	7	8
Traditional Classroom Learning	20	26	18	17	18	18
Virtual Reality (VR) Learning		23	26	23	21	27
Work-Integrated Learning (WIL)	15	13	16	12	10	10

Creativity and Innovation	Digital Literacy	Global Awareness	Leadership and Initiative	Ethical Responsibility	Life-Long Learning	Emotional Intelligence	Practical Skills
4	10	6	2	4	7	5	3
9	18	3	4	6	10	4	2
28						29	
14	2	13	16	17	18	14	16
	12			12	1	2	13
7	27	17	17	1	9	10	24
1	20		19		4		15
19	6	26	29	25	28	26	29
16	1	14	24	18	17	20	17
5	13	1	1	2	2	1	1
26		18	15	23	21	13	20
22	23	25	18	24	24	23	21
17	29	23	14	21	14	12	23
12	19	4	9	7	11	16	9
6	15	27	21	13	8	9	25
	25	9	12	15	13	18	8
20		10		27	26	25	27
13	3	15	13	20	16	19	18
		22	7	9	29		11
						28	
21	28	28		29	27	27	28
27			26	26			
	5		27				22
24	26	24	25	28	25	24	26
15	4	19	28	19	19	21	19
	22	21	8	10		6	12
29	21	20	23				
2	8	16	5	3	5	7	5
3	9	5	3	8	6	8	4
10	16	7	10	5	15	11	10
18	11	29	20	22	22	22	6
8	14	2	6	11	3	3	14
25	24	12	22	16	20	15	
23	7				23		
11	17	8	11	14	12	17	7

	Research Proficiency	Time Management	Resilience	Problem Identification	Cultural Competence	Public Speaking
Action Learning	6	1	2	4	4	2
Apprenticeship Model	9	6	8	11	10	8
Behaviorism						
Blended Learning	11	16	10	13	16	17
Constructivism	4	4	5	8	2	13
Critical Pedagogy	23	11	7	7	5	11
Design Thinking	8			1		
Digital Storytelling	22	25	25	25	28	
E-Learning	20	18	21	27	18	24
Experiential Learning Theory (Kolb)	5	5	1	6	3	1
Flipped Classroom	12	7	19	12	19	16
Gamification	29	27	23	10	24	26
Holistic Learning	25	9	22	19	9	19
Industry-Academia Collaboration Models	10	22	9	15	11	15
Inquiry-Based Learning	3	12	13	5	29	10
Internships	16		16	17	13	21
Language Immersion	24	23	27	23	21	28
Massive Open Online Courses (MOOCs)	14	17	18	18	17	23
Mentoring		14	12	22	14	9
Microlearning						
Mind Mapping	26	29	28	24	27	29
Mindfulness Training	28	10	29		26	
Mobile Learning		26		26		25
Montessori Method		24			25	
Online Tutorials	13	19	17	28		22
Peer Coaching	19	8	11	21	15	3
Peer Learning	18	28				
Problem-Based Learning	1	2	3	2	7	5
Project-Based Learning	2	3	4	3	6	4
Service Learning	27	13	14	20	8	12
Simulated Environments	21	20	24	14	22	
Socio-Cultural Theory (Vygotsky)	7	15	6	9	1	14
Traditional Classroom Learning	17		20		20	18
Virtual Reality (VR) Learning		21	26	29	23	27
Work-Integrated Learning (WIL)	15		15	16	12	20

Data Analysis	Technical Skills	Networking	Initiative	Project Management	Environmental Awareness	Conflict Resolution	Interdisciplinary Thinking
4	4	8	8	3	4	4	7
10	5	2	5	1	11		16
					23		
15	19	17	21	12	25	19	10
6	17	22	1	22	22	7	1
9	14	13	14	17	10	6	9
7		28	4	15	18		4
	25			14	17	22	28
17	20	18	27	11	26	18	23
1	1	6	2	4	1	1	2
22	23	23	20			17	11
21	24	27	12	23	19	23	24
12		21	23	7	9	16	21
11	9	1	19	6	13	12	15
5	16	14	13	16	7	5	8
14	10	3	17	5	15	14	
28	26		29	28	20	26	
16	22	20	18	18	27	20	20
27	12	4	10		12	10	17
25	29	26		26		28	
	27	29		27		27	27
			24	29	24		29
			22				
	8					29	26
18	21	19	25	21	28	21	19
24	13	5	11	25	16	11	18
23		25	9	24		9	12
2	2	10	6	19	2	2	5
3	3	7	7	2	3	3	6
26	15	15	15	8	6	15	13
20	6	9	26	13	5	24	25
8	18	11	3	20	21	8	3
19	28	24	28	10	29		22
29	7					25	
13	11	16	16	9	14	13	14

The evaluation of the whole table: First it is counted, how many times the method is mentioned to aquire a skill. This lets us select more relevant methods. The diagram on the right shows a summary of the results of my research.

	Mentions	Average
Action Learning	28	4.75
Apprenticeship Model	27	7.81
Behaviorism	4	25.5
Blended Learning	28	15.39
Constructivism	21	8.76
Critical Pedagogy	28	11.82
Design Thinking	17	10
Digital Storytelling	23	23.7
E-Learning	28	18.79
Experiential Learning Theory (Kolb)	28	3
Flipped Classroom	24	18.29
Gamification	27	22.22
Holistic Learning	26	18.46
Industry-Academia Collaboration Models	28	12.07
Inquiry-Based Learning	26	11.5
Internships	23	13.78
Language Immersion	23	24.48
Massive Open Online Courses (MOOCs)	28	17.61
Mentoring	21	13.76
Microlearning	8	27.38
Mind Mapping	24	26.92
Mindfulness Training	13	25.62
Mobile Learning	9	21.78
Montessori Method	19	23.05
Online Tutorials	27	19.56
Peer Coaching	25	14.04
Peer Learning	16	18.44
Problem-Based Learning	28	4.89
Project-Based Learning	28	4.32
Service Learning	28	12.46
Simulated Environments	27	19.44
Socio-Cultural Theory (Vygotsky)	28	8.68
Traditional Classroom Learning	24	20.25
Virtual Reality (VR) Learning	16	22.5
Work-Integrated Learning (WIL)	27	13.22

Fig. 21 Diagram 3: Final Scoring
Source: Author

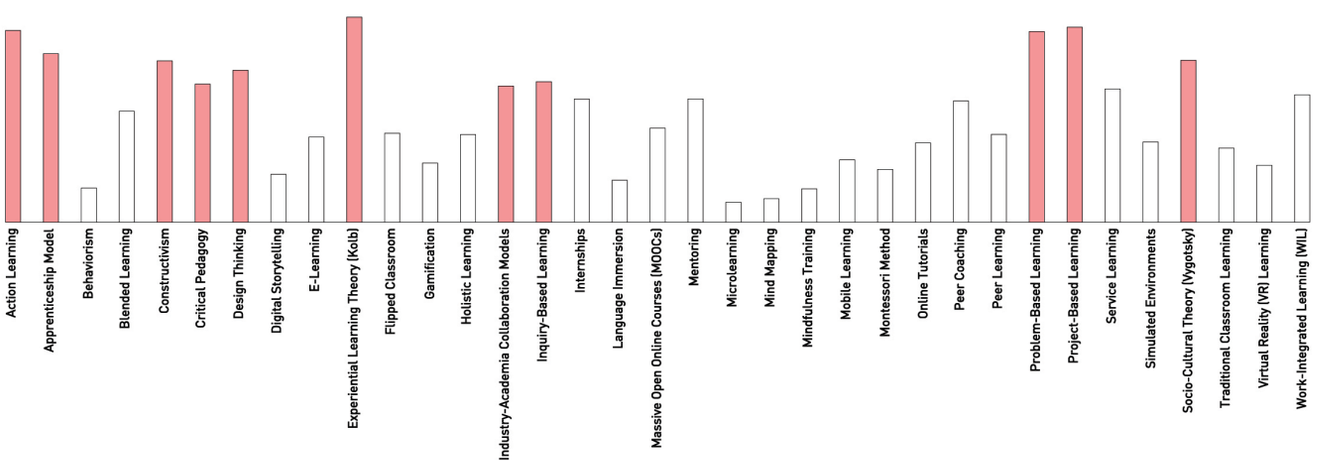


Fig. 22 Diagram 4: Learning method selection based on scoring results.
Source: Author