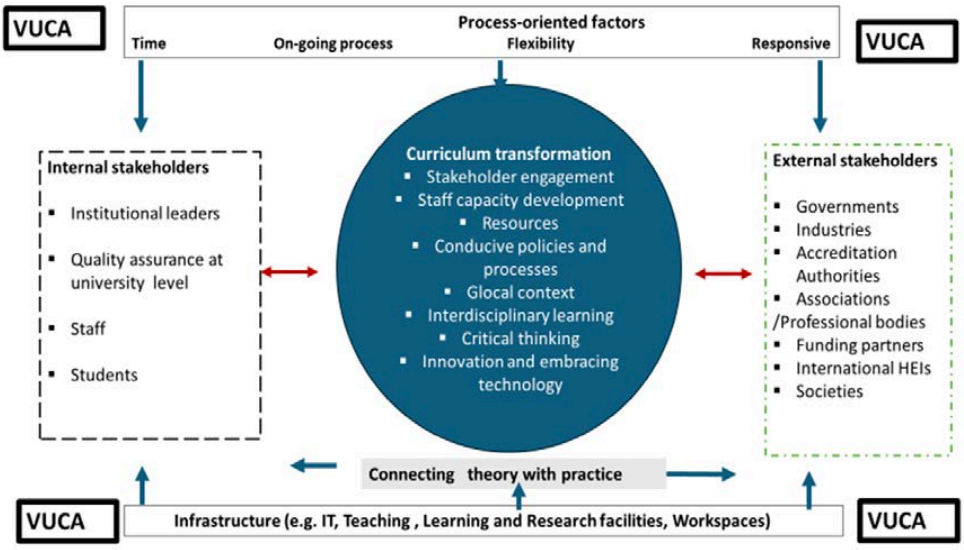
# DECART: Designing higher Education Curricula for Agility, Resilience & Transformation

## DECART WP3: Curriculum Transformation

## Deliverable D31

*version 1.0, March 2025*

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# Preface

DECART (Designing higher Education Curricula for Agility, Resilience & Transformation) is a cooperation partnership in higher education funded by Erasmus+. The aim of the project is to propose methods and tools to guide STEM & Management educational leaders in innovative curriculum design and program transformation in an effort to be more prepared for unpredictable VUCA contexts (volatile, uncertain, complex and ambiguous). The project facilitates the identification and sharing of innovative curricula among partners in the project as well as associated international participants, in essence to assess and improve interoperability and resilience of curricula. Over the course of three years (2022-2025), the project brings together four universities from Europe and two from South Africa and Asia.

This report (*Curriculum Transformation: Drivers and Challenges),* R31, summarizes the work done in the third phase of the project, i.e. on understanding curriculum transformation in Higher Educational Institutions (HEIs). This was mainly done by the UKZN WP3 team, Cecile Gerwel Proches, Macdonald Kanyangle and Angela James.

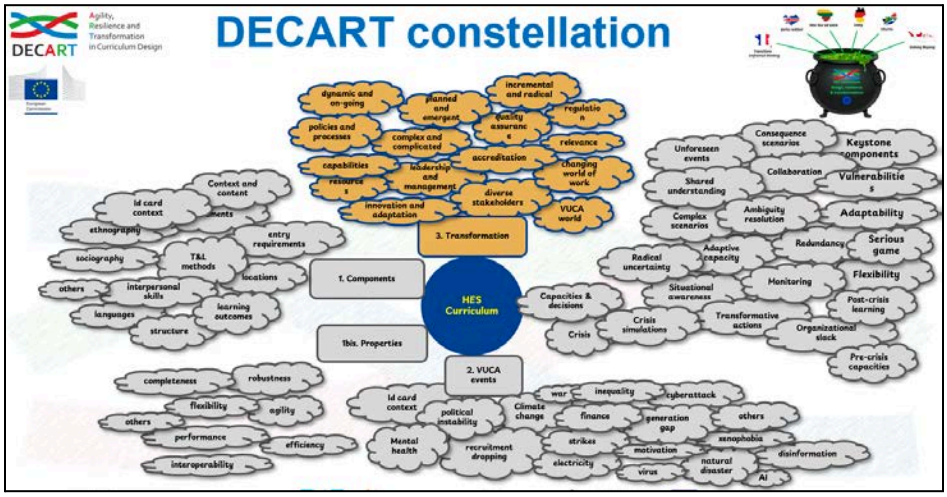


Figure A. The DECART components - here focusing on Curriculum Transformation

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Agility,
Resilience and
Transformation
in Curriculum Design



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    - Additional authors, collaborators and reviewers are listed at the end of this document, in the collaborators & acknowledgements section

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# Dissemination model

| | |
|---|---|
| **Type** | ☐ Teaching material<br>☒ **Learning material**<br>☐ Training material<br>☐ Event<br>☒ **Report**<br>☐ Video<br>☐ Service/Product |
| **Languages** | English |
| **Target groups** | ☒ **Teaching staff**<br>☐ Students<br>☐ Trainees<br>☐ Administrative staff<br>☐ Technical staff<br>☐ Librarians<br>☒ **Other: *University Management*** |
| **Dissemination level** | ☒ **Department / Faculty**<br>☒ **Institution** |
| **Lead Organisation** | UKZN - WP3 coordinator: Cecile Gerwel Proches |
| **Participating Organisations** | European partners: IMTA, RU, RWTH and VU<br>African partner: UKZN<br>ASEAN partner: ITD |

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# Executive Summary

Curriculum transformation in Higher Educational Institutions (HEIs) is critical to ensure preparedness and responsiveness in a volatile, uncertain, complex and ambiguous (VUCA) world. In this changing world, there are constant drivers and challenges, which lead to new requirements for HEIs to consider for their curricula and pedagogies. A changing world of work, as well as requirements and changes from industry, government, and accreditation and quality further drives the need for curriculum transformation. The purpose of this report is to present work done in the DECART third phase of the project, i.e. on understanding curriculum transformation in Higher Educational Institutions (HEIs). The report outlines the methods, activities and tools involved with respect to the third work package. The results outline how curriculum transformation can be conceptualized, the dimensions of curriculum transformation, and the drivers, disruptions and challenges in curriculum transformation. Valuable insights and recommendations for curriculum and programme designers, and leaders, tasked with leading curriculum transformation, are provided.

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# Introduction

The DECART project focuses on designing methods and tools for innovative curriculum design and program transformation in Higher Education (HE). The purpose is for Higher Education Institutions (HEIs) to be more prepared for volatile, uncertain, complex and ambiguous (VUCA) contexts. To achieve this, the project has three work packages: curriculum design, curriculum resilience and curriculum transformation. Additionally, it seeks to develop a framework and tools to guide STEM & Management educational leaders, in original curriculum design and programme transformation according to unpredictable VUCA contexts. As such the project aims to identify and share innovative curricula between project partners and some international associated partners, to propose models and processes for curriculum change and transformations, as to assess and improve interoperability and resilience of curricula.

The aim of the third work package (WP3) on curriculum transformation is to investigate the critical role of leadership in achieving curriculum transformation. Its three sub-objectives are:

- O1: to identify curriculum change drivers and challenges that inhibit higher educational leaders from achieving curriculum transformation
- O2: identify the multiple, diverse key stakeholders who are required to be involved in realising successful curriculum transformation in a complex system such as HE, and then determine coherent leadership models
- O3: facilitate leadership development workshops for HEI leaders.

WP3 produces two reports, three conference papers, and one journal article. WP3 also entails the development of leadership skills, and strengthening of HEI systems. There will also be increased collaboration and stakeholder engagement, through various workshops with DECART project partners, as well as other stakeholders.

This report focuses on O1, the details of which are presented below:

- O1: to identify curriculum change drivers and challenges that inhibit higher educational leaders from achieving curriculum transformation

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The WP3 team (Cecile Gerwel Proches, Macdonald Kanyangale and Angela James from UKZN) commenced with WP3 engagements in May 2024. For more about UKZN, see:

https://www.youtube.com/watch?v=7NZt1eYoYYY&t=200s

The UKZN team are from the UKZN Graduate School of Business and Leadership (GSB&L) and UKZN School of Education. The GSB&L has an established track record in providing management education and training to business and public sectors. Based on both high-quality scientific research and intensive corporate relations, members of the GSB&L provide their postgraduate students up-to-date education that combines extensive theoretical studies with experience of real business life.

The School of Education is one of the largest schools in the university. It offers a wide range of undergraduate and postgraduate programmes aimed at preparing educators and education professionals. These programmes are designed to equip students with the skills needed to tackle complex educational issues and contribute to the field through rigorous research.

WP3 provides a valuable perspective into curriculum transformation by working within the realms of education, leadership and management, and change management. Challenges need to be approached from a systemic perspective and global strategy vision. They may be visible in the processes and policies that are in place, or in a covert manner, for example, mindset change, resistance to change, a desire to move towards a societal transition or not, economic means, etc. Transformation entails doing things differently, and not just better.

Workshops are planned to develop leadership capabilities on a systemic level, to drive curriculum transformation. The workshops will be interactive and collaborative in nature, underpinned by the principles of adult learning and being a reflective practitioner. Critical aspects pertaining to the development of effective leadership in the HE context will be explored, and will be approached from the perspective of empowering diverse stakeholder groups to lead change.

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The above-mentioned activities are aligned to the objectives of determining drivers and challenges that leaders in HEIs face in achieving curriculum transformation, identifying coherent leadership models required by the various stakeholders to facilitate curriculum transformation, and developing leadership capabilities to drive curriculum transformation.

This R31 report comprises the conceptualizing of curriculum transformation, the drivers, disruptions and challenges in curriculum transformation.

**Project context**

Curriculum transformation in HE is essential to advancing education in a rapidly changing world. In 2025, HEIs are currently operating in a rapidly advancing world, and must respond to and engage with diverse stakeholders in a VUCA context, and societies are under pressure from disruptions. The HE system as a whole is being impacted and may impede responsiveness because of the complexities of reform, and sometimes its inertia and resistance to change. These complex challenges call for transformation, and the necessity for HEIs and their stakeholders to adapt quickly. In HEIs, there is a compelling need for new strategies and ways of doing business regarding learning and teaching methods that reflect changes in society, and its needs. Leaders in HEIs must pay attention to also be future-oriented and assess how to move from the current reality to a desired future.

In the HEIs, the VUCA framework (Figure 1) serves as both a contextual backdrop and a skillset imperative in curriculum transformation efforts. The role of universities in preparing students for a VUCA world is relevant to scholars and policy makers in different parts of the world.

VUCA by its nature, makes it more difficult for one to make decisions without pursuit of understanding where there is uncertainty, seeking clarity and turning plans into reality in a complex situation, and being agile in the face of ambiguity (Taskan, Junça-Silva & Caetano, 2022).

- *Volatility* is about rapid constant and dynamic change often associated with no predictable trend or repeatable pattern. The pace of any change in terms

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of varying speeds and magnitudes may create instability, disruption of trends and unexpected occurrences. A volatile context is also typified by extreme and rapid fluctuations.

- *Uncertainty* which is the second construct in the acronym VUCA stands for the inability to predict situations and incidents due to lack of knowledge (e.g. about the outcomes, cause-effect relationship, the mechanisms of change), unpredictability but also unknown factors.

- The third construct in the acronym is *Complexity*. This characterizes a situation where there are many interconnected parts, which are unidentifiable or contradictory that they are making it difficult to understand the reasons and factors in a problem. Andrade et al. (2021) specifies that the combination of many factors involved, multiple interconnections and interrelationships, between the factors, are fundamental elements of complexity.

- Finally, *Ambiguity* refers to a situation or condition in which the causes and the "who, what, where, when, how and why" behind the causes and events are unclear and difficult to ascertain, and may have different interpretations or meanings. It therefore, is not only the accuracy but also recognition that components of the VUCA acronym may sometimes overlap. This is critical for categorizing and interpreting information from the environment.

The conceptual map (Figure 1) of VUCA is also useful to inform adaptive decisions and actions when it comes to the strategic and operational levels for curriculum transformation. Figure 1 depicts the conceptual map of VUCA, the necessary actions in volatile conditions, pursuit of understanding when faced with uncertainty, agility in ambiguous conditions and clarity in complex environments.

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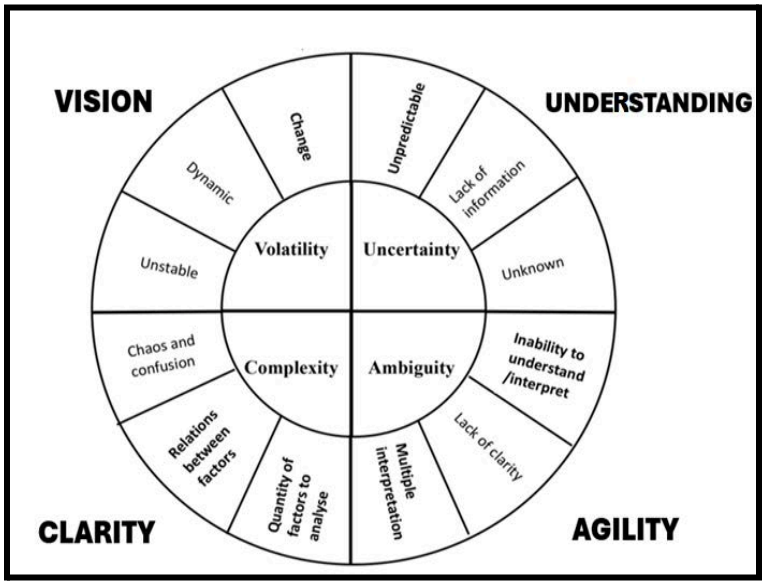


Figure 1: Conceptual map of the acronym VUCA and VUCA skills approach
Source: Adapted from Taskan et al. (2022, p. 203)

The pressing demand for versatile skills in modern organisations mirrors the challenges posed by VUCA environments. In these environments, traditional competencies often prove to be insufficient. When incorporated as content in a curriculum, the VUCA conceptual map informs the development of vision-led thinking and focus in volatile times, critical thinking, flexibility, and resilience among students. Integrating a "VUCA skills approach" ensures that curriculum transformation aligns educational objectives with industry demands, equipping students with competencies essential for success in environments where ambiguity and complexity are routine. More importantly, VUCA skills for diverse stakeholders in HEIs are critical to the design of transformed curriculum manifesting a shift to substantively new components of curriculum in response to changes affecting different stakeholders and society, and involving priorities different to the status quo, and leading to changes across multiple elements of curriculum.

This report presents the curriculum change drivers and challenges that inhibit higher educational leaders from achieving curriculum transformation. The meaning of transformation - what, how and why, among partners and other participants in

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workshops, including the curriculum change drivers, disruptions and challenges in curriculum transformation were explored and reported on.

# Methods, Activities and Tools

WP3 has been approached by conducting empirical research to determine the drivers and challenges that higher educational leaders face in achieving curriculum transformation. The qualitative research approach was used to determine in-depth views and opinions of participants. Ethical clearance was obtained from the UKZN. Research instruments were developed in line with the broad research objectives.

The findings that follow are informed by various rich engagements that occurred in 2024, through hybrid workshops, by drawing on various innovative digital tools, including Mentimeter, Rich Pictures, Jamboard, Google Forms, and Zoom breakout rooms to facilitate discussions. Data were analysed using thematic analysis and NVivo. WP3 is intertwined with WP1 and WP2, given the interconnected and interdependent nature of the study with VUCA as the backdrop of curriculum transformation processes, activities and outcomes in HEIs.

## Workshop 1

WP3, being the third and final DECART work package, commenced in May 2024, with the first virtual workshop held on 13 May 2024, to unpack curriculum transformation.

The objectives of the workshop were to:

1. Identify the disruptions experienced by HEIs with respect to curriculum,
2. Explore the main challenges with respect to curriculum transformation that should be addressed,
3. Explore understandings of curriculum transformation,
4. Unpack the multiple dimensions of curriculum transformation.

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All participating DECART HEIs (IMTA, ITD, RU, RWTH Aachen, VU, UKZN) were represented, with 13 participants who joined for the 3-hour interactive virtual workshop. The workshop drew on various digital tools such as Mentimeter, Jamboard and Zoom breakout rooms, to facilitate interaction. After introductions, participants were asked to complete a Mentimeter to identify the disruptions experienced by HEIs with respect to curriculum. Participants could add up to three responses in Mentimeter for each question. Participants were thereafter engaged in group work in Zoom breakout rooms to identify the main challenges that should be addressed. According to the participants, these include Artificial Intelligence (AI), new technologies, natural hazards, preparation of students, continuous adaptation of students and staff, and responding to strategy change and direction. Participants then shared and had an interactive discussion.

Participants then completed another Mentimeter to provide responses to what curriculum transformation means to them. Participants had different understandings of what curriculum transformation entails, including: innovation, adaptation, flexibility, changes to be better, future oriented, process of change, pedagogical innovation, development, adaptation to issues, and re-evaluating. This led to vibrant group work and discussions with all participants reflecting on the *what, why, how* and *when,* pertaining to curriculum transformation.

- **What** is curriculum transformation? What does it mean?
- **Why** should curriculum transformation happen?
- **How** does curriculum transformation happen?
- **When** does curriculum transformation happen?

This workshop was instrumental in revealing that there are diverse perspectives on what curriculum transformation entails, and that there are multiple challenges which need to be addressed, in order to facilitate curriculum transformation in HEIs. Excerpts from evaluations are available in Appendix 4. This data was used for the results, which are presented later. This is also the case for the other workshops.

# Workshop 2

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The second WP3 workshop was held in hybrid mode at the DECART PM4 meeting at IT Del in Indonesia, on 27 June 2024. The objectives of the workshop were to:

1. Identify the stakeholders involved in curriculum transformation,
2. Examine the role that the stakeholders play in curriculum transformation,
3. Test the curriculum transformation framework.

Twenty-seven participants, comprising DECART project partners and staff from the partner institutions, took part in a hybrid workshop held on 27 June 2024.

Using Mentimeter as an innovative digital tool allowed for real-time engagement and interaction with the participants, facilitating a sense of connection, given the hybrid workshop. It was also valuable for participants to see first-hand the multiple, diverse responses that came in through the word clouds, facilitating rich discussions. In the first part of the workshop, using Mentimeter, participants responded to the questions: "*Who are the stakeholders who are currently involved in curriculum transformation in HEIs?*", and "*How are the stakeholders involved in curriculum transformation in HEIs?*". Participants could add up to three responses in Mentimeter for each question.

In the second part of the workshop, participants were then asked to draw a '*rich picture*' using Jamboard. A rich picture is a system thinking tool used to depict a real-world, complex situation and, as argued by Marnewick, Romero-Torres and Delisle (2024), produce original data. Furthermore, rich pictures are considered standard action research methods, which can give diverse stakeholders a voice (Walker et al., 2014). Participants can gain a shared understanding of the complexities of the situation and better understand the relationships of the stakeholders, as well as their concerns and interests. In the last part of the workshop, participants worked in groups using Jamboard to practically apply the curriculum transformation framework that was developed (Appendix 3). Excerpts from evaluations are available in Appendix 5.

# Workshop 3

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The third virtual WP3 workshop was held on 27 August 2024. This workshop was facilitated by Professor Nyna Amin, Interim Director: Teaching & Learning of the UKZN Teaching and Learning Office. The workshop was attended by 19 participants, including DECART project partners, as well as other academics from UKZN and two universities in Indonesia. The objectives of the workshop were to:

1. Explore curriculum transformation, and its complexities and challenges,
2. Examine the curriculum as an intervention that redefines and shapes individuals through ideology and social norms, and exploring whose interests are served in this process.

Nyna Amin emphasized the importance of reflecting on traditional teacher-centric models and creating an educational approach that is responsive to societal and global needs. Her presentation also highlighted the importance of student-centered learning and addressing the challenges of power dynamics in education. The discussions also centered on exploring the complexities of decolonizing the curriculum, the potential of AI in education, and the importance of inclusive curriculum development processes.

Other aspects of Amin's presentation focused on the implications of transformation, the hidden curriculum, and the need for continued conversation about curriculum design and transformation, given the multiple complexities. The workshop not only encouraged participants to further explore systemic and big picture thinking in curriculum transformation, but to also learn about curriculum transformation in different countries. Participants compared and identified common challenges and unique national contexts of curriculum transformation. Excerpts from evaluations are available in Appendix 6.

# Knowledge sharing events

While sharing the results of the DECART project and WP3 results, we also engaged in two events: #ErasmusDays 2024 (Appendix 7) and UKZN International Partner Week (Appendix 8). During these events, we took the opportunity to elicit the views of participants on curriculum transformation.

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# #ErasmusDays 2024

The WP3 team delivered an online presentation on 17 October 2024, 9am – 10am (CET) for #ErasmusDays (Appendix 7), which is an international six-day celebration of the Erasmus+ programme. The presentation focused on "*Developing curriculum transformation champions in Higher Education: Insights from the DECART Erasmus+ Project"*. There were 39 participants from two countries: South Africa and France. The majority of the South African participants were from four different universities. Two participants were from a university in France. During the presentation, the UKZN team highlighted their efforts in curriculum transformation, emphasizing the complexities involved and the diverse perspectives held by various stakeholders. The team discussed the obstacles to realizing curriculum transformation, acknowledging the difficulties in aligning diverse perspectives. They emphasized the crucial role of leadership in facilitating and driving effective curriculum transformation processes. This presentation contributed to the broader discourse on international education, collaboration, and the ongoing efforts to adapt academic curricula to meet contemporary needs. The UKZN team used Mentimeter to explore how participants in the #ErasmusDays online event (https://www.erasmusdays.eu/events/) perceived and understood the concept of curriculum transformation, which is described in the report.

# UKZN International Partner Week 2024

The WP3 team presented on 30 October 2024 about the DECART project and WP3 at the 3rd UKZN's International Partner Week (Appendix 8), which was held 28 October to 1 November 2024. There were participants from 20 countries (South Africa, Tanzania, Mauritius, Sri Lanka, Ethiopia, Belgium, Malawi, Swaziland, Latvia, USA, Chile, Côte d'Ivoire, Zimbabwe, France, Austria, Madagascar, Italy, Senegal, United Kingdom). The theme was on Innovation for Global Engagement. This event showcased the DECART project and WP3 work to a diverse audience, including delegates from 20 countries. The UKZN team used Mentimeter to explore how participants in the UKZN International Partner Week event perceived and understood the concept of curriculum transformation, which is described in the report.

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https://globalengagement.ukzn.ac.za/ukzn-international-partner-week/

The themes that are presented are from the three workshops. We also include the responses to the Mentimeters that were conducted during the two events (#ErasmusDays and UKZN International Partner Week).

# Results

In order to identify curriculum change drivers and challenges that inhibit higher educational leaders from achieving curriculum transformation, there was a need to explore the DECART partners' understandings of curriculum transformation - what do the DECART partners understand by curriculum transformation.

In exploring the meaning of curriculum transformation, we came to understand that there are diverse understandings of curriculum transformation, as was found in the first workshop with DECART project partners in May 2024. Figure 2 depicts the diversity of views among DECART partners on what curriculum transformation means to them. The meanings depicted revolve predominantly around the aspects of adaptation, innovation and flexibility. Another nuanced aspect in the meaning of curriculum transformation among DECART partners cohere around change-orientation focusing on structuring, process of change, model of change and being better than before. In a different vein, there is the aspect of integration which illuminates integration of different views, and technology as part of curriculum transformation. The aspect of "new" in curriculum transformation was pronounced in terms of technological goals and new challenges.

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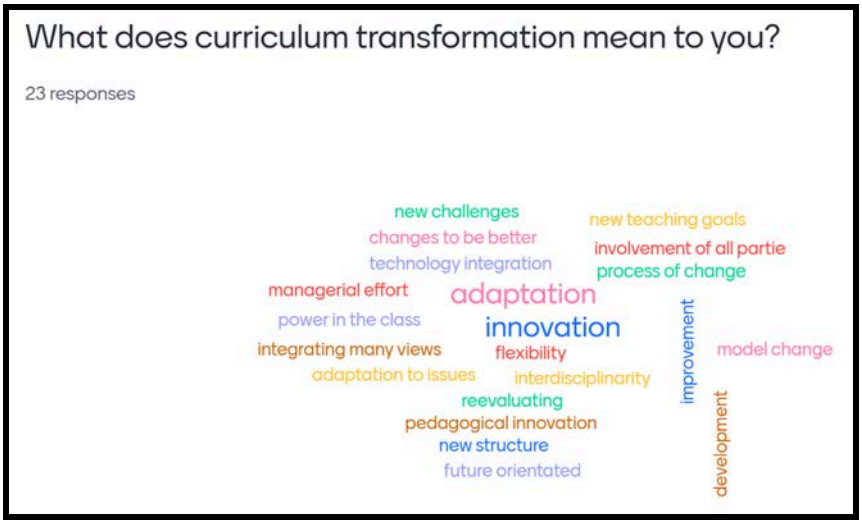


Figure 2: Diverse understandings of curriculum transformation by DECART project partners

Source: DECART Hybrid Workshop with DECART project partners, 13 May 2024

We also present the responses from Mentimeters from the #ErasmusDays and UKZN International Partner Week, as indicated in Figures 3 and 4.

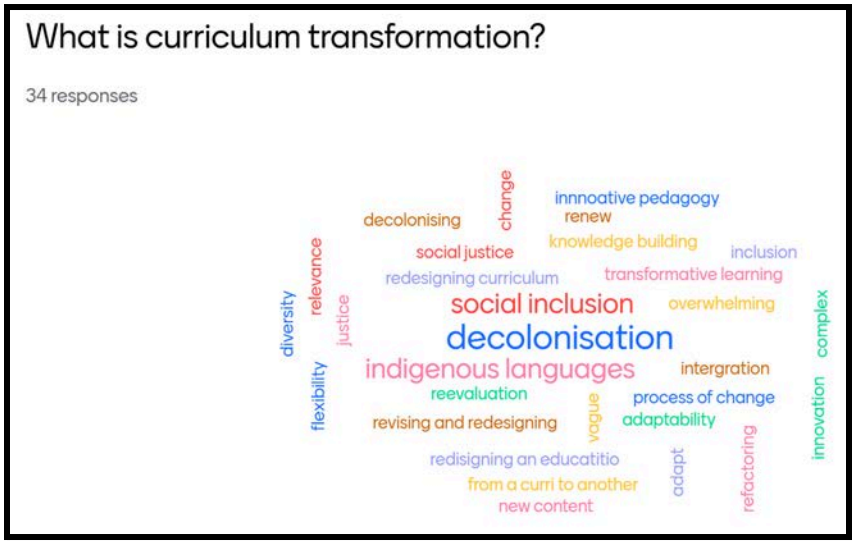


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Figure 3: Diverse understandings of curriculum transformation by participants at the #ErasmusDays 2024 event

Source: #ErasmusDays 2024 Virtual Presentation, 17 October 2024

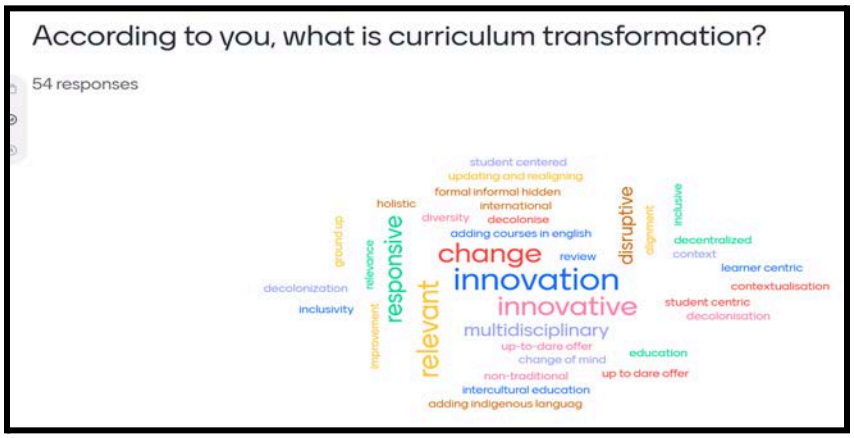


Figure 4: Diverse understandings of curriculum transformation by participants at the UKZN International Partner Week event

Source: UKZN International Partner Week 2024, In-person presentation, 30 October 2024

We also asked DECART project partners to share examples of effective curriculum transformation in their HEIs (Appendix 1), and to outline their understandings of curriculum transformation (Appendix 2).

The section that follows presents the conceptualizing of curriculum transformation, the drivers, disruptions and challenges in curriculum transformation.

# Conceptualizing curriculum transformation

Conceptualizing curriculum transformation questions the what, why, how and when of the process, as depicted in Figure 5. Specifically, it examines the various ways in which the participants understood the nature, scope and composition of curriculum transformation.

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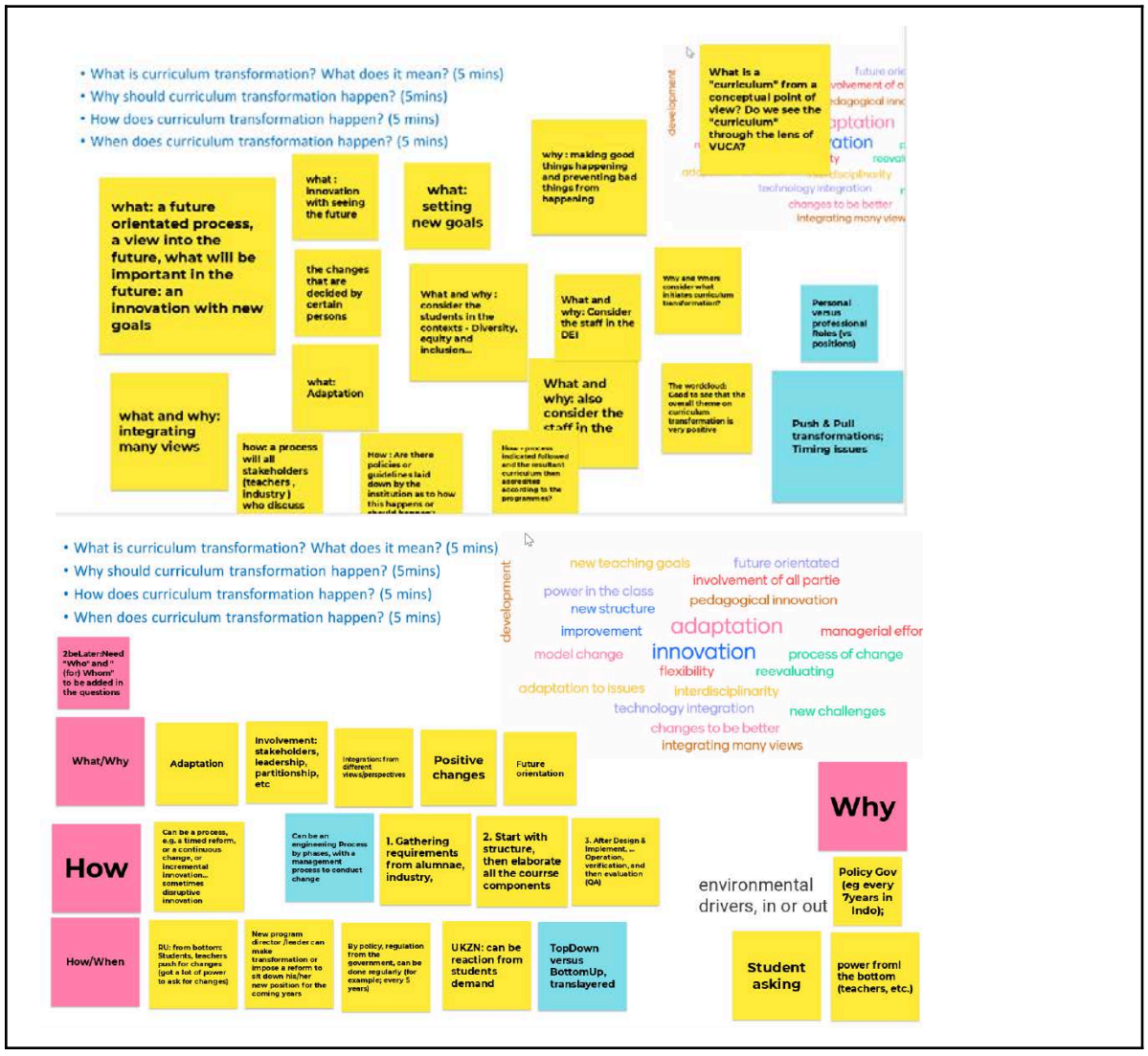


Figure 5: Unpacking Curriculum Transformation by DECART project partners
Source: DECART Hybrid Workshop with DECART project partners, 13 May 2024

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# Drivers, Disruptions and Challenges in Curriculum transformation

Curriculum transformation is viewed as a complex, multi-dimensional process that integrates innovation, stakeholder engagement, and future-focused learning. The distinction between change and transformation is significant, with participants acknowledging the need for both in different contexts. External factors such as regulatory frameworks and societal shifts also play a key role, with curricula needing to adapt in response to these forces. This holistic view of curriculum development underscores the need for ongoing review, inclusive participation, and proactive planning to prepare students for a rapidly changing world.

We also asked participants at the #ErasmusDays 2024 presentation, "*What are the characteristics of effective curriculum transformation".* Their responses are indicated in Figure 6.

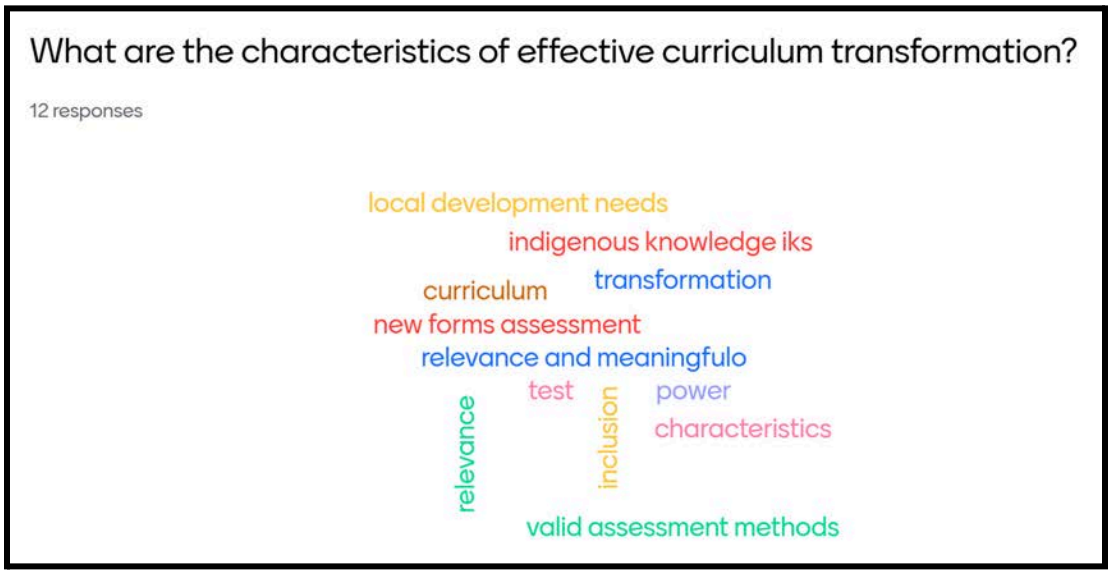


Figure 6: Characteristics of effective curriculum transformation by #ErasmusDays participants

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Source: #ErasmusDays 2024 Virtual Presentation, 17 October 2024

Through responses obtained in the evaluations of the workshops, we further got to understand the insights gained by the participants (Figures 7, 8 and 9). Figure 10 presents the responses of participants regarding their key take-aways after the second WP3 workshop.

If you gained insights into Curriculum Transformation, can you please elaborate and share with us

- I have gained insight into how other colleagues from different universities across the world view curriculum transformation
- Insightful
- Plan for the negatives
- "What" and "How" seem similar for everyone but "Why" and "When" look a bit different answers for every participants
- That curriculum transformation is a positive journey, it is part of the adaptation process of higher education to both external and internal needs, many stakeholders should be involved and it is a complex process. Also, the context is so different between institutions, i.e. from the grassroots or bottom up, and top down.
- Initial overview on curriculum transformation, adaptation, change and continuous improvement. The grain (tiny, small, large, total reform) of the modification seems to fix the terminology, rather it is a transformation action or not. Drivers of change/transformation change depending on culture/country/size of institutions, sometimes internal, sometimes internal. A transformation of one Model A to another Model B is an engineering process perspective (phases) and also a managerial perspective. Depending on a VUCA event and its criticality/dimension/timeframe, both engineering and managerial processes could be different. Regular cycled processes, agile processes, innovative-style processes, urgent decision making processes are different ways of supporting a transformation.
- Good methodology

Figure 7: Evaluation responses: DECART WP3 workshop 1 by DECART project partners

Source: DECART WP3 workshop 1 with DECART project partners, 13 May 2024

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If you gained insights into Curriculum Transformation, can you please elaborate and share with us

- The diverse nature and the accepting academics to higher authority
- Diversity of standard curricula for reference to formulate new curricula in IT Del
- Looking at many events and concepts
- Personally, I gained insights how to develop curriculum
- More considerations are necessary to be taken into account than what we have thought of before. Different views from different perspectives (for different country background, etc)
- Already some experience about curriculum transformation from a former meeting
- Provide a way to see the curriculum in a more systematic way.
- Change process, involving multiple stakeholders
- I obtained an overview of what is involved in curriculum transformation, the different components or aspects of the transformation, that transformations are indeed needed for universities to thrive, the importance of involvement of different groups, and the importance of enticing the keen interest of the people involved.

Figure 8: Excerpts from evaluation responses: DECART WP3 workshop 2 by DECART project partners

Source: Excerpts from DECART WP3 workshop 2 with DECART project partners, 27 June 2024

If you gained insights into Curriculum Transformation, can you please elaborate and share with us

- Very complex concept and even more complicated in reality.
- We can speak of 'transforming curriculum' as a new phenomenon that is still unexplored: which path to follow?
- How diverse the transformation can be and complex, and more aware of the implicit impact a curriculum can have, besides of course the traditional explicit purpose.
- Learning different approach of curriculum transformation from other country
- Drivers of change, the importance of history, culture and social aspects, as an example the decolonisation in South Africa

Figure 9: Evaluation responses: DECART WP3 workshop 3 by DECART project partners

Source: DECART WP3 workshop 3 with DECART project partners facilitated by Prof Nyna Amin, 27 August 2024

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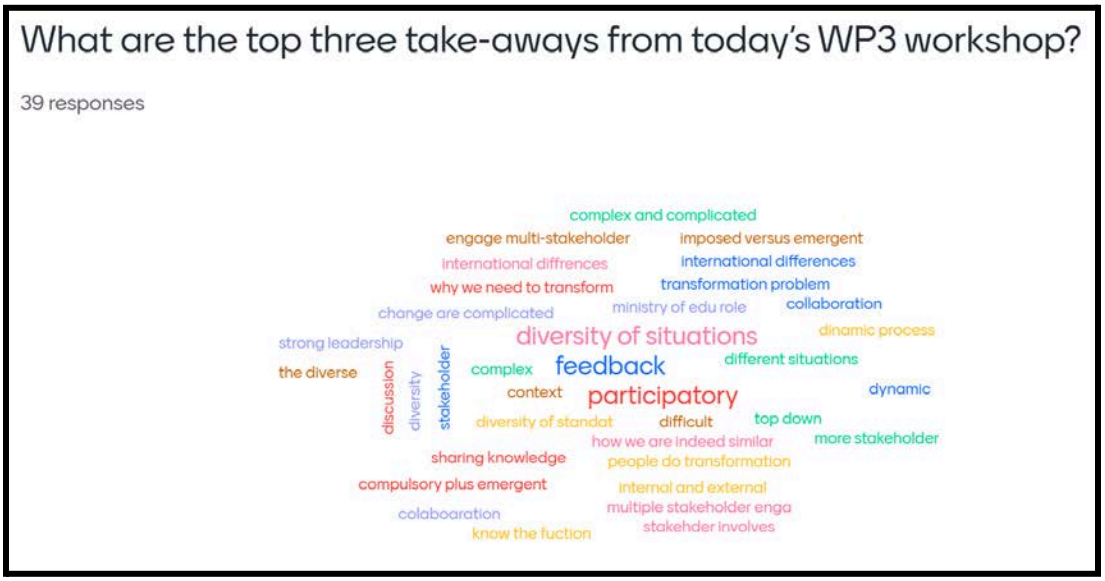


Figure 10: Key insights on DECART WP3 workshop 2 by DECART project partners
Source: DECART WP3 workshop 2 with DECART project partners, 27 June 2024

# Drivers in Curriculum Transformation

Conceptualizing curriculum transformation as done above, has implications along a number of key aspects in practice, which include: inclusivity and diversity, relevance to society and application, decolonisation and power structures, flexibility and innovation and interdisciplinary approaches. These may be regarded as the drivers in curriculum transformation.

## i) Inclusivity and diversity

The concept of inclusivity and diversity is captured under regulation brought about by multi-stakeholder and multi-disciplinary push factors, implying differing experiences, needs and expectations for curriculum transformation. When curriculum transformation is conceptualized along this frame, the process begins with a critical assessment of whose knowledge is included or excluded. This focus prompts institutions to actively engage with a wider range of stakeholders, especially those

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historically marginalised or underrepresented, including different cultural groups, gender perspectives, and indigenous knowledge systems. The process involves consultations with diverse communities and consideration of students' varied lived experiences. Practically, this perspective encourages curriculum designers and educators to integrate multiple perspectives into teaching materials, textbooks, and classroom discussions. This could mean incorporating texts, case studies, and theories from African, Asian, or indigenous perspectives, as well as gender and LGBTQ+ issues. The pedagogical approach may shift towards more participatory and discussion-based methods, where students' voices and experiences are actively included in learning activities. Educators are required to continuously reflect on and question the inclusivity of their teaching materials and course themes.

## ii) Relevance to societal responsibility and applications

A focus on making the curriculum more relevant to societal needs shapes the transformation process by aligning educational content with pressing societal, economic, and environmental challenges. This requires collaboration with industry, policymakers, and the community to ensure that the curriculum meets the demands of the contemporary world. It may involve revisiting learning outcomes, ensuring they align with competencies required in the workforce, or addressing issues such as sustainability, inequality, and digital literacy. In practice, a socially relevant curriculum fosters skills that students can directly apply to solve real-world problems. This could involve project-based learning, case studies of local issues, or collaboration with communities and industries. It reshapes traditional disciplines into more interdisciplinary fields, where students learn how to apply theory to practice. An example would be introducing problem-solving activities that address local societal issues, such as poverty or environmental degradation, within academic courses.

## iii) Decolonisation and power structures

Thinking about curriculum transformation, induces the notions of challenging power structures and ways of organising and disseminating knowledge. A key construct among some participants was the notion of decolonisation which emphasizes reshaping the process of curriculum transformation by emphasizing the dismantling of colonial legacies embedded in education systems. This may be more prevalent in the South African context, given the history of the country. The process involves

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critical reflection on what knowledge is being taught and where that knowledge originates. It forces a questioning of Eurocentric dominance in curricula, requiring the inclusion of local and indigenous knowledge systems. The process may involve forming task teams or working groups dedicated to rethinking the philosophical foundations of education and reviewing the epistemological assumptions that guide current curricula. In practice, decolonisation requires changes not only in content but also in pedagogical approaches. Educators might adopt teaching methods that challenge traditional hierarchical structures, moving towards more participatory or student-led learning models. Curriculum materials would include non-Western authors, theories, and methodologies. It might also challenge the way assessments are conducted, opting for more diverse evaluation methods that respect different ways of knowing and learning.

### iv) Flexibility and innovation

The concept of transformation and its key attributes for instance focus on incremental change and radical transformation, and innovating thinking implies the need for flexibility and innovative thinking. Thinking of curriculum transformation in this manner shapes the process by encouraging continuous adaptation to emerging trends in technology, pedagogy, and the labour market. This perspective emphasizes the need for the curriculum to remain dynamic, evolving with changes in the global and local contexts. This process may involve regularly reviewing and updating curricula, incorporating emerging technologies, and fostering partnerships with industries that are driving innovation. In terms of practice, this conceptualisation encourages the integration of new teaching tools and methodologies, such as digital learning platforms, gamification, or blended learning models. Flexibility also manifests in course design, where students may have greater choice in selecting subjects that suit their interests and career paths. This could involve creating cross-disciplinary courses, offering modular learning options, or adopting a more competency-based education model where students advance based on skills acquisition rather than time spent in class. The role of technology, such as using AI-driven learning analytics to personalise education, becomes crucial in this context.

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### v) Interdisciplinary approaches

When curriculum transformation is understood as a move towards interdisciplinarity, the process of transformation involves breaking down traditional disciplinary silos. This requires collaboration across departments and faculties, encouraging faculty members to work together on integrating content that reflects the interconnectedness of various fields. The process might include revising institutional structures to allow more fluidity between subjects and promoting team-teaching or collaborative projects between students of different disciplines. In practice, interdisciplinary curriculum transformation encourages students to think critically across multiple fields and understand the relationships between them. It might involve the integration of science, technology, engineering, and mathematics (STEM) fields with social sciences or the arts. For example, an engineering curriculum might include courses on ethics, sustainability, and sociology to ensure engineers can address societal challenges from multiple angles. This could also manifest as capstone projects that require students to solve complex, real-world problems using knowledge from different disciplines, fostering holistic thinking and problem-solving skills.

## Disruptions in curriculum transformation

Under this theme, the sub-themes presented capture the dynamic nature of the educational landscape, reflecting the interplay of internal and external challenges, technological advancements, and the need for ongoing adaptation, as depicted in Figure 11.

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Figure 11: Disruptions experienced in the HEIs with respect to curriculum by DECART project partners

Source: DECART WP3 workshop 1 with DECART project partners, 13 May 2024

These themes capture the notions of disruptions in curriculum transformation, their nature and the ensuing changes to the curriculum. Each of the identified themes plays a critical role in shaping our understanding of curriculum transformation. From technological advancements and pedagogical innovation to external pressures and crises, the landscape of education is constantly evolving. However, the success of curriculum transformation depends on how well institutions can navigate these changes, ensuring that they enhance learning outcomes, support faculty development, and meet societal needs without overwhelming students or compromising educational quality.

## i) Technological and pedagogical innovation

This theme highlights the transformation of teaching practices and curriculum through digital tools and innovation, AI, and pedagogical engineering. The analysis indicates that external pressures like digitalization have significantly influenced the evolution of teaching methods and curriculum content. It also discusses how these

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changes often challenge the established power structures within educational institutions, pushing both staff and students to adapt to new technologies. Technological advancements such as AI and digitalization are seen as both opportunities and challenges. While they introduce innovative teaching practices, they require alignment with learning objectives, teacher training, and restructuring of programmes. This can cause friction between traditional and emerging methodologies, as educators may struggle to integrate new tools into established curriculums. Moreover, the rapid evolution of technology risks creating mismatches between students' needs and faculty preparedness. Although AI and digitalization are transformative, their success depends on adequate support and understanding across the educational spectrum. This reflects the necessity for continuous professional development to ensure that educators are equipped to use new tools effectively.

### ii) Student workload

This theme explores the effects of curriculum changes on student workload, emphasizing the increasing expectations placed on students. As curriculum shifts to include more technological content and innovative teaching methods, student workload has significantly increased. The increasing student workload, driven by curriculum changes, raises concerns about the sustainability and effectiveness of educational reform. While the integration of new technologies and innovative methods may offer more diverse learning opportunities, they also increase the cognitive and practical demands on students. This may lead to burnout and decreased academic performance, particularly if institutions fail to provide adequate support or reduce other academic pressures. Beyond this, the rapid pace of change might exacerbate inequality, where students without access to necessary technological resources could fall behind. The challenge lies in balancing innovation with manageable expectations for students to ensure that curriculum transformation enhances, rather than hinders, learning.

### iii) Technology focus

The theme of technology focuses on its central role in curriculum transformation, especially in the context of AI, digital tools, and Industry 4.0. The text underscores

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the need for curriculum to reflect societal and market changes, particularly technological advancements. Technological change is inevitable, and curriculum transformation must evolve to meet these new demands. However, while digital tools and AI offer exciting possibilities for pedagogical innovation, they also pose challenges. The reliance on technology could deepen disparities between institutions with varying levels of resources. Moreover, the shift from face-to-face to online learning, driven by technological advancements, has prompted debates about the quality of education, student engagement, and the role of the educator. Institutions must navigate these challenges carefully, ensuring that technological integration enhances learning rather than detracts from it.

## iv) External factors and curriculum

External factors such as natural hazards, societal crisis, and market demands heavily influence the curriculum. The data illustrates how social and economic crises, such as the COVID-19 pandemic, have accelerated changes in educational systems, forcing universities to adopt new modes of learning. Crisis-driven curriculum changes, such as those seen during the pandemic, demonstrate both the vulnerabilities and resilience of educational systems. While crises often act as catalysts for innovation, pushing institutions to rapidly adapt, the changes are not always sustainable or well-integrated. The shift to hybrid and remote learning during COVID-19, for instance, has persisted beyond the immediate crisis, suggesting that some of these transformations have become permanent. However, the long-term impact on student engagement, learning outcomes, and institutional culture is still unclear. Moreover, the uneven ability of institutions to cope with such crises—particularly in underfunded or developing contexts—raises questions about equity and access in education.

## v) Crisis as a catalyst for change

Crises are seen as opportunities for growth and transformation within educational systems. Disruptions like pandemics, technological changes, and external crises challenge the status quo and prompt institutions to adopt new learning methods. Viewing crises as opportunities for educational reform is an optimistic approach, but it also requires careful consideration of the consequences. While crises often spur

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innovation, they can also exacerbate existing inequalities, as institutions with more resources are better positioned to adapt. Furthermore, crisis-driven changes may lack thoughtful implementation and evaluation, leading to hasty decisions that do not consider the long-term impact on students and faculty. For example, the shift to remote learning during COVID-19 highlighted the potential of online education but also exposed its limitations, particularly in terms of accessibility, student engagement, and learning outcomes.

## vi) Societal impacts and external pressures

This theme examines how societal demands, industry requirements, and government regulations influence curriculum changes. Universities must constantly adapt to external pressures to remain relevant in a changing world. Curriculum transformation is not just an internal institutional matter but is heavily shaped by external societal forces. Industry demands, government regulations, and market trends play a crucial role in determining the direction of educational programmes. This can lead to tension between academic freedom and external control, where universities are compelled to prioritise employability and market readiness over intellectual exploration. Moreover, the constant need to adapt to societal pressures can lead to instability in curriculum planning, where short-term demands overshadow long-term educational goals. Balancing these external influences while maintaining the integrity and mission of higher education is a key challenge in curriculum transformation.

## vii) Mismatch and misalignment

This theme addresses the discrepancies between the expectations of students, teachers, and programme objectives. The data on participants highlights how differing goals and perspectives can lead to misalignment, creating confusion and dissatisfaction. The theme of mismatch reveals the complexities of curriculum transformation. As educational systems evolve, misalignments between student expectations, faculty preparedness, and institutional goals become more apparent. These discrepancies can undermine the effectiveness of curriculum changes, particularly if students feel overwhelmed by new demands or if faculty are not adequately prepared to implement innovative teaching practices. The challenge is to ensure that all stakeholders—students, teachers, and administrators—are aligned in

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their understanding and expectations of curriculum changes. This requires clear communication, ongoing professional development, and a collaborative approach to curriculum design.

### viii) Regulatory challenges

The role of government regulations and accreditation processes in shaping curriculum transformation is key. These external controls can both facilitate and hinder innovation in education. Regulatory challenges highlight the tension between innovation and compliance in education. While accreditation and government regulations are essential for maintaining standards, they can also stifle creativity and responsiveness. Universities often find themselves caught between the need to innovate and the requirement to meet regulatory expectations. This can lead to conservative approaches to curriculum transformation, where institutions prioritise compliance over innovation. To foster meaningful change, regulatory bodies need to evolve alongside educational institutions, offering more flexible frameworks that encourage innovation without compromising quality.

## Challenges in curriculum transformation

The challenges of curriculum transformation in HE are multifaceted, as depicted in Figure 12.

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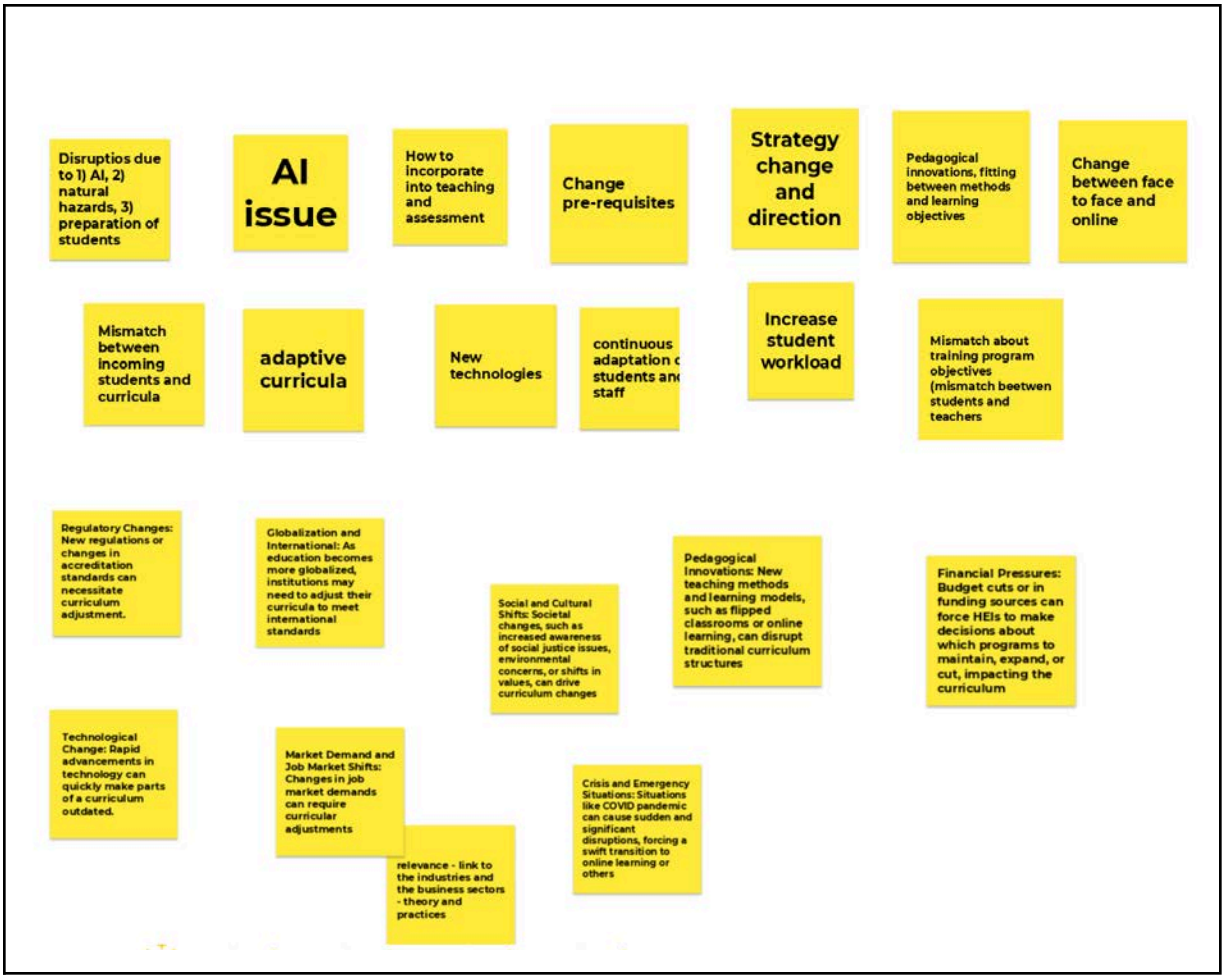


Figure 12: Challenges in curriculum transformation by DECART Project Partners

Source: DECART WP3 workshop 1 with DECART project members, 13 May 2024

There is a clear misalignment between high school preparation and university expectations, compounded by the shifting demands of the job market. The rapid advancement of technology, particularly AI, adds a layer of complexity, necessitating urgent adaptations in teaching and learning methods. Stakeholder dynamics, particularly the tensions between faculty, parents, government, and students, further complicate curriculum reform efforts. These issues are exacerbated by ideological

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barriers and power dynamics, which often resist changes that might redistribute control over curriculum content. Lastly, there is a significant concern about the preparedness of both students and teachers, who struggle to meet the demands of modern education due to gaps in knowledge and skills.

## i) Technology integration in education (Artificial Intelligence and Digitalization)

The theme of technology integration focuses on the role of AI, digitalization, and the transition to online education in curriculum transformation. The participants emphasize the need for curricula to adapt to modern technological advancements to remain relevant. They acknowledged AI as a disruptive yet essential force in education, and there is a sense of urgency in incorporating it into teaching practices.

The integration of AI and digital tools in education represents a paradigm shift that requires more than just technical adjustments. There is broad consensus that AI is no longer optional but necessary for educational progress. However, a critical point is the challenge of effectively incorporating these technologies without widening the gap between students who have access to digital resources and those who do not. Furthermore, educators may not yet have the skills or training to use AI meaningfully, which highlights a gap in teacher preparedness. While AI can enhance learning, it also necessitates a rethinking of ethical issues, particularly around data privacy and student autonomy. There is an underlying concern as to how AI could become naturalised as part of teaching and learning, but this assumes equal access and readiness, which may not be the case in many educational contexts.

## ii) Changing learning landscape and micro-credentialing

This highlights the shift away from traditional learning methods toward more flexible, modular forms of education, such as micro-credentialing. This trend addresses the increasing demand for personalised, skill-based learning that aligns with the job market. Micro-credentialing presents an opportunity for educational systems to provide more adaptable and tailored learning experiences, which could benefit students by offering relevant, stackable qualifications. It appears that this shift is already taking place, reflecting broader changes in how society views education. The

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move toward micro-credentials, however, raises questions about the value of traditional degrees. Will micro-credentials replace or simply complement full degrees? In addition to this, it must be noted that this trend risks exacerbating inequalities, as access to these programmes may favour wealthier students or those in developed regions with better access to digital resources. This could undermine equity in education by creating a tiered system where only some students can afford or access the- benefits of tailored learning.

### iii) Curriculum misalignment and job market demands

There is a disconnect between secondary and tertiary education, as well as the mismatch between curriculum content and job market demands. Participants highlight how students enter university unprepared due to high school curricula not adapting to the changing demands of the job market. The curriculum's misalignment with the job market points to a significant challenge in ensuring that education systems remain relevant and effective. While universities strive to prepare students for careers, they often fail to account for the rapidly shifting demands of industries, especially in areas like technology and automation. This mismatch can result in graduates who are ill-prepared for the workforce, leading to unemployment or underemployment. The critical issue here is the lack of communication between educational institutions and industry stakeholders. While curriculum transformation is discussed in the context of societal and technological needs, the challenge of making swift changes to curricula, which are traditionally slow to adapt, remains a key barrier. This is particularly problematic in fast-paced industries where technological advancements quickly render certain skills obsolete.

### iv) Stakeholder tensions and power dynamics

There are power dynamics between various stakeholders in curriculum design, including the government, faculty, students, and industry. It highlights the influence of external actors, such as the government, on higher education and curriculum decisions, often leading to conflicts of interest and priorities. Power dynamics in curriculum transformation reveal the complexity of balancing stakeholder interests. The text points to the significant control that governments and other external bodies have over curriculum content, often overshadowing the input of educators and

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students. This centralisation of power can stifle innovation and limit the responsiveness of curricula to local or student-specific needs. The discussions of power also expose how entrenched interests—such as those of policymakers or administrators—can prevent meaningful reform. While external regulation may ensure standards and quality, it can also hinder flexibility, making the curriculum less adaptable to new educational paradigms, such as interdisciplinary learning or digital literacy. There is a concern that those with vested interests in maintaining the status quo may resist changes that redistribute power within the educational system, such as giving more voice to students or industry leaders in curriculum design.

## v) Ideological and structural barriers

This theme explores the ideological and structural constraints that hinder effective curriculum transformation, particularly societal values and government control. Participants reflect on how education systems often perpetuate dominant ideologies that resist change, making it difficult to implement equitable or progressive reforms. The ideological underpinnings of curriculum design create significant barriers to transformation. Educational institutions often serve as "ideological state apparatuses" that reinforce dominant social norms and power structures, as reflected in the data. This ideological entrenchment can obscure the need for curriculum reforms that promote critical thinking, inclusivity, and social justice. For instance, the prioritisation of Western or Eurocentric knowledge systems over indigenous knowledge limits the scope of transformation. The facilitator in the third workshop highlighted the "hidden curriculum" - the implicit values and norms embedded in educational practices—which perpetuates inequality by teaching students their position/place in society. Transforming curricula to reflect a more diverse and equitable worldview requires confronting these deeply embedded/entrenched ideologies, which may meet resistance from those invested in maintaining the current system.

## vi) Student preparedness for evolving curriculum

This relates to addressing the preparedness of students (and to some extent, teachers) to meet the demands of evolving curricula, especially as it relates to new technologies and changing educational practices. The data mentions a gap in skills

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and knowledge, particularly in adapting to digital tools and online learning environments. The gap in student preparedness for university-level work, especially in terms of technology use, is a critical concern. Many students are underprepared for the technological demands of modern education, which poses challenges for both learning and teaching. This lack of preparedness can exacerbate existing educational inequalities, as students from under-resourced schools may struggle more with digital tools and online learning. There is also a growing divide between the digital fluency of students and teachers, further complicating curriculum transformation efforts. While integrating technology into education is essential, it must be accompanied by robust support systems, such as teacher training and student digital literacy programs, to ensure that both educators and learners can fully benefit from new technologies.

There are challenges and opportunities of curriculum transformation in practice. Technology integration, stakeholder tensions, and curriculum misalignment with the job market highlight the dynamic and multifaceted/multidimensional nature of curriculum reform. At the same time, ideological and structural barriers complicate efforts to create more equitable and relevant educational systems. Addressing these issues requires a micro approach that balances innovation with inclusivity, ensuring that all students are prepared for the future while respecting the diverse needs of stakeholders.

DECART project partners were asked a series of questions to engage with in an effort to unpack the nature of curriculum transformation.The questions were:

- *Why should curriculum transformation happen?*
- *What is curriculum transformation?*
- *Who should be involved in curriculum transformation?*
- *When should curriculum transformation happen?*
- *How should curriculum transformation happen?*

The questions and subsequent discussions by all DECART Partners revealed that unpacking curriculum transformation requires questioning which intentionally focuses on *why, what, who, when, and how* pertaining to curriculum transformation. It is out of these discussions that the value of the questions and how they interlink and reinforce each other was evident in unpacking curriculum transformation in a holistic

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and methodical manner. The framework for Curriculum Transformation with its components and interlinkages necessary to unpack curriculum transformation is depicted in Figure 13.

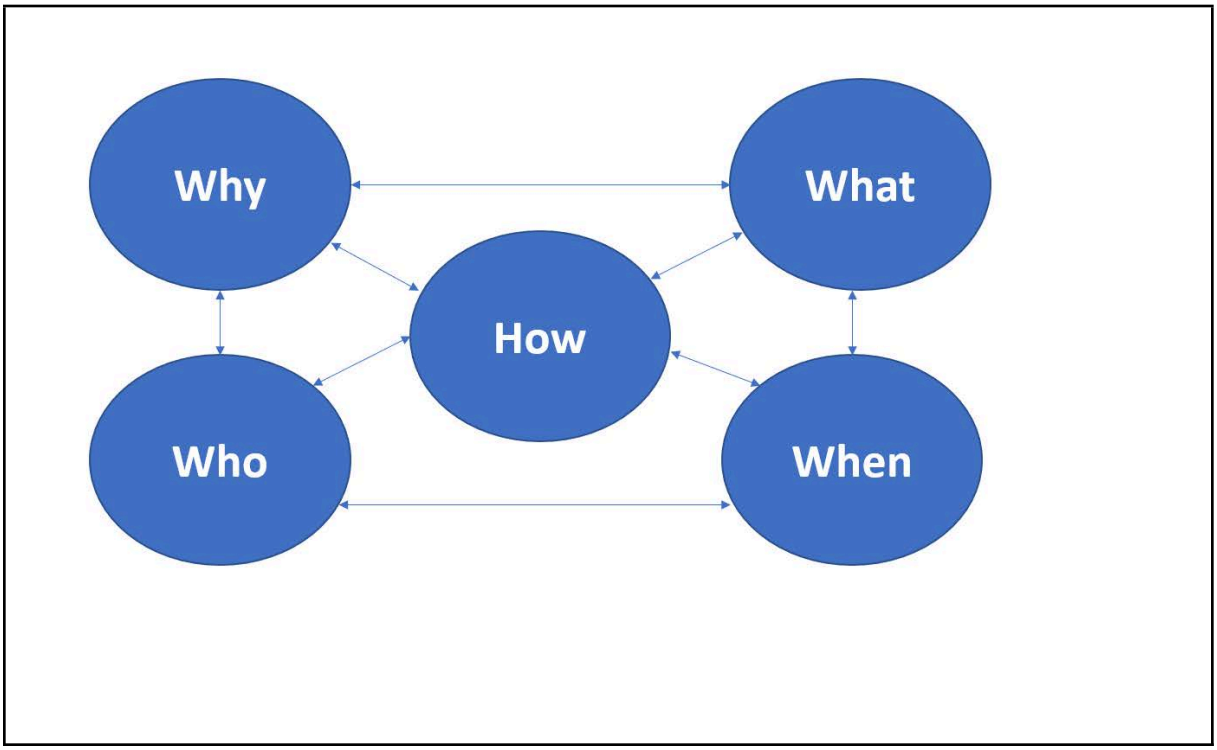


Figure 13: Curriculum transformation framework

Source: Developed by the authors

The results revealed that these components are critical to approaching curriculum transformation. The framework for curriculum transformation can be used by diverse stakeholders in HEIs to engage in interactive sessions to stimulate rich discussions and brainstorming when engaging in curriculum transformation.

Drivers, disruptions and challenges in curriculum transformation occur in a VUCA environment. The process of curriculum transformation involves internal and external stakeholders. It is important to underscore that curriculum transformation requires

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resources such as IT infrastructure, teaching, learning and research facilities and human resources. In this regard, the framework in Figure 14 provides insights into the components of curriculum transformation, internal and external stakeholders, and the VUCA environment which may present disruptions, challenges but also drivers of change.

**A Framework for Catalyzing Curriculum Transformation**

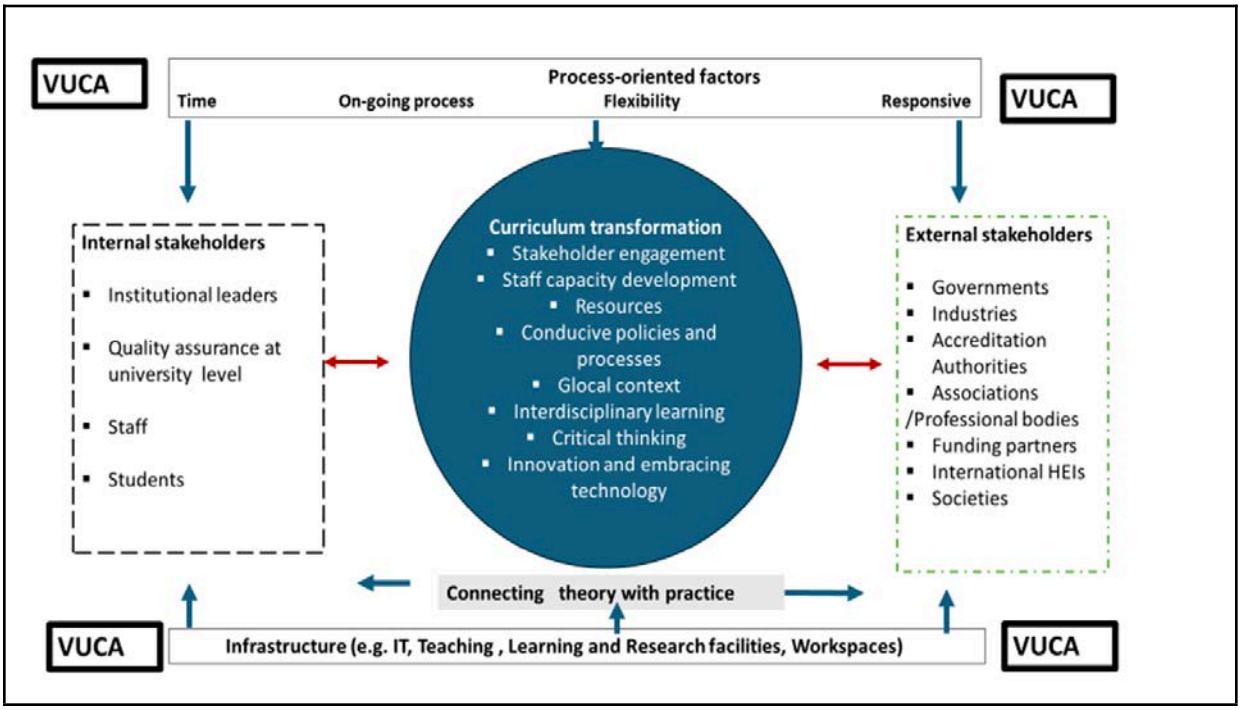


Figure 14: Catalyzing curriculum transformation

Source: Available in EDUCON 2025 conference paper (not to be reproduced)

The above framework in Figure 14 highlights how curriculum transformation can be viewed as a complex, multi-dimensional process that requires time to integrate innovation, stakeholder engagement, and future-focused learning. External factors such as regulatory frameworks and societal shifts also play a key role, with curricula needing to adapt in response to these forces in a VUCA context. This holistic view of curriculum development underscores the need for ongoing review, inclusive

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participation of internal and external stakeholders, and proactive planning to prepare students for a rapidly changing world.The results highlight that curriculum transformation can be enhanced through encouraging flexibility, where a repertoire of existing alternatives is sought and evaluated for possible switching as appropriate at HEIs, facilitating cooperation and teamwork, enhancing the collective capacity to change the curriculum, and ensuring involvement of diverse stakeholders. It is also critical that there is enthusiasm and academic strength of faculty, support from leadership, theory and practice, along with a VUCA skills approach be integrated, industry needs be aligned, and that the curriculum emphasizes lifelong learning and critical thinking.

# Recommendations

Recommendations are provided below for diverse stakeholders in HEIs to better manage curriculum transformation.

1. In preparation for a VUCA context, there is a need for comprehensive understandings of curriculum transformation. It may be regarded as a complex phenomenon with diverse meanings, an on-going and dynamic process, involving a variety of internal and stakeholders.
2. Curriculum transformation is multi-dimensional and has key characteristics, which require attention if curriculum transformation is to be effective.
3. The methodical pursuit of curriculum transformation should entail a relentless pursuit of answers to different components of the curriculum transformation framework, focusing on the why, what, who, when, and how pertaining to curriculum transformation.
4. HEIs need to navigate technological advancements and challenges carefully, ensuring that technological integration enhances learning rather than detracts from it. Technological advancement has a central role in curriculum transformation, especially in the context of AI, digital tools, and Industry 4.0 which underscores the need for curriculum to reflect societal and market changes in a digital world. However, there is need for caution as digital tools and AI could deepen disparities between institutions with varying levels of

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resources and negatively affect the quality of education, student engagement, and the role of the educator.

5. The success of curriculum transformation depends on how well HEIs can navigate a variety of disruptive changes, ensuring that they enhance learning outcomes, support faculty development, and meet societal needs without overwhelming students or compromising educational quality.
6. Dynamic curriculum alignment and realignment pronounces the need for a collaborative approach in which all stakeholders—students, teachers, administrators, industry and professional bodies—are aligned in their understanding and expectations of curriculum changes. Clear communication, ongoing professional development, and a collaborative approach to curriculum design are pivotal as misalignments are capable of undermining the effectiveness of curriculum changes, particularly if students feel overwhelmed by new demands or if faculty are not adequately prepared to implement innovative teaching practices.

# Conclusion

There are various challenges impacting HEIs. These include AI, new technologies, natural hazards, preparation of students, continuous adaptation of students and staff, and responding to strategy change and direction.

There are diverse perspectives on what curriculum transformation entails, and that there are challenges which need to be addressed, in order to facilitate effective curriculum transformation in HEIs.

Diverse stakeholders can drive and inhibit curriculum transformation. These stakeholders include students, lecturers, administration, faculty members and HEI, leaders, industry, government, Alumni, parents of students, and accreditation bodies.

The next WP3 report in the project (D32, April 2025) will focus on the multiple, diverse key stakeholders who are required to be involved in realising successful curriculum transformation in a complex system such as HE, and coherent leadership models to facilitate curriculum transformation.

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# Knowledge sharing at university academic events

We engaged in various knowledge sharing activities at UKZN. A descriptive account follows.

## Presentation at the UKZN College of Law and Management Studies (CLMS) Research Day 2023

The DECART project and overview of WP3 was shared at a virtual presentation for the UKZN College of Law and Management Studies (CLMS) Research Day on 12 October 2023 (Appendix 11). The theme of the UKZN CLMS 2023 Research Day was "Achieving the Sustainable Development Goals 2030 for Higher Education Institutions Post-COVID-19 Pandemic". The goal with this multidisciplinary research day celebration was to bring together diverse members of UKZN CLMS academia — scholars, researchers, graduates, and post-graduate students. The College Research Day provided an opportunity to learn about the latest research outcomes and advancements in the various fields, and for networking for CLMS peers, academics, scholars, and practitioners.

https://clmsresearch.ukzn.ac.za/research-day/

https://ndabaonline.ukzn.ac.za/UkzndabaStory/Vol11-Issue56/SDGs%20for%20Higher%20Education%20Institutions%20Spotlighted%20at%20the%20Annual%20Research%20Day

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# Conference presentation at the 2nd Innovations in the Science of Teaching and Learning (ISOTL) Conference, 26-27 September 2024, in Durban, South Africa

The DECART project and WP3 work was shared at the 2nd Innovations in the Science of Teaching and Learning (ISOTL) Conference, 26-27 September 2024, in Durban, South Africa. The presentation focused on "*Unpacking curriculum transformation in Higher Educational Institutions in a volatile, uncertain, complex and ambiguous (VUCA) world: Insights from the DECART project"*. The iSoTL 2024 conference (Appendix 9) brought together educators, researchers, and practitioners from various disciplines to explore the crucial link between innovation, ethics, and inclusive excellence in higher education teaching and learning. The two-day event aimed to promote debate and share practices that leverage innovation to enhance equity and learning, particularly in response to the transformation of universities driven by new technologies and increasing diversity among students and staff. Sessions and presentations at the conference focused on fundamental themes that connect teaching, learning, ethics, and innovation. The conference sought to inspire creativity in higher education, aiming to improve outcomes and enrich the educational experience for all students. https://utlo.ukzn.ac.za/isotl-conference-2024/

# Presentation at the UKZN College of Law and Management Studies (CLMS) Research Day 2024

The WP3 team presented on the DECART project and WP3 at the UKZN College of Law and Management Studies (CLMS) Research Day on 2 October 2024 (Appendix 10). The title was "*Exploring Curriculum Transformation: Insights from the Erasmus+ DECART Project*". The event was centered around the theme "Energizing Research in Law and Management Studies". The goal with this multidisciplinary research day

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celebration is to bring together diverse members of academia, scholars, researchers, graduates, and post-graduate students – from various Schools within the College of Law and Management Studies. The aim is to showcase the latest research outcomes and advancements in pertinent fields, including Accounting, Economics and Finance, Law, Supply Chain and Logistics, Maritime Law and Maritime Studies, Marketing, Management and Entrepreneurship, Corporate Governance, Human Resource Management, Industrial Relations, and many more. This event presents a unique opportunity for you to connect with your peers, academics, scholars, and practitioners from other schools and disciplines within the CLMS and beyond.
https://ww2.clmsresearch.ukzn.ac.za/research-day/

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# APPENDICES

## Appendix 1: Examples shared by DECART Project Partners of effective curriculum transformation in their HEI

| **Vilnius University, Lithuania** |
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| **Example of effective curriculum transformation**<br>Childhood pedagogy / Primary Education pedagogy |
| **Programme / Curriculum, Department / Discipline**<br>Childhood pedagogy<br>Institute of Educational Sciences |
| **Characteristics that made it effective**<br>Flexibility, cooperation of professors, combining theoretical courses with practical activities |
| **Context**<br>In the early 2020s, there was a significant shift in educational paradigms, driven by rapid advancements in technology and a growing recognition of the importance of STEM education. This period saw an increased emphasis on integrating computational thinking (CT) into primary education, aiming to equip young students with essential problem-solving skills and a strong foundation in technology.<br><br>In response to these changes, a comprehensive curriculum transformation was undertaken to train primary school teachers. The objective was to prepare educators to effectively teach STEM subjects and computational thinking, ensuring they could foster these critical skills in their students from an early age. This transformation included developing new teaching materials, incorporating innovative teaching methodologies, and providing professional development opportunities for teachers to adapt to the evolving educational landscape.<br><br>The curriculum reform focused on making STEM education more accessible and engaging for young learners. It emphasized hands-on, experiential learning and the application of computational thinking across various subjects. By doing so, the curriculum aimed to create |

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a more integrated and cohesive learning experience, encouraging students to develop a deeper understanding of STEM concepts and their real-world applications.

This period of curriculum transformation was marked by collaboration between educational institutions, policymakers, and technology experts, all working together to create a forward-thinking educational framework. The ultimate goal was to prepare primary school teachers to inspire and guide the next generation of learners in a rapidly changing, technology-driven world.

**Additional comment**
In addition to the above, it's essential to:
- Regularly consult with researchers and people who are interested
- Align with industry needs
- Integrate technology and innovation
- Foster interdisciplinary learning
- Continuously monitor and evaluate
- Provide faculty professional development
- Emphasize lifelong learning and critical thinking
- Promote diversity, equity, and inclusion.

**Institut Teknologi Del, Indonesia**

**Example of effective curriculum transformation**
We do a regular curriculum review every five years that result curriculum improvement every five years

**Programme / Curriculum,, Department / Discipline**
Bachelor of Informatics Engineering
Faculty of Infomatics and Electrical Engineering

**Characteristics that made it effective**
Stakeholders' involvement

**Context**
As regulated by the government, we continuously conduct curriculum evaluation and review every five years. We do it for about 1 year (starting with to do review internally and with stakeholders, elaborate the evaluation result and propose an improved curriculum to the academic senate) to be ready to use by the related study program.

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| RWTH Aachen University, Germany |
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| **Example of effective curriculum transformation**<br>Further development of the Environmental Engineering B. Sc.<br>Increasing the “studyability” of the degree program<br>Fundamental revision of module content and structures |
| **Programme / Curriculum,, Department / Discipline**<br>Environmental Engineering B. Sc.<br>Faculty of Civil Engineering |
| **Characteristics that made it effective**<br>Compulsory practical course<br>Introduction to Responsible Research and Innovation<br>Compulsory module Introduction to Scientific Work in Engineering<br>Hybrid and digital offerings: Virtual Reality and online courses |
| **Context**<br>Introduction of teaching guidelines, implementation of competence-oriented teaching, learning and assessment<br>Funding opportunities |
| **Additional comment**<br>Ongoing process, started in spring 2024 |

| Reykjavik University, Iceland |
|---|
| **Example of effective curriculum transformation**<br>Expansion of the engineering program to include Biomedical Engineering as part of the offered programs. In effect, the task was to design a program in engineering and hence curriculum, that followed traditional engineering programs despite having distinct characteristics. At the time the program in Biomedical Engineering was formed, even the name of this degree was new and was practically unknown in Iceland.<br><br>The curriculum of Biomedical Engineering was established as part of a general program in engineering with several study lines. This occurred at the time two colleges merged to form the current Reykjavik University in 2005. |

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**Characteristics that made it effective**

1) Because of trustworthy and proper design of the program´s curriculum:
Design of the curriculum of the program, i.e. structure of the program, the courses offered, and length (total ECTS), was based on a) formal accreditation requirements in Iceland by the ministry of education, b) formal requirements of the Association of Chartered Engineers in Iceland, c) harmonized curriculum in biomedical engineering in Europe and d) the initial visits of the designing faculty to a few selected universities in Europe. Hence the design was such that is fulfilled all the external constraints and at least some of the stakeholders.

2) Because of synergy with other programs in engineering and keeping the program´s distinction at the same time:
Synergy with the other engineering programs was part of the design process. The curriculum is similar to a large degree, same structure of program, similar entry requirements, and quite many courses are the same. Even so, the curriculum in biomedical engineering has a distinct flavor, in large part due to one of its foundations in physiology and the biosciences.

3) Enthusiasm of the faculty designing the curriculum.
Although not directly related to the curriculum itself, the enthusiasm, academic strength and collaborative nature of the faculty directing and designing the new program helped to carry out the change and the adoption of Biomedical Engineering to the program.

**Programme / Curriculum, Department / Discipline**

Biomedical Engineering
Department of Engineering

**Context**

1) A major change was ongoing due to merging of two universities and expectations of something new and unique in terms of new study lines being offered by the new university. The Technical University of Iceland (based on technology, college established in 1964) and the young Reykjavik University (based on non technology subjects, college established in 1998) merged in 2005 to form the current Reykjavik University. At the same time several other programs in engineering were initiated, and Biomedical Engineering was one of them.

The merger helped the new university to establish itself as unique, and hence there was interest in new programs in engineering. The new university was and is considered dynamic and progressive, hence it was easy to introduce a new discipline in engineering, Biomedical Engineering, although it was considered unique and modern in

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Iceland. At the time the program was introduced, even the name of the field was new (in Icelandic). In short, due to the merger, the governing body and leaders of the new university provided keen support for designing and establishing distinct programs in engineering.

2) At the time, and possibly still, young students deciding on their field of study had the courage to try out some new, unique and promising. Maybe this had to do with the optimistic financial situation in Iceland at the time (which collapsed a few years later, but the program in biomedical engineering was not really affected).

3) Faculty hired to the new university had keen interest in engineering and establishing something new.

4) For years a somewhat related program had already been offered at the Technical University, in applied engineering (it is BS degree, compared to MS for engineering) and in applied medical degrees (at the BS level), and hence it provided an established foundation for the new engineering programs.

**Additional comment**
Again, I would like to emphasize one driving force for successful curriculum transformation: the enthusiasm of the people designing the new program and curriculum. Also of importance is the support they get from the leaders of the university and the general attitude of the young people that were willing to try out a new promising path in their education.

**IMT Atlantique, France**

**Example of effective curriculum transformation**
2024 reform of an engineering Master level degree. Ongoing so no results yet as architecture designed, contents under implementation for September 2024.

Going back to 2003, a reform to include a competency-based program, To meet skills and competency development of future French engineers, a new integrated curriculum of 3 years was designed (in France, elitist Grande Ecole d'Ingénieurs still follow a 2+3 model, Master level, first 2 years are in highly selective so called Maths preparatory schools).

**Characteristics that made it effective**
The 5 first semesters of the 3 year degree included a project-based learning model for

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generalist engineers. Each semester students are in teams every wednesday, of 8, 3, or 5 depending). Academic tutors are following each group, 20 tutors for approx. 160 students overall. The competency development all along the semesters for these projects is formalized in a matrix with proficiency levels, scaled and thresholded between projects for incremental reinforcement. The 4 projects are link based on the phases of an engineering project with V-cycle phases. Each project has specific phases. At the end of the 4 projects, all student have navigated through all phases.
http://srouvrais.free.fr/documents/EJEErouvrais.pdf

Aside, classical course/practical/lab model is used other week days the first two years, on 5 domains: computer science, electronic & physics, Maths & signal processing, networks, and humanities and social sciences. These five domains are offered as minor or Majors between the first 2 years (three 84h each majors to select, two 42h minors). An other minor is compulsory: 8 practical workshops (ATELIER) to illustrate scientific training courses.

Semester 5, last year, is on a specific domain of specialization, except humanities and social sciences. A project with an industrial client is also included, by teams of 2 students for a 50h work duty. Last S6 semester is an internship in a company or industry, which is compulsory in France for having an engineering degree at Master level.

**Programme / Curriculum,, Department / Discipline**
FISE ICT Generalist Engineering (Formation d'Ingénieurs sous Statut d'Etudiants)
Specialisation in computer science, electronic & physics, Maths & signal processing, networks,

**Context**
A formal requirement of the French Ministry of Industry to align diplomas with a competency approach and programs aligned with professional branches work competency-based specifications. 12 Graduate outcomes also fixed by the national accreditation French body for engineering degrees, competency oriented. and Soon after to be also aligned with European requirements on competencies for Higher Education at that time, following the Bologna EU reform.

**Additional comment**
New requirements and specifications to meet to reform or transform a program, could be at Ministry, accreditation or professional branch levels needs. An engineering issue of changing, adapting or renewing a program but also a strong managerial project with resistance to changes. Accreditation cycle is every 5 years, most often in France a deep program reform is conducted by engineering institutions every 2 cycles, 10 years, to be aligned with new needs. The effectiveness is very hypothetic, no formal comparison is

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| formally conducted to validate that new/revised program is better than previous one,. student skills as outputs when graduated are hard to assess precisely and graduate outcomes are not really the same, neither the syllabus contents and pedagogical models which are unequal on basic knowledge, applied knowledge, skills, attitudes, qualities, competencies. Professional recruiters do not engage in longitudinal analysis on their side to give formal elements of comparison, verification and tough validation of the benefit of changes. |

| **UKZN, South Africa** |
|---|
| **Example of effective curriculum transformation**<br>Sustainability for Local Economic Development (LED) |
| **Characteristics that made it effective**<br>Relating the theory of sustainability with case studies and fieldwork in the local context. Most of the literature is euro eccentric |
| **Programme / Curriculum, Department / Discipline**<br>Post Graduate Diploma in LED<br>Graduate School of Business and Leadership |
| **Context**<br>The qualification was introduced in 2017 to target LED officers and economists in local and national government. This was one subject in the curriculum of eight subjects taught over 4 semesters. Teaching materials were locally developed with a case study approach. The first world perspective on sustainability is different to that in the developing world. |
| **Additional comments**<br>Must engage with all stakeholders to get different perspectives. |

Source: Google Form to DECART project partners, May/June 2024

# Appendix 2: Understandings of curriculum transformation by DECART project partners

- Curriculum transformation involves a comprehensive process of reviewing, updating, and redesigning educational curricula to ensure they are relevant, inclusive, and

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aligned with current knowledge, societal needs, and future trends.

- Curriculum transformation involves revising and enhancing educational programs to better meet the needs of students, society, and the workforce. This process updates content to stay relevant to societal and technological advancements, shifts from teacher-centered to student-centered learning, and integrates emerging fields like computational thinking and data science. It leverages digital tools, ensures inclusivity and diversity, emphasizes essential skills development, and adopts innovative assessment methods. Engaging stakeholders in the curriculum development process ensures it meets the needs of all involved. In summary, curriculum transformation aims to create dynamic and relevant educational experiences that equip students with the knowledge, skills, and attitudes needed for success in a rapidly changing world.
- A change adapted to external and internal constraints, opportunities and threats.
- Having a curriculum C1 to be changed to a curriculum C2. Some curriculum components of C1 can be kept m, new can be added for T&L services to students, some can be suppressed, some can be changed. Thus, it's not a refinement with components added without changing the previous ones' services.
- A curriculum transformation process can have some of its activities (e.g one component changed only or several components interacting as could be with dependencies) capitalized to be reused in other transformations for other curricula of this model.
- Overall, curricula having a model, a transformation can be a move to another model, where a curriculum is an instance of this model.
- This engineering issue has also a large part of managerial and leadership issues to ensure acceptance to have a C1 moved to a C2.
- Curriculum transformation is the comprehensive process of rethinking and redesigning educational curricula to address contemporary challenges and opportunities. It involves updating content, integrating new teaching methodologies, and embracing interdisciplinary approaches. The goal is to prepare students for complex, real-world problems by fostering skills such as critical thinking, problem-solving, and adaptability. This transformation emphasizes the importance of aligning education with the demands of a rapidly changing world, ensuring that students are equipped with the necessary competencies for the future.
- Curriculum transformation is the process of revising and updating educational programs to make them more flexible, inclusive, relevant, and effective. It involves incorporating diverse perspectives, aligning with current societal and technological needs, adopting innovative teaching methods, and focusing on student-centered learning. The goal is to create a more dynamic and equitable education that better prepares students for the real life.
- Developing robust processes for programme design, approval and review. Improving

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student learning and experience, including assessment literacy. Reducing assessment burden by promoting and facilitating a programme-level vision.

- It is an intentional process of revising and redesigning the curriculum in educational institutions to make it more relevant and aligned with contemporary needs and values.
- The process of curriculum transformation can be complex, there are many and varied stakeholders involved and also the systematic of curriculum is so tangled or interwoven. But the need, interest and willingness for the transformation must be there for it all to work out and the leadership is crucial. The transformation may involve moderate revisions, like every 5 years or so, but may also involve more fundamental changes, like 1) at the moment learning and adapting the new pedagogy involved with the new metaverse, 2) make it more resilient and adaptive, and 3) reflect to some extent the need for the future, not only for today or tomorrow, just to mention a few examples.
- I have studied curriculum theory and design. I've been involved in reforming national curriculum for primary and secondary schools from 1996 to 2023, so my understanding is quite deep.

Source: Google Form, June 2024

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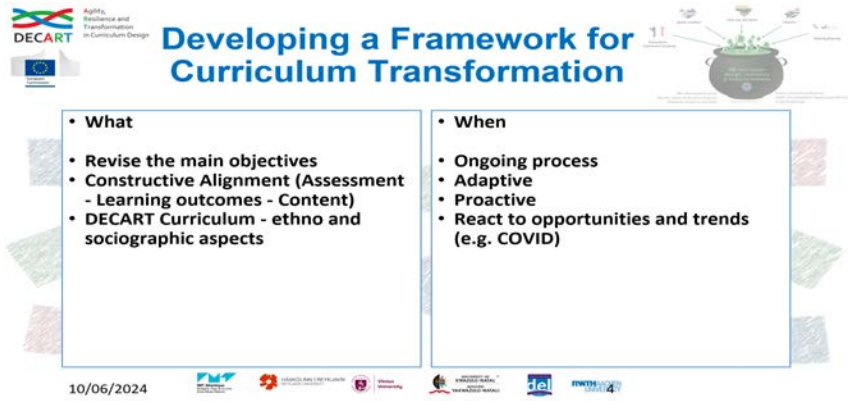
# Appendix 3: Application of the curriculum transformation framework by DECART project partners

## Group 1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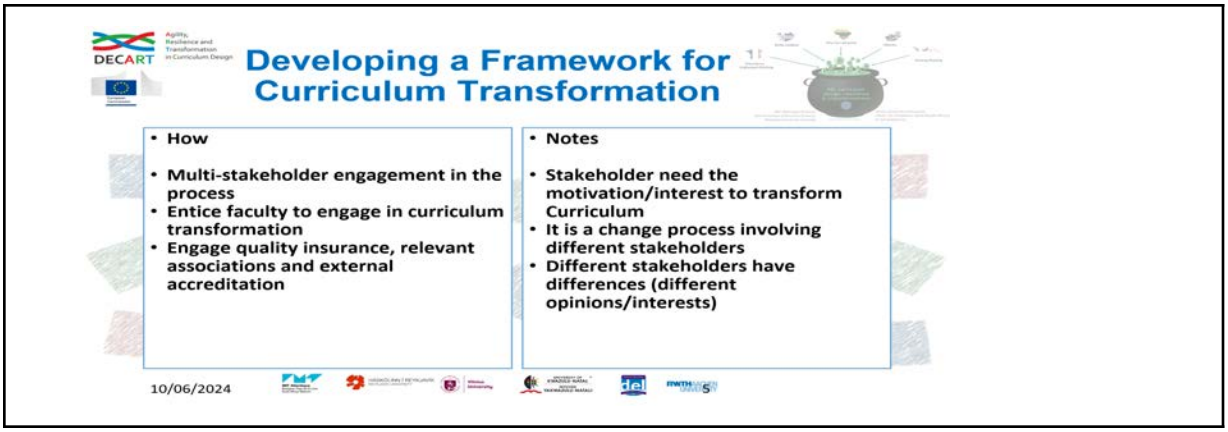


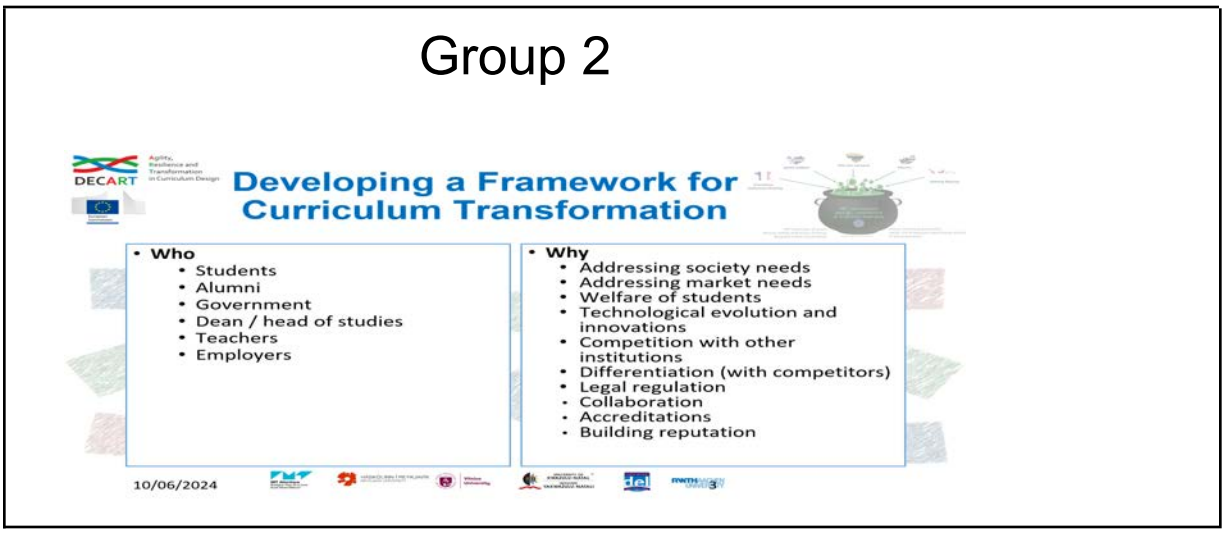


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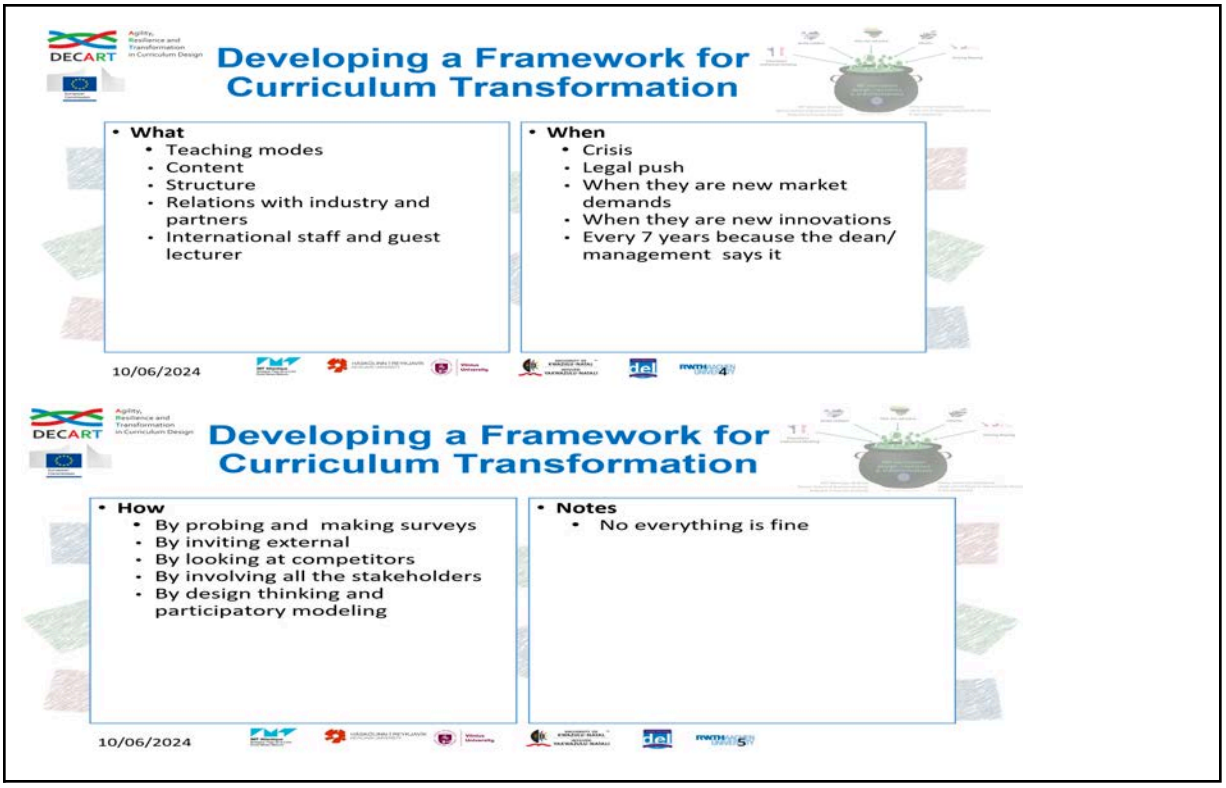


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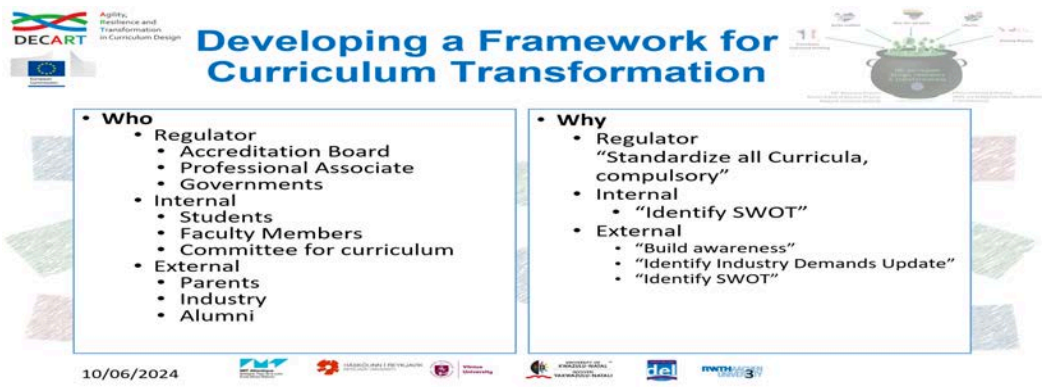
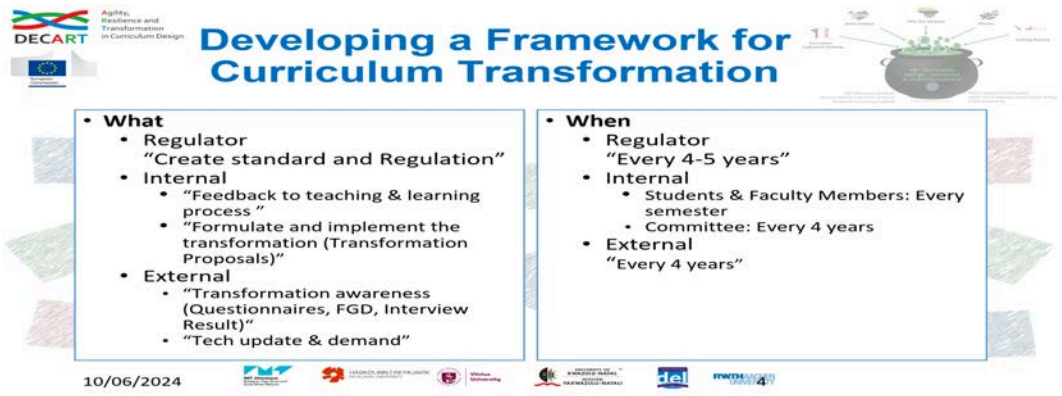
# Group 3

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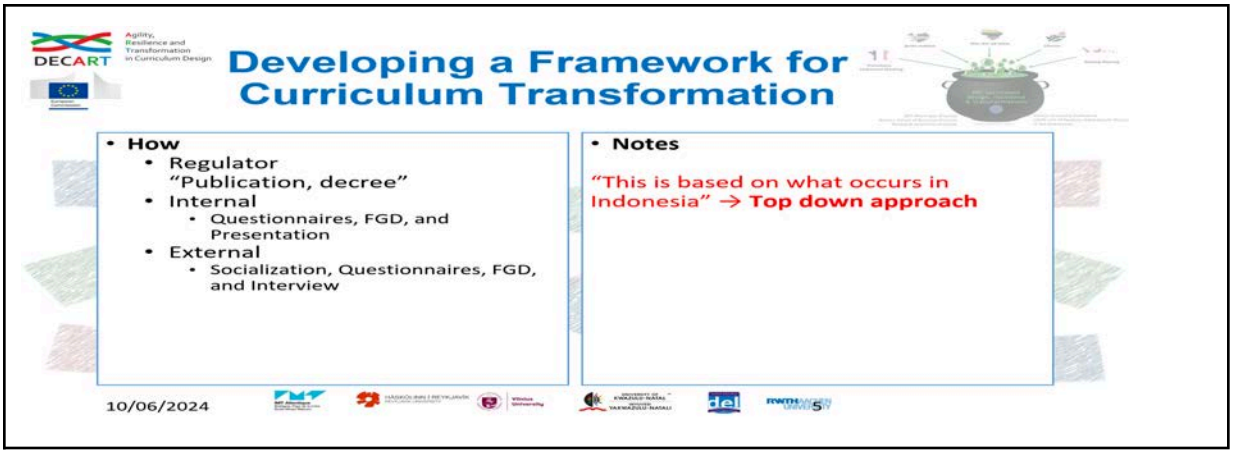
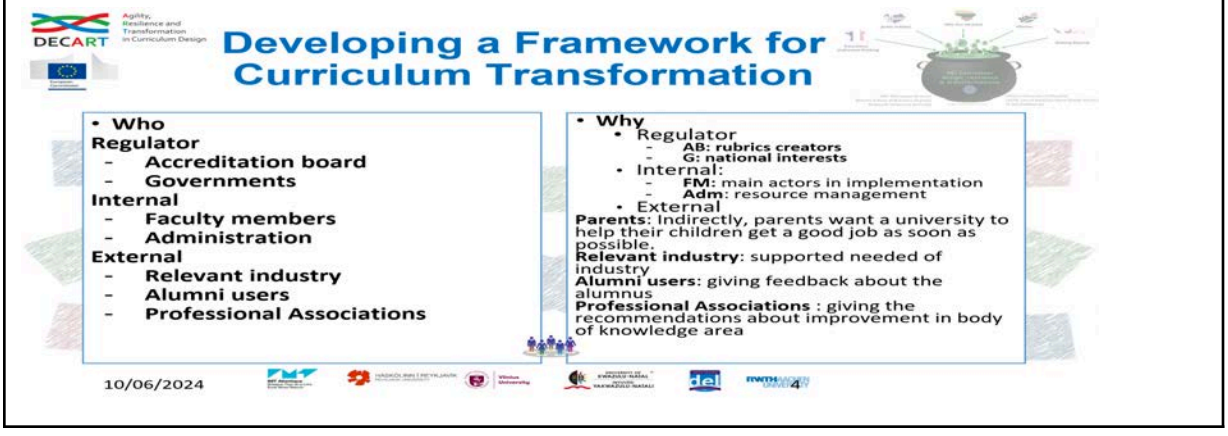



Group 4

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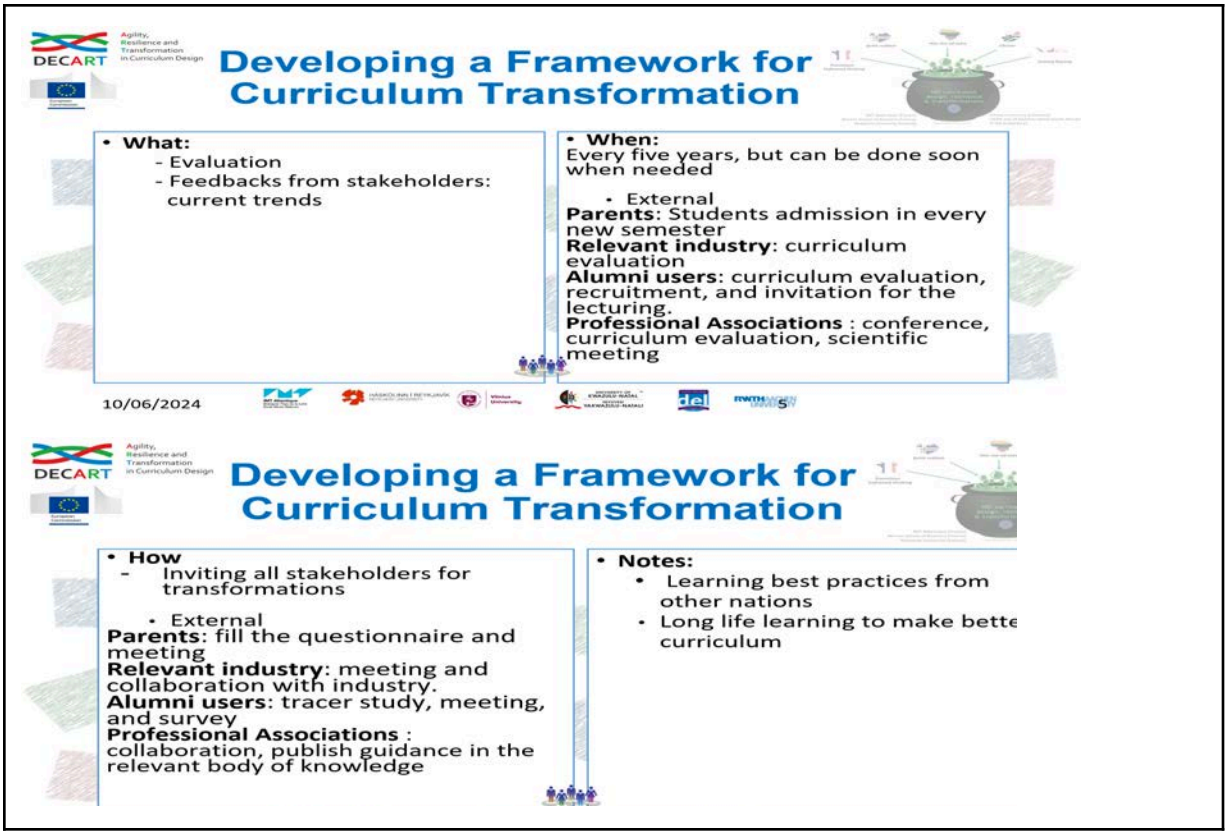


Source: WP3 workshop 2, June 2024

# Appendix 4: Feedback on WP3 workshop 1 by DECART Project Partners

**What did you most enjoy about the workshop?**

- The discussions
- Interactions
- The in-depth discussions and the range of perspectives.
- Interactive
- Group debate

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- Learning about different views and experiences, and that understanding the transformation process is so important in the continuous adaptation of curriculum in HE systems. In addition, it was satisfying to see how the work packages in DECART all make a coherent process, from WP1 to WP3. And on the personal side, I enjoyed seeing how many really enjoyed the discussions and are keen on curriculum transformation.
- Discussion in subgroups and time for restitution, 2 groups were good and sufficient. The tagclouds to initiate discussion on the framework What/Why/How/When. Last time for discussion and take aways of each participants
- Time for exchange, many activities

Source: Excerpts from evaluations of WP3 Workshop 1, May 2024

# Appendix 5: Feedback on curriculum transformation workshop 2 by DECART Project Partners

What did you most enjoy about the workshop?

- Group activities
- Discussion
- The methods used
- Interactive and fruitful discussion
- Discussion and brainstorming about the topic
- Well prepared presentations and guidelines
- Workshop is fun
- To develop the curriculum framework
- Interesting, engaging and easy to understand
- The interactive method and great time management. Input from participants who joined online was great too
- Various tools (mentee, jamboard), rich picture
- Curriculum transformation development
- Group discussions
- Developing a Framework for Curriculum Transformation
- The collaboration
- The interactive aspect and framework
- I like the workflow, initially some brainstorming on what are the stakeholders, and then discussion on what would be the ideal framework.

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- All the knowledge it brought to me and skills, how easy it was to work online

Source: Excerpts from evaluations of WP3 Workshop 2, June 2024

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# Appendix 6: Feedback on curriculum transformation workshop 3 by DECART Project Partners

What did you most enjoy about the workshop?

- Discussion in break out rooms
- Diverse opinions
- Active discussion of new and emerging topics
- Yes, sharing experiences between different countries is always interesting. breakout sessions
- The presentation by Nyna Amin and the discussions that followed. In addition I liked the global view, not only global north or global south.
- Break out room where we can discuss interactively in a small group
- Introduction by the invited speaker

Source: Excerpts from evaluations of WP3 Workshop 3, August 2024

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# Appendix 7: Presentation of DECART WP3 work at Erasmus Days# 2024, Representation by UKZN WP3 team

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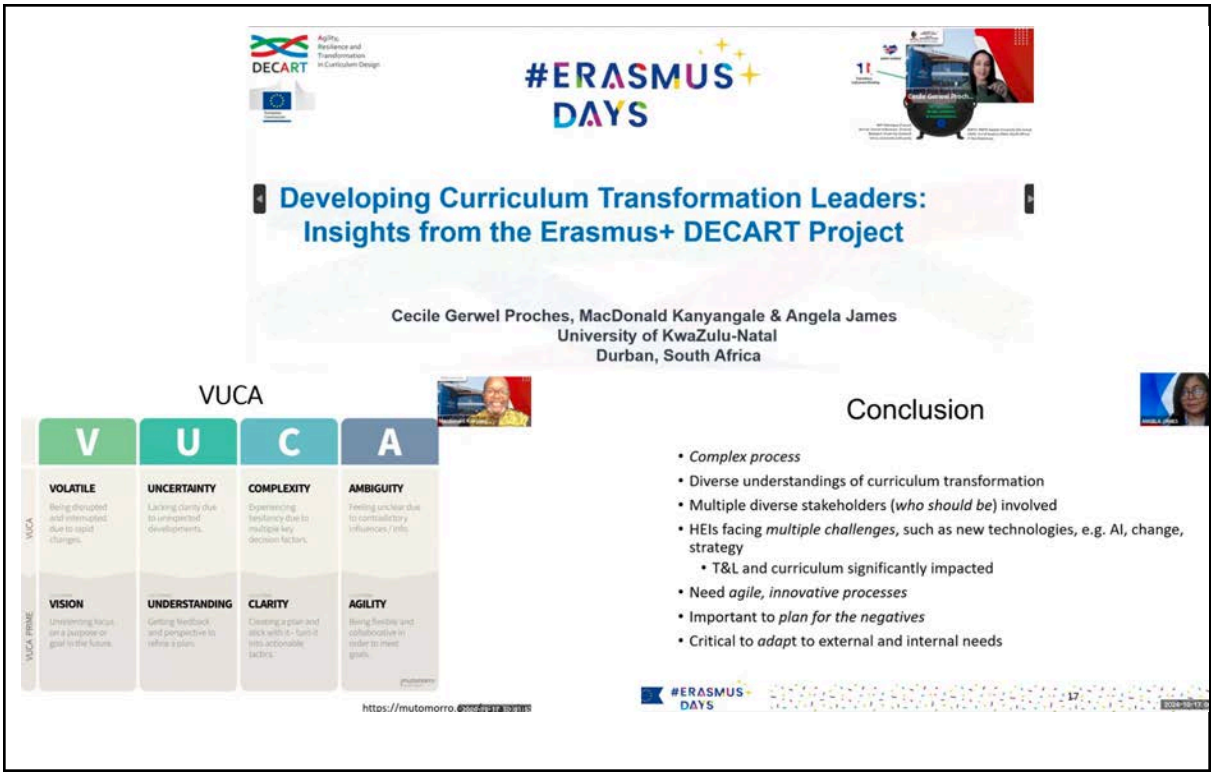


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# Appendix 8: Presentation of DECART WP3 work at the UKZN International Partner Week 2024, Representation by UKZN WP3 team

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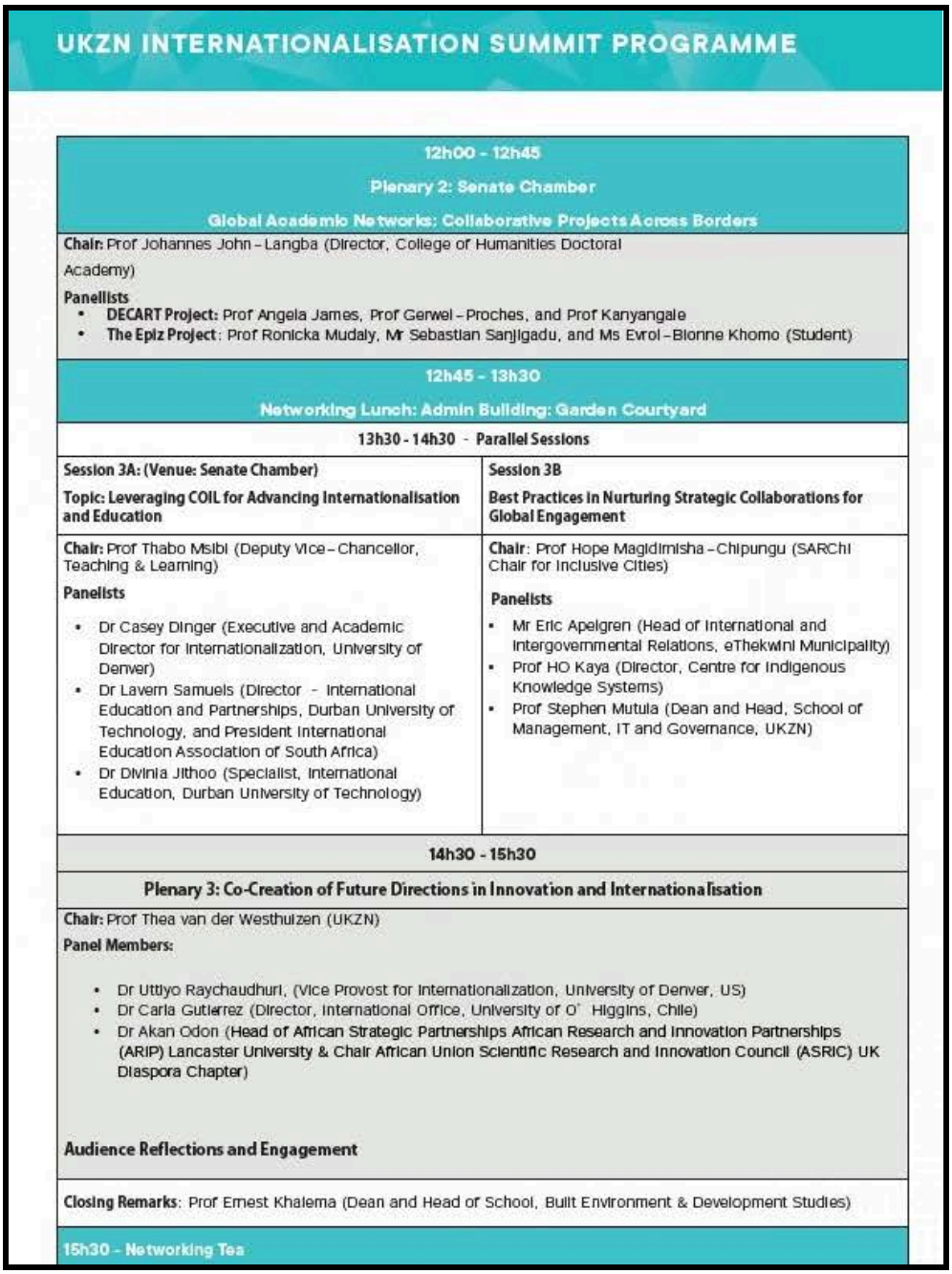

## UKZN INTERNATIONALISATION SUMMIT PROGRAMME

**12h00 - 12h45**

**Plenary 2: Senate Chamber**

**Global Academic Networks: Collaborative Projects Across Borders**

**Chair:** Prof Johannes John-Langba (Director, College of Humanities Doctoral Academy)

**Panellists**

- **DECART Project:** Prof Angela James, Prof Gerwel-Proches, and Prof Kanyangale
- **The Epiz Project**: Prof Ronicka Mudaly, Mr Sebastian Sanjigadu, and Ms Evrol-Bionne Khomo (Student)

**12h45 - 13h30**

**Networking Lunch: Admin Building: Garden Courtyard**

**13h30 - 14h30 - Parallel Sessions**

| **Session 3A: (Venue: Senate Chamber)** | **Session 3B** |
|---|---|
| **Topic: Leveraging COIL for Advancing Internationalisation and Education** | **Best Practices in Nurturing Strategic Collaborations for Global Engagement** |
| **Chair:** Prof Thabo Msibi (Deputy Vice-Chancellor, Teaching & Learning) | **Chair**: Prof Hope Magidimisha-Chipungu (SARChI Chair for Inclusive Cities) |
| **Panellists**<br>• Dr Casey Dinger (Executive and Academic Director for Internationalization, University of Denver)<br>• Dr Lavern Samuels (Director - International Education and Partnerships, Durban University of Technology, and President International Education Association of South Africa)<br>• Dr Divinia Jithoo (Specialist, International Education, Durban University of Technology) | **Panellists**<br>• Mr Eric Apelgren (Head of International and Intergovernmental Relations, eThekwini Municipality)<br>• Prof HO Kaya (Director, Centre for Indigenous Knowledge Systems)<br>• Prof Stephen Mutula (Dean and Head, School of Management, IT and Governance, UKZN) |

**14h30 - 15h30**

**Plenary 3: Co-Creation of Future Directions in Innovation and Internationalisation**

**Chair:** Prof Thea van der Westhuizen (UKZN)

**Panel Members:**

- Dr Uttiyo Raychaudhuri, (Vice Provost for Internationalization, University of Denver, US)
- Dr Carla Gutierrez (Director, International Office, University of O' Higgins, Chile)
- Dr Akan Odon (Head of African Strategic Partnerships African Research and Innovation Partnerships (ARIP) Lancaster University & Chair African Union Scientific Research and Innovation Council (ASRIC) UK Diaspora Chapter)

**Audience Reflections and Engagement**

**Closing Remarks**: Prof Ernest Khalema (Dean and Head of School, Built Environment & Development Studies)

**15h30 - Networking Tea**

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Delegates at the UKZN International Partner Week 2024

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# Appendix 9: Presentation of DECART WP3 work at the 2024 Innovations in the Science of Teaching and Learning Conference, Representation by UKZN WP3 team


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| 1<br>**Automated scoring tools and intelligent feedback systems**<br>Perspectives on advances in assessment methods, including automated essay marking, computer-assisted assessment of assignments and the integration of AI for personalised feedback and recommendations for students | 2<br>**Equity in online/tech learning**<br>Critical reflections and experiences on access and equity in technology-enhanced education, particularly with regard to the digital divide, learning contexts and equitable access for all students. | 3<br>**Innovation through multi-inter-transdisciplinary learning**<br>Theorising innovative approaches that bring together insights from different disciplines and encourage collaboration across disciplinary boundaries. | 4<br>**Language Equity, Diversity, and Inclusion**<br>Exploring potential biases in language teaching, presenting methods for developing academic skills, improving the linguistic accessibility of educational technologies and exploring the benefits of linguistic diversity in educational institutions. | 5<br>**Promoting Diversity and Inclusion**<br>Exploring interventions and outcomes of creating inclusive academic environments, promoting diversity and inclusion. |
| 6<br>**Bridging the digital divide**<br>Identifying and analysing challenges related to technology accessibility and skill inequality that impact on equitable access to modern learning tools. | 7<br>**Innovations in assessment methods and learning analyses**<br>Investigating new assessment techniques, technologies and effective practises that focus on evaluating student learning, providing feedback and utilising data and learning analytics for instructional purposes. | 8<br>**AI for personalised learning**<br>Investigating the use of AI to tailor educational experiences to individual student needs and strengths. | 9<br>**Supporting mental health and wellbeing**<br>Exploring the use of technology and innovative methods to comprehensively assess and support students' mental health and socio-cultural needs. | 10<br>**Preparing students for ethical issues related to new technologies**<br>Exploring strategies to improve students' ability to deal with ethical dilemmas related to new technologies, such as privacy, safety, and bias considerations. |


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Delegates at the 2024 Innovations in the

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Science of Teaching and Learning Conference

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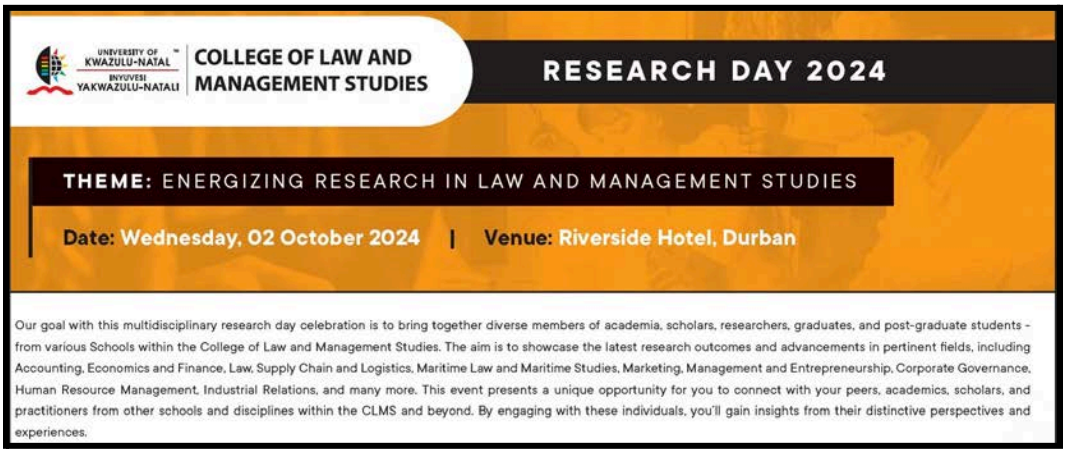
# Appendix 10: Presentation of DECART project at the UKZN College of Law and Management Studies (CLMS) 2024 Research Day, Representation by UKZN WP3 team

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| 08h30-09h00 | CONFERENCE REGISTRATION | | | |
|---|---|---|---|---|
| | **Director of Proceedings: Professor Sheetal Soni** | | | |
| 09h00-09h15 | **Welcome Address**: Professor Managay Reddi, Acting Deputy Vice-Chancellor and Head: College of Law and Management Studies | | | |
| 09h15-09h35 | **Keynote Address**: Dr Edwell Gumbo: Director of Entrepreneurship: Universities South Africa (USAf) | | | |
| 09h35-10h00 | **Keynote Address**: *Dr Michael Sutcliffe:* Co-Director: City Insight | | | |
| 10h00-10h30 | TEA BREAK | | | |
| | **Session 1** | | | |
| **Time** | **Main Room** | **Room 1** | **Room 2** | **Room 3** |
| 10h30-12h30 | From offline to online assessment: Effects on a systems analysis and design course.<br>***Rushil Raghavjee, Rosemary Quilling and Sue Price***<br>*SMIG* | Transformative leadership incorporating practitioner action research in a public healthcare setting<br>***Maseeha Ansermeah***<br>*GSB&L* | The Right to Rehabilitation: An Analysis of South Africa's Prisons and the Need for Evidence-Based Rehabilitation Programmes<br>***Samantha Naidoo***<br>*LAW* | Industry-specific effects of geopolitical risk on the returns of the stock market in South Africa under different market conditions<br>***Sandisele Jaffar***<br>*SAEF* |
| | Enhancing Facial Recognition with Generative AI and Microlearning<br>***Gabriel Kabanda***<br>*GSB&L* | Environmental impact of road freight trucking for sustainable supply chains in the Durban region<br>***Nandipha Ngcobo***<br>*GSB&L* | Is there rehabilitation after impeachment as a judge and public protector in South Africa in South Africa?<br>***Bhaso Yalezo***<br>*LAW* | Do Foreign Equity ETFs Provide Diversification Benefits in South Africa?<br>***Damien Kunjal***<br>SAEF |
| | Exploring Curriculum Transformation: Insights from the Erasmus+ DECART Project<br>***Cecile Proches, Macdonald Kanyangale and Angela James***<br>*GSB&L* | Implementation of E-Health Strategies for Enhanced Public Healthcare at McCords Provincial Eye Hospital<br>**Anele Mkhwanazi**<br>*SMIG* | Integration of Artificial Intelligence in Assisted Reproductive Technologies in South Africa: Navigating the ethical, legal and policy landscape<br>**Nomfundo Mthembu**<br>*LAW* | Comparative analysis of determinants of non-bank financial intermediation in developed (G7) and emerging (BRICS) countries<br>**Lorraine Muguto**<br>*SAEF* |
| | Employee commitment and its impact on organisational performance in the public sector<br>**Sbonelo Ngcobo**<br>*SMIG* | Reimagining Trade and Investment Promotion in South Africa: A Case Study of KwaZulu-Trade and Investment Agency: Governance Challenges and Opportunities<br>***Siyabonga Dlamini***<br>*SMIG* | The game for the throne rages on: Bhekuzulu v President of the Republic of South Africa [2024] All SA 662 (GP)<br>***Siyabonga Sibisi***<br>*LAW* | A novel digital financial inclusion index for the Tripartite Free Trade Area –<br>**Sihlobo Nyoni**<br>*SAEF* |

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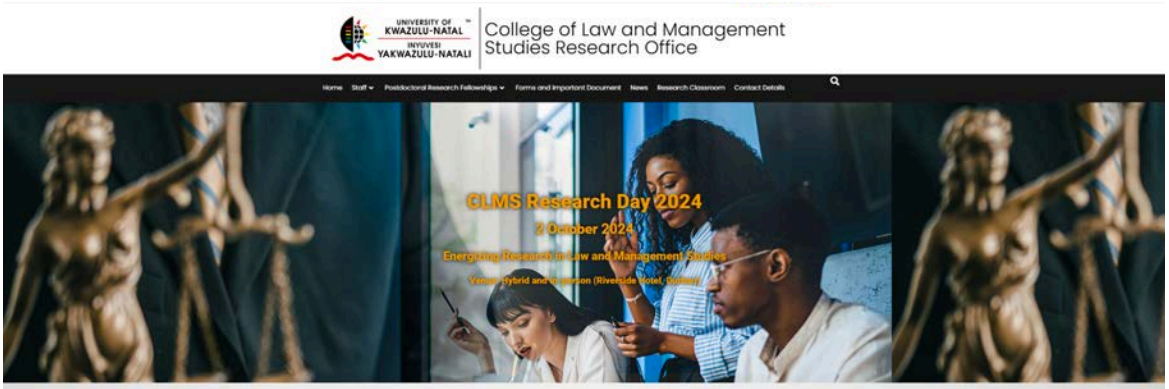
# Appendix 11: Presentation of DECART project at the UKZN College of Law and Management Studies (CLMS) 2023 Research Day, Representation by UKZN WP3 team




The Organizing Committee of the College of Law and Management Studies takes immense pride in extending an invitation to you for the upcoming **College Research Day**. This event is centered around the theme "**Energizing Research in Law and Management Studies"**. Our goal with this multidisciplinary research day celebration is to bring together diverse members of academia, scholars, researchers, graduates, and post-graduate students – from various Schools within the College of Law and Management Studies.

The aim is to showcase the latest research outcomes and advancements in pertinent fields, including Accounting, Economics and Finance, Law, Supply Chain and Logistics, Maritime Law and Maritime Studies, Marketing, Management and Entrepreneurship, Corporate Governance, Human Resource Management, Industrial Relations, and many more. This event presents a unique opportunity for you to connect with your peers, academics, scholars, and practitioners from other schools and disciplines within the CLMS and beyond. By engaging with these individuals, you'll gain insights from their distinctive perspectives and experiences.

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## ORDER OF PROCEEDINGS

| | | |
|---|---|---|
| **11h50-12h00** | **Phiiani Ndimande**<br>GSB&L<br>South African state-owned entity leadership: Examining the impact of emotional intelligence and self-efficacy to business management | **Yeukai Memorial Rudzi**<br>SAEF<br>Impact of COVID-19 pandemic on financial markets in Africa |
| **12h00 -12h10** | **Makhomo Macheli**<br>SAEF<br>Explaining inflation differential between Lesotho and South Africa adopting system-Generalized Methods of Moments | **Christian Chuks Emenike, Ernest Bhero and Bhekisipho Twala**<br>SMIG<br>Post-COVID-19 traffic patterns around higher education institutions: A case study of counting station 1471 |
| **12h20-12h30** | **Albert Makore**<br>SMIG<br>Contextual factors as critical determinants of drug abuse and its impact on academic performance among university students | **Bangeni Masixole**<br>SMIG<br>A comparative examination of technology blended learning approaches used in higher education institutions-notes for South African context |
| **Session 2** | **CHAIR: DR L MUGUTO** | **CHAIR: DR FEMI** |
| **12h30-12h40** | **Adrian Chikowore**<br>SMIG<br>Implications of public private partnerships in the sustainable financing of health infrastructure: Cases of Lesotho and Zimbabwe | **Rilwan F. Mahmoud**<br>LAW<br>Electronically stored information under the United States Federal rules of evidence: A re-analysis |
| **12h40-12h50** | **Halisha Ramlall**<br>SMIG<br>The management of digital education (blended learning) within a South African independent school | **Grace Oluwafunmilayo Obalade and Vuyokazi Mtembu**<br>GSB&L<br>Human resource practices and workplace deviance in higher education institutions |
| **12h50-13h00** | **Cosmas Anayochukwu Nwankwo and MacDonald Isaac Kanyangale**<br>GSB&L<br>Consumerism and drug distribution in South-Eastern Nigeria | **Cecile Gerwel Proches**<br>GSB&L<br>Strengthening higher education curricula for agility, resilience and transformation: An overview of the DECART Project |
| **13h00-14h50** | **BREAK** | |

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# Conference Papers

- Conference paper *"Catalyzing Curriculum Transformation to Advance Industry 5.0 Engineering Education".* Accepted for presentation and publication in IEEE EDUCON 2025.
- Conference paper "*Stakeholder analysis in facilitating curriculum transformation in Engineering Higher Educational Institutions"* submitted to 2025 Engineering Education Conference (currently under review).

# Presentations

- Gerwel Proches, C., James, A., Kanyangale M., Waldeck, R., Auðunsson, H., & Rouvrais, S. (2024). *Unpacking curriculum transformation in Higher Educational Institutions in a volatile, uncertain, complex and ambiguous (VUCA) world: Insights from the DECART project.* Innovations in the Science of Teaching and Learning Conference, University of KwaZulu-Natal. 26-27 September 2024, Durban, South Africa.
- Gerwel Proches, C., James, A., & Kanyangale M. (2024). *Exploring curriculum transformation: Insights from the Erasmus+ DECART project.* UKZN College of Law and Management Studies Research Day, 2 October 2024, Durban, South Africa.
- Gerwel Proches, C., James, A., & Kanyangale M. (2024). *Developing curriculum transformation leaders: Insights from the DECART Project*. #ErasmusDays 2024. Online webinar. 27 October 2024.
- James, A., Gerwel Proches, C., & Kanyangale M. (2024). *The DECART Project.* 3rd UKZN International Week. 30 October 2024, Durban, South Africa.
- Gerwel Proches, C. (2023). Strengthening higher education curricula for agility, resilience and transformation: An overview of the DECART Project.

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UKZN College of Law and Management Studies Research Day, virtual presentation, 12 October 2023, Durban, South Africa.

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# Contributors

DECART project is an inter-institutional collaboration which includes a process in which parties (individuals or institutions) work together to achieve project goals. DECART knowledge is shared through regular open discussion during plenary project and Zoom meetings from January 2024. All DECART partners share values and ideologies around the project objectives. This DECART report, as project WP3 deliverable, is a joint authorship: several authors have participated and whose contributions cannot be separated one from the other. The property of this document content is the one of all the corresponding authors.

| | |
|---|---|
| **Lead Organisation** | WP3 Coordinator: UKZN |
| **Participating Organisations** | European partners: IMTA, RU, RWTH, and VU<br>African partner: UKZN<br>ASEAN partner: ITD |

The 'leader' for WP3 is Cecile Gerwel Proches, University of KwaZulu-Natal (UKZN).

- At UKZN, Cecile Gerwel Proches, Angela James and Macdonald Kanyangale were responsible for the WP3 work and report writing process.

A collaborative project cannot exist without the active involvement of several stakeholders in the partnership. Several members actively collaborated for this first DECART report, formally as subsection producers or during informal discussions during project meetings or when they joined staff training events. They include in country alphabetical order:

In France:

- Nathalie Chelin, Gilles Jacovetti, Siegfried Rouvrais, and Roger Waldeck from IMT Atlantique
- Nedjma Gosselin for graphical designs
- Chantal Puren and Coraline Lozac'h for project administration purposes

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In Germany:

- Carmen Leicht-Scholten, Clara Lemke, and Ann-Kristin Winkens from RWTH Aachen University

In Iceland:

- Haraldur Audunsson and Asrun Mathhiasdottir from Reykjavik University

In Indonesia:

- Arlinta Barus, Humasak Tommy Argo Simanjuntak, Arnaldo Marulitua Sinaga, Inggriani Liem, Sari Silalahi, Eka Stephani Sinambela from IT Del

In Lithuania:

- Valentina Diagene, Vladimiras Dolgopolovas, Egle Jasute and Asta Meškauskienė from Vilnius University

In South Africa:

- Cecile Gerwel Proches, MacDonald Kanyangale, and Angela James, from the University of KwaZulu-Natal (UKZN)
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www.decartproject.eu



Agility,
Resilience and
Transformation
in Curriculum Design

DECART project report, deliverable D31, March 2025

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