engage

Centre for Engaged Education
through Entrepreneurship

Ten Years of SFU Engage

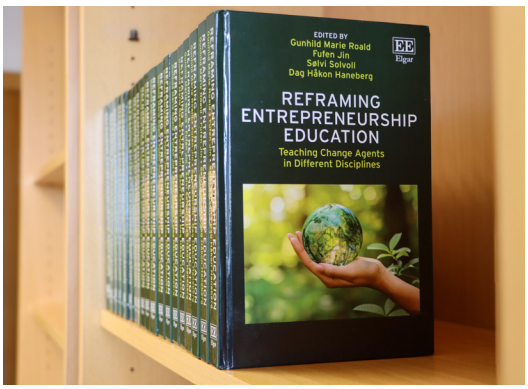
Impact, Insights and Lessons from a Centre for Excellence in Education













NTNU

CENTRE FOR EXCELLENCE IN EDUCATION

NORD University

Table of Contents

Introduction
Impact and Changes
The Way Forward
Reading this Report
Project team and Contributors

1. Student Engagement and Extra-Curricular Activities

1.1 Growth of the Local Student Innovation Ecosystem
1.1.1 Gruva: A Hub for Student-Driven Innovation
1.1.2 Spir: Building a University-Wide Innovation Ecosystem
1.1.3 Spark*: Mentoring for Student Entrepreneurs
1.1.4 Gründerbrakka

1.2 International Contribution to Developing Student Innovation Ecosystems and Collaboration
1.2.1 The Engage Ecosystem Ambassador Programme: International Learning Across Innovation Ecosystems

1.3 Exemplar Events Promoting Innovation and Entrepreneurship
1.3.1 Join a Startup Night
1.3.2 NTNU Student Investor Day
1.3.3 The Business Simulator
1.3.4 Fra Hobby til Levebrød: Making Innovation Relevant for Everyone
1.3.5 Gaming Innovation Hackathon

1.4 Promoting Diversity in Entrepreneurship
1.4.1 Boost Henne
1.4.2 Sector Diversity
1.4.3 Diversity Beyond Sectors

1.5 Funding Sources and Challenges
1.5.1 The Spark* Funding Mechanism
1.5.2 Innovate for better
1.5.3 StageTwo
1.5.4 ArcticNext

2. Curricular Activities and Study-Related Initiatives

2.1 Venture Creation Programmes
2.1.1 FIVER: Building a Venture Creation Programme – Learning by Doing
2.1.2 NTNU School of Entrepreneurship
2.1.3 Setting up Programmes at OsloMet, UiA and HVL

2.2 Life-Long Learning
2.2.1 Health Innovation in Practice: Building Innovation Capacity in the Health Sector
2.2.2 COVID Programme in Entrepreneurship and Business Development for the Unemployed
2.2.3 Intrapreneurship in Healthcare

2.3 Courses for students
2.3.1 VentureCup or Entrepreneurship in Practice
2.3.2 Courses for International Students

2.4 Development of Courses
2.4.1 From Basic Courses to a Portfolio: Expanding and Deepening Train-the-Trainer Offerings
2.4.2 Innovation and Value Creation in the University-wide Course Experts in Teamwork

3. Staff Development

3.1 Train-the-Trainer
3.1.1 Basic Course in Entrepreneurship Education for Higher Education Educators
3.1.2 EngagePed: Building Capacity for Student-Active Learning Across Disciplines
3.1.3 Creating Holistic Innovation Capacity (CHIC)
3.1.4 From Sustainability Challenges to Entrepreneurial Action: SFU Engage's role in CinnovatE

3.2 PhD Courses
3.2.1 Courses on Research-Based Innovation
3.2.2 Knock-on Effects from the PhD Courses Offered by SFU Engage

3.3 Capacity Building of PhD Students within SFU Engage

3.4 Developing Teaching Excellence Through SFU Engage

3.5 Internal Staff Development
3.5.1 Influencing the System and Management
3.5.2 Cultivating Influence, Recognition, and Systemic Impact

4. Conferences and Active Knowledge Sharing

4.1 3E Conference
4.1.1 Hosting the Conference
4.1.2 Contributions to the Conference

4.2 The Venture Creation Program Forum: Building a Global Community for Venture Creation Education

4.3 Other Conferences
4.3.1 ACERE - The Australian Centre for Entrepreneurship Research Exchange Conference
4.3.2 CDIO Conference in Trondheim 2023

5. Publications and Resource Dissemination

5.1 Papers and Publications
5.1.1 Building and Sharing Knowledge Through SFU Engage Publications
5.1.2 Special Issues Initiated and Special Issue Editors
5.1.3 The Campus Pilot for Student Innovation

5.2 Edited Volumes on Entrepreneurship Education
5.2.1 How to Become an Entrepreneur in a Week
5.2.2 Reframing The Case Method in Entrepreneurship Education
5.2.3 Handbook of Research on Entrepreneurial Learning

5.2.4 From Educational Framework to International Reach: The Impact of I-CARE

5.3 SFU Engage Resources
5.3.1 The Engage Resource Hub
5.3.2 Video series: Health Innovation and Engage Talk

5.4 Media Appearances
5.4.1 The Podcast Helseskift
5.4.2 Media Coverage

6. Networking and Collaboration

6.1 External Funding and Partnership-Based Grants
6.1.1 The SUPER Project
6.1.2 Gruva Partners
6.1.3 The Social Innovation Programme - Building a More Diverse Ecosystem for Social Innovation and Entrepreneurship
6.1.4 From Space Research to Student Innovation: Building an Entrepreneurial Space Ecosystem

6.2 The Ally Network

6.3 Research Partners at Chalmers and Lund

6.4 Non-Grant Networks
6.4.1 The Norwegian Forum for Entrepreneurship Education
6.4.2 Teaching Tools for Sustainable Entrepreneurship

6.5 Alumni Engagement
6.5.1 Train-the-Trainer Course Alumni Network: From Informal Ambitions to Structured Communities of Practice
6.5.2 Alumni From Study Programmes

6.6 Cooperation with Other Institutions
6.6.1 The Nordic Five Tech Alliance
6.6.2 Enhance

Appendix A List of Publications
Appendix B Media Coverage

Introduction

Entrepreneurship and entrepreneurial competencies play an important role in addressing societal, organisational and economic challenges. People who are willing to act under uncertainty, take considered risks and develop ideas are needed in many contexts. In a period characterised by technological transformation, demographic change, sustainability challenges and geopolitical uncertainty, higher education institutions face growing expectations to prepare students to navigate complexity, identify opportunities and contribute to positive change.

SFU Engage was established with an ambition to educate change agents in higher education, responding to an explicit policy need in Norway at the time. Preparing students to address environmental and climate challenges, safety concerns, technological opportunities, public-sector needs and wider societal change was central to the centre from the outset. These challenges remain relevant today, and in several respects have become more pressing. As the pace of change accelerates, society needs graduates who can respond constructively and responsibly. Although the centre has developed substantially over its ten-year period, its underlying ambition has remained constant:

«To increase the number of students in Norway and around the world with entrepreneurial skills and mindset to become change agents for the better.»

Over its ten-year period, SFU Engage has contributed to broadening the meaning and reach of entrepreneurship education: from its traditional association with venture creation towards a research-informed educational approach relevant across disciplines, organisations and societal contexts. This development reflects the deliberately inclusive nature of the centre's vision. SFU Engage has worked with students across higher education, not only in business, management and entrepreneurship, but also in fields such as engineering, nursing, design, music and the arts. This breadth is grounded in a central conviction: change does not arise solely through new ventures or start-ups. It is also created from within established private, public and voluntary organisations. The ability to recognise opportunities for positive value creation is therefore relevant across society. Consequently, SFU Engage has worked to make entrepreneurship education meaningful across disciplines and educational contexts, enabling more students to become change agents for the better.

At its core, SFU Engage has been an educational development initiative. Its purpose has not simply been to increase the amount of entrepreneurial activity in higher education, but to improve how students learn to act, reflect, collaborate and create value under conditions of uncertainty. Entrepreneurship has therefore been both the subject of education and a basis for developing more active, experiential and student-centred approaches to learning. Over

the years, we have tested and refined these approaches through curricular, co-curricular and student-led activities. This development has been supported by extensive research, providing a knowledge base for improving our educational practices and strengthening their impact. Close contact with key actors in entrepreneurial ecosystems within and beyond the universities has also allowed us to understand changing needs and put collaboration into practice. The centre has therefore evolved in response to experience, evidence and opportunity, helping SFU Engage remain relevant while contributing across a diverse range of university activities.

As the ten-year SFU period draws to a close, the knowledge, practices and relationships developed through SFU Engage remain highly relevant. This report documents how SFU Engage has driven the development of entrepreneurship education over the past decade, initiating and enabling changes that would often not have occurred, or would not have occurred with the same scope, coherence or momentum, without the centre.

Impact and Changes

On 1 November 2026, SFU Engage marked ten years since being awarded status as a Centre for Excellence in Education. During the decade that followed, the centre tested, developed, explored, learned and, at times, failed, much like the entrepreneurial journeys that inform our work. SFU Engage moved from an initially open and exploratory approach towards a more mature, research-informed and coherent educational practice. The following paragraphs provide a brief overview of this development; the report as a whole offers the fuller account.

SFU Engage brought together the NTNU School of Entrepreneurship, Nord University Business School, NTNU Experts in Teamwork and Spark* NTNU. Together, these partners provided a strong foundation for testing and developing different approaches to entrepreneurship education and building a shared understanding of what such education can involve. This work is synthesised in the Engage Educational Framework, which identifies five interconnected principles: action, reflection, interaction, authentic challenge and embracing uncertainty. A central insight underlying the framework is that action alone is insufficient. Entrepreneurial learning develops through the interplay between action and reflection, through interaction with others, and through engagement with authentic challenges whose outcomes cannot be fully predicted in advance. Developed through sustained collaboration across the centre, the framework has provided a common foundation for educational development. It is also presented in the centre's recent book, with contributions from colleagues within and beyond SFU Engage (see Section 5.2.4 From Educational Framework to International Reach: The Impact of I-CARE).

A further priority has been to strengthen the entrepreneurial ecosystems surrounding students at our institutions. This has involved collaborating with student organisations, supporting the establishment and development of new initiatives, improving facilities, organising events, and sharing knowledge and experience.

In many of these efforts, students have been not only participants, but partners and initiators in developing learning environments, organisations, events and entrepreneurial communities. Their involvement has shaped both the initiatives themselves and the centre's understanding of how entrepreneurial learning can take place within and beyond the curriculum. SFU Engage has also connected campus-based activity with external and regional actors, helping students access wider networks, resources and professional communities. In this way, the centre has treated the learning environment not simply as a collection of courses, but as an ecosystem in which curricular, co-curricular and student-led activity reinforce one another.

Alongside student-led and voluntary activities, SFU Engage has developed programmes and introduced courses that give students further opportunities to learn through entrepreneurship. The centre has also worked to embed entrepreneurial learning across disciplines by helping educators interpret entrepreneurship in relation to their own fields and integrate relevant approaches into their courses. Related offerings for educators, researchers and other university employees have extended this work beyond student education, introducing participants to entrepreneurial ways of thinking and acting in teaching, research and innovation.

Research and systematic inquiry have been central to the centre's development. More than 20 PhD candidates have been affiliated with SFU Engage, and researchers associated with the centre have contributed to more than 130 journal articles, book chapters and books. This work has strengthened the knowledge base underlying the centre's educational activities and informed their continued development. Knowledge has also been shared through courses, seminars, conferences, networks, digital resources and direct collaboration. SFU Engage has contributed to the development of entrepreneurship education initiatives in Norway and supported the adaptation of models such as Spark* NTNU at other campuses and institutions in Norway and internationally.

The partnership between NTNU and Nord University has been important to this work, enabling SFU Engage to develop and refine ideas across different institutional, disciplinary and regional contexts. It has also reinforced an important lesson: educational practices cannot simply be transferred unchanged from one setting to another. Meaningful dissemination requires interaction, adaptation and local ownership. SFU Engage has therefore approached dissemination not only as the sharing of resources and results, but as a collaborative process through which ideas and practices are interpreted, tested and further developed in new contexts.

The remainder of this report presents impact stories from activities conducted across the ten-year period. Together, they show how SFU Engage has worked to make entrepreneurship a more established and accessible part of higher education through changes in courses, programmes, educational practices, staff development, facilities, networks and institutional perspectives. They also illustrate different forms of impact: direct participation and outputs; changes in practice and organisational arrangements; the adaptation of ideas in new contexts; and longer-term developments that cannot always be captured through counts alone.

Taken together, these developments represent more than a portfolio of individual activities. They have built educational, organisational and research capacity in the form of knowledgeable staff, scholarly communities, student environments, courses and programmes, physical meeting places, institutional relationships and a shared language for entrepreneurial learning. This capacity is one of the centre's most important legacies and provides the foundation for continued development beyond the SFU period.

The Way Forward

Since 2023, SFU Engage has been working on its Eternity Strategy, the centre's plan for ensuring that key activities, knowledge and communities continue beyond the SFU funding period. Five areas within the centre's three domains of Students, Education and Research have been prioritised: sustaining entrepreneurial ecosystems for students; train-the-trainer activities for educators who wish to embed entrepreneurship across disciplines; PhD courses and staff development in research-based innovation and entrepreneurship; continuing education in entrepreneurship for different professional and disciplinary contexts; and internationally recognised research on entrepreneurial learning and development. All five areas will continue in new organisational forms.

At NTNU and Nord University, continued attention will be given to developing entrepreneurial ecosystems for students. Facilities and communities such as Gründerbrakka, Spir and Gruva will continue to evolve alongside student-led initiatives supported by committed faculty and professional staff. Educator development will also continue through established offerings, including the university-pedagogy courses at NTNU and the legacy of EngagePed at Nord University, as well as new activities intended to strengthen the integration of entrepreneurial learning across educational contexts.

At NTNU, PhD courses in research-based innovation will be offered at introductory and advanced levels. These will be complemented by mentoring for researchers seeking to explore the commercial potential of their work and by a business bootcamp designed to support further development where appropriate, as a complement to existing technology-transfer services. At both NTNU and Nord University, continuing education will remain an important means of bringing entrepreneurial perspectives into a range of professional contexts. Research activity will likewise continue, building on the capacity, collaboration and scholarly communities developed during the centre period while opening new lines of inquiry.

Reading this Report

This report has been written to summarise, showcase and share the results and lessons from SFU Engage's ten years as a Centre for Excellence in Education. It is intended for the many stakeholders who have been involved in, contributed to or may benefit from the centre's work. Students and student organisations, educators within entrepreneurship and other disciplines, researchers in entrepreneurship education, university leaders, policymakers and external partners should all find topics and examples of relevance to their interests and activities.

While we encourage readers to explore the report as a whole, it has also been designed to make it easy to identify and examine particular areas of interest. The report is organised around six clusters of activities, each representing an important dimension of the centre's work:

- Student Engagement and Extra-Curricular Activities
- Curricular Activities and Study-Related Initiatives
- Staff Development
- Conferences and Active Knowledge Sharing
- Publications and Resource Dissemination
- Networking and Collaboration

Together, these chapters cover activities within SFU Engage's three focus areas of Students, Education and Research. They provide insight into what has been developed, how our work has evolved, what we have learned, and the impact these efforts have created. Readers interested in student activities, educational development, entrepreneurship education research or institutional collaboration can therefore follow the relevant chapters and subsections, while also seeing how the different parts of the centre's work have reinforced one another.

We hope that what follows will be inspirational, interesting, relevant and, perhaps, thought-provoking. Regardless of where you enter the report, we hope that you find something of value and that our experiences can inform and inspire further development beyond SFU Engage and its ten-year centre period.

Enjoy the read.

Torgeir Aadland
Centre Director

Project team and contributors

The Engage Impact Project team consists of Malin Toften Mangersnes, Torgeir Aadland, Marianne Arntzen-Nordqvist, Håvard Engen, Astrid Feddersen, Fufen Jin, and Maria Kourkouli. The team is responsible for the overall planning, coordination, and implementation of the project.

The project has relied extensively on contributions from Engage staff and partners, who have provided documentation and photos, shared their experiences and insights, helped identify evidence of impact, and reviewed individual impact stories. The project team has worked closely with these contributors to ensure that the final documentation reflects the breadth of Engage's activities and achievements throughout the Centre period.

The following individuals have contributed to the development of this report through their input, documentation, review and/or contributions to individual impact stories.

List of contributors (in alphabetic order)

Lise Aaboen
Torgeir Aadland
Marianne Arntzen-Nordqvist
Maiken Stensaker Emilsen
Håvard Engen
Ragnhild Nordeng Fauchald
Astrid Feddersen
Eleni Georgiadou
Dag Håkon Haneberg
Elise Hamnes Høvik
Fufen Jin
Line Mathilde Karlsen
Nils Magne Killingberg
Ingeborg Landsem Kjelvik
Jicky Lullies
Malin Toften Mangersnes
Sara Maryami
Gunn-Berit Neergård
Gunhild Marie Roald
Lars Reyes-Gjølme
Vivek Sinha
Ingrid Berg Sivertsen
Simon Sætre
Jakob Brattli Sørensen
Roger Sørheim
Mukesh Hasirumane Venkatesh
Elli Verhulst
Vårin Vaskinn
Øystein Widding
Åshild Wilhelmsen
Stephanie Zepeda

All photographs are by SFU Engage unless otherwise noted.

Design by:

Designhjelpen

1 Student Engagement and Extra-Curricular Activities

SFU Engage has worked to increase student engagement in innovation and entrepreneurship through a wide range of extra-curricular activities, student-led initiatives, and ecosystem-building efforts. Through innovation hubs, mentoring schemes, international collaborations, entrepreneurship events, diversity initiatives, and funding mechanisms, the centre has created opportunities for students to develop entrepreneurial skills, gain practical experience, and engage with real-world challenges outside formal education.

The activities and initiatives described in this chapter illustrate the breadth of these efforts and their impact on individuals, institutions, and the wider ecosystem. They highlight how SFU Engage has helped build strong student innovation communities at NTNU and Nord University, strengthened connections between students and external stakeholders, and contributed to a culture in which innovation, entrepreneurship, and value creation are increasingly viewed as relevant for students across all disciplines.

1.1 Growth of the Local Student Innovation Ecosystem

SFU Engage has been a part of developing and facilitating the student innovation ecosystems at NTNU and Nord University. At NTNU, SFU Engage have been a part of the “Campus Pilot for Student Innovation” project (2020-2025) [5.1.3] established by NTNU with its partners (SpareBank 1 SMN, Equinor, DNB and Element Logic) [6.1.2]. SFU Engage has contributed to developing the venue for innovation called Gruva (Eng. “The mine”) as well as facilitating and supporting the organisation Fram and the rest of the student innovation community. A specific focus for SFU Engage has been on developing the “Founder journey” - a cluster of student driven services provided to student entrepreneurs as support for business development, including both financial support and mentoring. SFU Engage serves as a bridge between NTNU management and students, as well as local contact point for external collaborators on behalf of the students and student organisations, making sure that offerings and activities related to innovation are made for and targeted to the student community. SFU Engage’s student innovation community management has been vital in the negotiation of continued financial support and knowledge contribution from partners after the pilot ended in 2025.



Marta Lindvert presenting the FIVER Master’s Programme during the ALLY Conference in Bodø. *Photo: Håvard Engen.*



Workshops at Gruva at NTNU. *Photo: Peter Nystoyl.*

At Nord University, SFU Engage has developed the innovation initiative Spir. The original Spir initiative was established through a collaboration between Nordland County Council and Nord University. Through SFU Engage’s efforts, Spir has developed into a central physical location on campus reaching students from all faculties and a hub for innovation at Nord University. This development has contributed to changing the culture of innovation at Nord University by establishing Spir as a university-wide arena where students and staff from diverse disciplines explore ideas, develop solutions, and create value for society.

An example of an initiative reaching far beyond SFU Engage is the student driven initiative Spark*. SFU Engage has contributed to the initiative by connecting it to academic programmes and interdisciplinary learning arenas. SFU Engage has further contributed by systematising and documenting the Spark* model, enabling its transfer both nationally and internationally.

In addition to supporting current students, SFU Engage has also contributed to strengthening the transition from student to entrepreneur. Through Gründerbrakka, former students are able to maintain links to university resources,



Students interacting with the organizations from NTNU's innovation ecosystem.
Photo: Oda Laugerud Grusd.

networks, and entrepreneurial communities while continuing to develop their ventures after graduation.

1.1.1 Gruva: A Hub for Student-Driven Innovation

Gruva operates as a venue for student driven and/or student targeted innovation events and has its own identity and "vibe" compared with traditional university lecture halls. The venue is operated by students to ensure ownership among the next generation of change agents and to spark creativity among the students. This also creates a readily accessible environment for collaboration between student organisations and external contributors of knowledge, competence and funding. In addition to being a venue for innovation events and activities it also serves as an alternative study hall and a venue for meetings and group work. The space is furnished with six "pods", each able to accommodate groups of five to eight people. Four of the pods are mobile in order to enable more floor space for audience in front of the stage and presentation screen. Gruva as a venue can host up to 200 standing, and 100 seated participants.

SFU Engage's contribution to Gruva is operating as the student innovation ecosystem manager and facilitator on behalf of NTNU. This includes providing guidance and counselling to the extra- and co-curricular student organisations working with innovation and/or entrepreneurship at NTNU, maintaining the venue, providing economic and administrative support, co-hosting and producing events together with or on behalf of NTNU and external actors.

To facilitate the student innovation ecosystem, SFU Engage works closely with the student organisation FRAM NTNU. FRAM is a student-driven organisation that works as the umbrella organisation for the innovation and entrepreneurship ecosystem at NTNU. It was established in 2016 as a continuation of NTNU's Centre for Student Innovation, with the intention of supporting and connecting student-led initiatives across different disciplines. Today, FRAM brings together nearly 30 student organisations working in innovation, technology development, entrepreneurship, and social impact. In addition to creating networking and development opportunities for students, the organization operates Gruva, where students meet, collaborate, and develop new ideas and projects. Through infrastructure, community-building activities, events, and collaboration opportunities, FRAM plays a central role in fostering innovation among students and helping transform ideas into projects and startups.

The last five years have seen an increase in the number of student organisations joining the innovation ecosystem, as well as an increase in popularity and the use of Gruva and its associated spaces. Gruva and the campus pilot has had a positive impact on student engagement. According to the Current-state Analysis of the Campus Pilot1, there has been an increase in engagement, both in the number of events, and in the number of participating students at the events. Qualitative data also indicated an increase in quality of the various events. The assessment also indicated an increased cooperation between the various student organisations that is involved in student innovation at NTNU, which increases both the robustness and quality of the ecosystem.

1.1.2 Spir: Building a University-Wide Innovation Ecosystem

Innovation hubs have become increasingly important in higher education as dedicated arenas for experiential learning, interdisciplinary collaboration, and engagement with external stakeholders. By providing accessible spaces for idea development and experimentation, such hubs help students translate knowledge into action while strengthening universities' contributions to innovation and societal value creation. Spir is Nord University's innovation hub and a central element in SFU Engage's long-term work to strengthen student innovation and entrepreneurial learning across the institution.

While Spir officially opened in its new facilities in January 2025, its story began much earlier. The original Spir initiative was established through a collaboration between Nordland County Council and Nord University and was initially located within the Business School before later moving to Mørkvedgården. Although the initiative provided valuable opportunities for highly motivated students, its peripheral location and close association with business education limited both visibility and reach. Many students and staff across the university remained unaware that the innovation hub existed.



When SFU Engage assumed responsibility for Spir in 2017, the ambition extended far beyond creating new facilities. The goal was to transform Spir from a business-oriented initiative into a strategic, university-wide platform for student innovation. This required both physical and cultural change.

SFU Engage led the development of new facilities in Torggården at the centre of campus, creating an accessible and visible meeting place for students, staff, and external stakeholders. The facilities include the Idélab for workshops and project work, the Kafé as a social meeting place, and the Inkubator for early-stage student startups, including ventures emerging from the university's venture creation programmes.

However, SFU Engage recognised that infrastructure alone would not have an impact. A key challenge was ensuring that innovation became relevant to students and staff across all five faculties. Historically, entrepreneurship activities had largely been associated with business students. SFU Engage therefore worked strategically to broaden both the language and activities connected to Spir. By emphasising creativity, problem-solving, societal value creation, and interdisciplinary collaboration rather than narrow business terminology, Spir was positioned as a learning arena for the entire university.

[1] https://www.ntnu.no/documents/1272503658/0/Ståstedsanalyse+for+Campuspilot+for+Studentinnovasjon.pdf/c478e892-2f68-d0aa-252f-b6e9999fed7b?t=1757534636782

The role of SFU Engage staff has been crucial throughout this process. Dedicated employees have actively facilitated activities, mentored students, built relationships across faculties, connected students with external partners, and ensured continuity in the ecosystem. Their presence has been essential in transforming Spir from a physical space into a living innovation community.

> “The role of SFU Engage staff has been crucial throughout this process.

The first full operational year demonstrated the results of this approach. During 2025, more than 30 activities were organised at Spir, generating close to 1,000 participant visits. A major priority was awareness-building and lowering barriers to participation. As part of Nord University’s orientation programme, approximately 100 new students were introduced to Spir through a creative challenge, ensuring that students from all study programmes encountered the innovation hub early in their university journey.

To further encourage engagement, SFU Engage established SpireOnsdag, a weekly open-house concept where students and staff could visit Spir for coffee, waffles, and informal conversations about ideas and opportunities. During 2025, 20 events attracted approximately 300 visits, creating a steady flow of both new and returning participants.

Another important initiative was the event series From Hobby to Livelihood. Through six short and accessible talks, participants met individuals who had transformed personal interests, passions, and ideas into meaningful careers, businesses, or social initiatives. More than 100 participants attended the series, which challenged traditional perceptions of entrepreneurship and demonstrated that innovation can emerge from many different disciplines and life situations. Importantly, the series attracted students and employees from across all faculties, helping position innovation as relevant for the entire university community.

Spir has also served as a platform for larger events and conferences. One notable example was She Leads, organised in collaboration with KPB in March 2024. The conference focused on women’s entrepreneurship and leadership and brought together more than 170 students, university staff, entrepreneurs, and industry representatives. Through personal stories, leadership insights, and discussions on allyship and systemic barriers, the event created a space for reflection, inspiration, and networking. The conference reached full capacity with minimal marketing efforts, demonstrating both the relevance of the topic and Spir’s growing role as a trusted arena for dialogue and community building.



Opening of Spir. *Photo: Adrian Brunborg.*



Beyond these flagship initiatives, Spir has hosted a broad portfolio of workshops, guest lectures, networking events, student-led activities, innovation challenges, and ecosystem gatherings. Many activities have been developed through collaboration between students, employees, public-sector organisations, businesses, and support actors. This collaborative approach reflects a core principle of SFU Engage’s educational philosophy: innovation emerges through interaction between different perspectives, disciplines, and sectors.

Spir has also hosted more specialised innovation activities. The international Space Hackathon brought together students and participants from different countries to work intensively on space-related innovation challenges. The ArcticNext Student Challenge connected students from Nord University and Memorial University in Canada to collaborate on innovation challenges relevant to northern regions, strengthening both international collaboration and student engagement.

Today, Spir functions as much more than a physical space. It has become a shared arena where students, educators, entrepreneurs, public-sector organisations, and industry representatives can meet, exchange ideas, and develop new initiatives. Staff from multiple faculties increasingly use the facilities for workshops, teaching activities, and student projects. This growing ownership among employees is particularly important, as staff act as ambassadors who encourage student participation and integrate innovation-related activities into educational programmes.

The impact extends beyond the university itself. A particularly important contribution has been SFU Engage’s role in the regional network Gründerhjelperne Salten. The network brings together key support actors for entrepreneurship and business development, including Innovation Norway, NAV, KPB, Bodø Municipality, Skatteetaten, and other public and private organisations. Together, these actors work to simplify the entrepreneurial journey by providing coordinated guidance, expertise, and access to relevant resources. Through this collaboration, students and aspiring entrepreneurs connected to Spir can more easily find the right support at the right time.

The network also co-organises Arctic Innovation Week, an annual regional innovation festival that connects students, startups, businesses, and public-sector actors through a broad range of events and activities. Through collaborations with organisations such as Coop Nordland, DNB, Ungt Entreprenørskap, KPB, Inno_vation Norway, and many others, Spir has strengthened the connections between higher education, entrepreneurship, and regional development.

Nationally, Spir contributes to the development of student innovation ecosystems through networks such as ALLY. In 2025, SFU Engage hosted a national ALLY seminar at Spir **[read more about ALLY in 6.2]**, bringing together representatives from higher education institutions across Norway to share experiences and explore how innovation hubs can support student engagement and ecosystem development.

The perhaps most significant impact of Spir cannot, however, be measured solely through participation numbers. The development of Spir has contributed to changing the culture of innovation at Nord University.

What was once perceived as a resource primarily for business students is increasingly bec_ oming a university-wide arena where students and staff from diverse disciplines explore ideas, develop solutions, and create value for society.

Through a combination of dedicated infrastructure, long-term strategic development, committed staff, strong eco-system partnerships, and inclu-sive activities, Spir demonstrates how a university innovation hub can foster entrepreneurial mindsets, strengthen inter-disciplinary collaboration, and empower students to become active contributors to societal change.

In this way, Spir has become both a symbol and a practical expression of SFU Engage's vision of empowering students to create value for the better.

1.1.3 Spark*: Mentoring for Student Entrepreneurs

Spark*[2] is a free mentoring service for students, establi-shed in 2013 through a col-laboration between Trønder-Energi (now Aneo) and the Norwegian University of Science and Technology. Since its establishment, Spark* has become Europe's largest student-run advisory organisa-tion. Spark* mentors more than 60 startups and has over 30 employees, all of whom are students from a wide range of academic backgrounds.

The initiative was designed to engage students across disciplines in innovation and entrepreneurship by providing accessible support for early-stage ideas through guidance, funding opportunities **[1.5.1 Spark* funding mechanism]**, and access to networks. Spark*



Stephanie, the leader of Spark*Nord, is ready to advise students. *Photo: Håvard Engen.*

formally launched in January 2014 in Trondheim and is open to students from all faculties seeking to explore and develop new ideas. SFU Engage has played a central role in advancing Spark* beyond its initial scope through coordinating, supporting and researching the initiative.

The impact of Spark* is evident in both activity levels and outcomes. In 2025, 145 new startups were registered, the highest number recorded in a single year, while 1,800 hours of individual guidance were delivered, representing a 230% increase since 2023. These figures indicate a substantial strengthening of both capacity and student engagement. At the same time, Spark* functions as a learning environment where early-stage ideas are systematically tested and refined. While many projects conclude during the validation phase, a considerable number progress beyond the programme as alumni ventures, contributing to innovation and value creation beyond the university context. Spark* has demonstrated its ability to support ventures with significant real-world impact. For instance, companies such as Tise, reMarkable, and Native have all received guidance through Spark*. In September 2025, Tise was acquired by eBay for approximately 1.3 billion NOK, highlighting the commercial potential of ventures supported through Spark*.

Spark*Nord was established at Nord University in 2019 as a sister student organisation to Spark* NTNU. The initiative emerged when students with business ideas identified a gap in the support available to student entrepreneurs and saw an opportunity to create a similar offering inspired by the successful model at NTNU. Initially led by Michal Meyer Nilsen and later by Ole Albrekt, Spark* Nord expanded its activities to Nord University's campus in Mo i Rana. The organisation adopted a professional structure with paid student positions, creating clear expectations regarding responsibility and quality.

From the outset, Spark* Nord aimed to serve as a tool for helping students develop and realise their ideas. In addition to mentoring, they organised a range of activities, such as pitching events and competitions. These events brought together students from Nord University and UiT campus Bodø. At the same time, the organisation developed strong connections with Bodø's entrepreneurship ecosystem through collaboration with the network Gründerhjelperne. This collaboration contributed to the establishment of Arctic Innovation Week, previously known as Gnist Gründeruke. During the COVID-19 pandemic, event-based activities were significantly reduced, and the organisation shifted its focus towards mentoring and one-to-one support. Following the pandemic, leadership changed and fewer student startups entered the ecosystem, prompting Spark* Nord to adapt its activities. Join a Startup Night evolved into Make a Startup Night, a successful concept that presented participants with challenges from different industries and encouraged the development of new ideas, ventures, and entrepreneurial teams. While comprehensive statistics are not available, it is estimated that Spark* Nord has supported well over 100 startups since its establishment.

As part of the CHIC project **[3.1.3]** SFU Engage contributed to disseminating Spark* practices to other European institutions, and Spark*Nord have initiated SHIFT, a project that offers free mentorship and guidance to Ukrainian refugees who want to start their own businesses in Norway **[1.4.3 Diversity beyond sectors]**. Spark* was further extended to NTNU Ålesund in 2026. This development reflects both growing demand and the adaptability of the model across institutional contexts. Since 2016, a total of 1,017 startups have been registered at NTNU, with 136 still active as of March 2026.



Spark* leader Siri in the Co-working space. Room to work and to think about the next big idea. *Photo: Håvard Engen.*





Spreading the word about Spark* services to a group of students

[2] https://sparkntnu.no/

[3] Fauchald, R. N., Aaboen, L., & Haneberg, D. H. (2026). How extracurricular entrepreneurship initiatives foster entrepreneurial learning: A synthesis of research on the student mentoring program Spark. In G.M. Roald, F. Jin, S. Solvoll, & D. H. Haneberg, Reframing entrepreneurship education: Teaching Change Agents in Different Disciplines (pp. 151–170). Edward Elgar Publishing. https://doi.org/10.4337/9781035345274.00017

Through its continued development, Spark* has become an important instrument through which SFU Engage generates measurable impact. It strengthens the connection between education and practice, fosters an entrepreneurial mindset among students, and supports the development of graduates who are equipped not only to enter the labour market, but to create new opportunities within it. Spark* is thus a central partner in SFU Engage's work to engage and support student entrepreneurs. Research indicates the importance of structures in the ecosystem to make such initiative work. The actions, conditions and mechanisms operating within and between curricular and extracurricular activities need to be considered when establishing initiatives such as Spark*[3].

These insights have been extensively communicated to research communities, educators and university managers around the world, due to high interest in adapting a Spark* initiative to their university. As such, Spark* and the role of SFU Engage in coordinating, supporting and researching the initiative have had an international impact. These activities have positioned Spark* within a broader entrepreneurship education ecosystem, linking it to academic programmes and interdisciplinary learning arenas. SFU Engage has further contributed by systematising and documenting the Spark* model, enabling its transfer both nationally and internationally.

1.1.4 Gründerbrakka

Gründerbrakka was established at NTNU in 2018 as a workspace and community for start-ups developed by former students. The idea emerged through a lunch session between SFU Engage and students from the NTNU School of Entrepreneurship, where the students identified a gap in the entrepreneurial ecosystem surrounding the university. While students had access to courses, networks, laboratories, academic expertise, and other resources during their studies, this connection became more difficult to maintain after graduation.

For student entrepreneurs, graduation did not necessarily coincide with the point at which their ventures were ready to operate independently from the university environment. Many still needed access to technical expertise, relevant facilities, potential collaborators, and the wider networks surrounding NTNU. At the time, however, there was no dedicated place where former students could continue developing their ventures while maintaining a connection to these resources.

Gründerbrakka was developed in response to this need. It provided selected start-ups with a temporary workspace close to campus, creating a transition between being a student and becoming a full-time entrepreneur. The initiative was not primarily based on advanced facilities, but on providing a place where ventures could work alongside one another and remain connected to the university environment.

Over time, Gründerbrakka developed into a community as well as a workspace. The participating ventures represented different industries and disciplinary backgrounds but shared many of the same challenges associated with developing an early-stage company. Working in proximity made it easier to exchange knowledge, seek advice, and make use of one another's experiences and networks. It also allowed former students to stay connected to current students, faculty members, and relevant academic environments.

In this way, Gründerbrakka has functioned as a bridge in two directions. Former students have remained connected to knowledge, competence, and infrastructure at NTNU, while their ventures and entrepreneurial experience have remained accessible to students and academic communities at the university. The initiative has also provided a point of connection between the university and the wider entrepreneurial ecosystem, including mentors, investors, support organisations and industry partners.

Gründerbrakka will continue as part of Kaupang, the planned innovation and entrepreneurship environment in NTNU Campus development. Its inclusion in Kaupang will give Gründerbrakka a permanent and more integrated place within NTNU's innovation infrastructure. Located alongside laboratories, academic environments, students and other innovation activities, Gründerbrakka can continue to connect former students and their ventures with relevant resources at the university, while also providing a bridge to the wider entrepreneurial ecosystem.

What began as a need identified by students in a lunch session with SFU Engage has thus developed into a lasting part of NTNU's entrepreneurial infrastructure. Gründerbrakka illustrates how student input,



The next generation of innovators from Talent Trøndelag visiting the entrepreneurs at Gründerbrakka. *Photo: Håvard Engen.*

university resources and the centre's ability to initiate and support new activities have combined to address a specific gap in the entrepreneurial journey beyond graduation.

1.2 International Contribution to Developing Student Innovation Ecosystems and Collaboration

Through the years SFU Engage has been involved in several bilateral and multilateral projects focusing on developing opportunities for student entrepreneurs by disseminating knowledge and experience from student innovation ecosystem development at NTNU and Nord University. One of the major examples is the EU funded project CHIC **[3.1.3]**. Part of this project was the establishment of Spark* mentoring service and Train-the-trainer courses by SFU Engage abroad, to help university partners develop a foundation for their own student innovation ecosystem. Currently, Nord University is a partner in the European initiative CinnovatE **[3.1.4]**. Through SFU Engage, Nord University contributes as an entrepreneurship and innovation partner, sharing experience in entrepreneurial education, student innovation and collaboration with external stakeholders, particularly focusing on course development and ecosystem building.

An initiative situated within SFU Engage is the Engage Ecosystem Ambassador Programme. This is an example of learning and continued development through knowledge-sharing, where students from our local innovation ecosystems travel abroad and return with new knowledge and opportunities for collaboration.

1.2.1 The Engage Ecosystem Ambassador Programme: International Learning Across Innovation Ecosystems

Recognising the importance of understanding and learning from innovation ecosystems beyond our own institutional and national contexts, we established the Engage Ecosystem Ambassador Programme. The programme aims to systematically explore and compare innovation ecosystems around the world with those at Nord University and NTNU. By identifying similarities, differences, and complementary strengths, the programme aims to uncover new opportunities for collaboration and inspire the development of initiatives that can further strengthen our own innovation ecosystems.

A key ambition of the programme is to leverage students'



international mobility as a source of structured learning and ecosystem development. The resulting ecosystem reports are not only used internally by SFU Engage but are also made available to other students considering study or research stays abroad. Participating students receive financial support to cover travel-related costs, along with guidance on additional funding opportunities. In return, they conduct a structured mapping of the innovation ecosystem at their destination, typically in connection with travel undertaken for other academic or professional purposes. To ensure relevance and quality, ambassadors are required to be actively involved in, or have prior experience from, the student innovation ecosystem at NTNU or Nord University.

Since the programme was approved by the SFU Engage management group in 2025, 14 individuals or student groups have been accepted as ecosystem ambassadors. As of August 2026, two groups are about to present their findings, while one ambassador has yet to travel. There is also interest in the programme for 2027. The programme has already generated valuable outcomes. Eleven ecosystem reports have been submitted to date, and their key findings and the ambassadors' recommendations are currently being synthesised into a summary report. The summary report and individual reports are made available at SFU Engage's website[4].

Beyond documentation, the student ambassadors have returned with concrete suggestions for new initiatives to promote entrepreneurship and innovation at NTNU. These include ideas for making a clearer path from early-stage support to scale-up funding, closer and more structured industry collaboration, broader access to entrepreneurship education across all fields of study and strengthened international exposure through short-term exchanges and partnerships. Two tangible outcomes have already followed. In spring 2026, NTNU hosted visitors from the innovation ecosystem in Sapporo, which is the first ecosystem explored through the Engage Ecosystem Ambassador Programme **[2.3.2 Courses for international students]**. Insights from university innovation systems abroad also aided in defining Venture Trondheim, founded in 2025 as a student organization to support early-stage university-based startups in the pursuit of their first investment.

Beyond these concrete outcomes, the programme has proven to be an efficient way of gaining first-hand insight into how student innovation ecosystems are developed and supported elsewhere in the world. The ambassadors represent NTNU's innovation community well, and have also built lasting connections on NTNU's behalf, as illustrated by the Hokkaido visit, turning a single mapping exercise into a cross-continental university collaboration. At the same time, the reports show that there is still much to explore, both within ecosystems already visited, such as in Tokyo, and across entire regions and continents not yet mapped. The value of the programme compounds with scale: the more ecosystems it covers, the stronger the basis for comparison, and the clearer the picture of how NTNU's innovation ecosystem can be developed to be internationally renowned together with other top tier universities around the world.

[4] https://engage-centre.no/the-engage-ecosystem-ambassador-program/

1.3 Exemplar Events Promoting Innovation and Entrepreneurship

SFU Engage contributes to entrepreneurial learning and innovation through a wide range of initiatives and events. The activities described below are examples of arenas in which students can develop entrepreneurial skills, expand their professional networks, engage with investors/ partners, and gain hands-on experience with innovation and venture creation. Collectively, they illustrate how SFU Engage supports student entrepreneurship at different stages, from initial exposure to innovation and startup culture, to investor readiness, venture development, and career formation. The cases presented below highlight a selection of recurring events and initiatives that showcase the value of experiential learning, interdisciplinary collaboration, and strong partnerships with external stakeholders in strengthening the innovation ecosystem. In addition to describing the activities themselves, the cases provide examples of participant outcomes, growth over time, and broader impacts on students, startups, and the entrepreneurial communities surrounding NTNU and Nord University.



Pitching for new prospective team members.

1.3.1 Join a Startup Night

Join a Startup Night (JASUN) is an annual event organised by Spark* NTNU, designed to connect students with early-stage startups within the entrepreneurial ecosystem at NTNU. The event brings together more than 100 students, including those who are already building their own ventures as well as those interested in joining startups as co-founders, early employees, or contributors.

The core purpose of JASUN is to bridge the gap between talent and startups seeking relevant skills and expertise. Throughout the evening, selected startups present short pitches on stage, outlining their business ideas, the problems they are solving, their proposed solutions, and most importantly, the types of skills and roles they are looking for. This structured pitch format allows participants to quickly gain an overview of multiple opportunities and identify those that align with their own experience and interests.

Following the pitching session, the event transitions into an open networking phase with dedicated stands for each startup. This part of the event is less formal and allows for deeper conversations, where students can engage directly with founders, ask more detailed questions, and explore potential collaboration in a more personal setting. It is often during this phase that initial conversations develop into concrete discussions about joining a team.

JASUN has over time become a recognised entry point into the startup and innovation ecosystem at NTNU. It plays an important role in strengthening connections between students, startups, and the wider entrepreneurial community, with a strong emphasis on networking, knowledge sharing, and practical engagement in real ventures.

SFU Engage has been a contributing partner to Spark* NTNU since 2016 and has been involved in supporting the visibility of JASUN within relevant student environments. In relation to the event, SFU Engage has particularly contributed by increasing awareness and participation among students across different academic disciplines, thereby supporting the goal of broadening the reach of the startup community and strengthening engagement between students and startups.

1.3.2 NTNU Student Investor Day

Recognising the need to increase investor readiness and awareness for student entrepreneurs / startups, the NTNU Student Investor Day was created in 2021 by SFU Engage and SpareBank 1 SMN as the "first" meeting point and introduction of the best student startups and potential future investors. The half-day programme consists of:

- Startup pitching session for startups so that participating investors get a brief introduction to the business idea
- A 1-on-1 meeting marathon between investors and startups to ensure all startups meet investors for in-depth questioning about the business idea and advise on becoming investor ready
- An award ceremony for "best business idea" and "most sustainable business"
- Mingling to secure future network connections

The event is "invite only" with National and Nordic early-stage investors as target audience, and top student business ideas as "content". This creates an exclusive insight in the most promising student startups for investors and a "safe space" for young entrepreneurs/business developers meeting investors for the first time.

NTNU Student investor day was first organised in 2021 with SFU Engage as a partner, along with NTNU, SpareBank1 SMN and 6AM Accelerator. The first year 10 student startups pitched their idea to 25 investors and relevant parties. The prizes for "best business idea" and "most sustainable business" have been awarded every year since then, with more applicants and participating parties, bigger prizes and, since 2025, also including participants from other universities in Norway. This has become an annual "student startup graduation event" rounding off the spring semester for student innovation at NTNU, with many investors returning year after year.

The 2026 event was covered by the national outlet Shifter5. The following quotes from investors attending the event illustrate the value of the NTNU Student investor day **[See next page]**:

[5] https://www.shifter.no/nyheter/12-oppstarter-konkurrerte-om-ntnu-pris-over-30-investorer-fulgte-noye-med/464712

"

«Great to be back at the NTNU Student Investor Day meeting some of the best from the next generation of tech entrepreneurs that will shape our future!»

Finn Persson - Partner & Cofounder / Spintop Ventures

« Impressive quality in both the entrepreneurs and the programme. Several companies with great potential! This arena is important for keeping us closely connected to the exciting startup environment at NTNU.» [Translated]

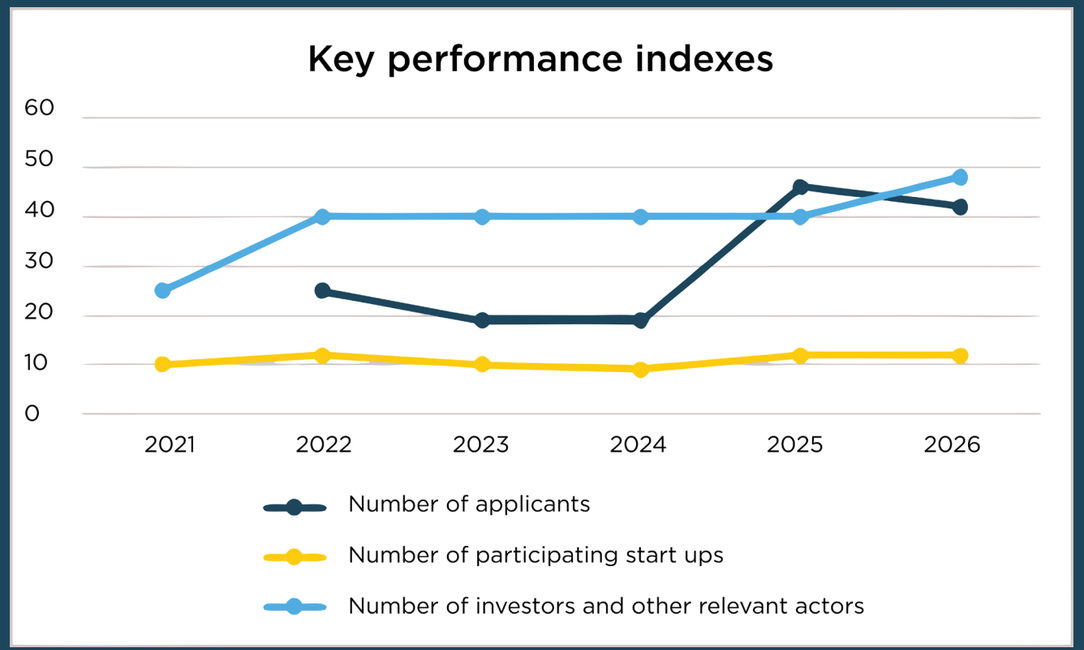
Morten Skaland, investment controller / CoFounder

« It was great to be a part of this! There were so many talented entrepreneurs, and several companies impressed with both their level, energy, and how far they had already come. It's rare to see so much innovative technology and strong teams gathered in one place - this bodes very well for the future of the startup ecosystem.» [Translated]

Pia Merkesdal - COO / TheFactory Venture

All participating startups 2026 with the winners in front.
Photo: Oda Laugerud Grusd.





Student Investor day in numbers

	2021	2022	2023	2024	2025	2026
Partners	NTNU, Sparebank 1 SMN, 6AM Accelerator, SFU Engage	NTNU, Sparebank 1 SMN, 6AM Accelerator, SFU Engage	NTNU, Sparebank 1 SMN, 6AM Accel., StartupTRD, SFU Engage	NTNU, Sparebank 1 SMN, 6AM Accel., Gnist Kapital, StartupTRD, SFU Engage	NTNU, Sparebank 1 SMN, 6AM Accel., StartupTRD, SFU Engage	NTNU, Sparebank 1 SMN, 6AM Accel., StartupTRD, SFU Engage, CoFounder, Innovasjon Norge
Total price in NOK	150 000	150 000	150 000	200 000	300 000	400 000



Working hard at the next business idea. *Photo: Einar Fredrik Barth-Heyerdahl.*

1.3.3 The Business Simulator

The Business Simulator (or Bedriftsimulatoren as it is called in Norwegian) is an annual event[6] organised by the student organisation Boost Henne NTNU, where around 50 female students are invited to develop their own startup over the course of three intensive days. The programme concludes with a final pitch session in which each team presents its business idea to a jury, and one winning team is awarded a prize of 25,000 NOK. Participants come from a wide range of academic backgrounds, including medicine, engineering, food science, teacher education, and political science. Some have no prior experience with entrepreneurship, while others bring more advanced knowledge. Students may register as teams or individually, in which case they are assigned to groups at the start of the event.

The initiative is carried out in collaboration with partners such as DNB, which provides both financial support and professional expertise through lectures and mentoring, for example on market analysis. Additional collaborators, such as Frøya Ventures, contribute by delivering an investor-focused lecture, providing participants with insight into how investors evaluate startups, what they look for in early-stage companies, and how to effectively pitch a business idea. The overall aim is to provide an engaging and practice-oriented learning experience where students actively work on realistic business challenges. Through teamwork, decision-making, and idea development, participants gain valuable insight into how companies operate while developing key skills such as collaboration, creativity, and problem-solving.

For SFU Engage, the Business Simulator represents a concrete example of how education can be made more relevant and engaging. By applying a "learning by doing" approach, the activity supports the centre's strategic ambition to foster entrepreneurial mindsets across disciplines. It also helps lower barriers to entrepreneurship, promotes interdisciplinary collaboration, and strengthens connections between higher education and the world of work. Students benefit from increased motivation and a clearer

[6] https://www.youtube.com/watch?v=NBdTWTMRLWA



Content participants.



Winners.

understanding of how theory can be applied in practice, while external partners gain access to new perspectives and potential future talent. At the same time, educational institutions enhance the relevance and quality of their teaching.

A clear example of the initiative's impact can be seen in a case from 2024, where a medical student with no prior background in entrepreneurship chose to participate without knowing anyone else. She was placed in a new team, and together they developed a solution that ultimately won the competition. This experience proved decisive: it sparked her interest in entrepreneurship and gave her the confidence to pursue it further. She later applied to and was admitted to the entrepreneurship programme at NTNU, where she is currently completing a master's degree in entrepreneurship and expects to graduate in 2026, alongside her medical degree. This example illustrates how the Business Simulator can engage students beyond traditional target groups and influence both educational choices and career paths.

The impact of the Business Simulator is also reflected in broader indicators such as participation across disciplines, including students without prior entrepreneurial experience, and consistently positive feedback from both participants and partners. Furthermore, cases where participation leads to further studies in entrepreneurship demonstrate long-term educational effects. Continued collaboration with external stakeholders highlights the initiative's relevance beyond academia. Taken together, these outcomes show how the Business Simulator contributes to SFU Engage's mission of advancing active, collaborative, and practice-based learning.

1.3.4 Fra Hobby til Levebrød: *Making Innovation Relevant for Everyone*

One of the recurring challenges in entrepreneurship education is that many students and employees do not see themselves as entrepreneurs. When people hear words such as innovation, startups, or entrepreneurship, they often imagine technology companies, venture capital, and revolutionary business ideas. For many students and staff at Nord University, this can create a sense of distance and make innovation seem relevant only to a small group of people.

Through the initiative Fra Hobby til Levebrød ("From Hobby to Livelihood"), SFU Engage through Spir sought to challenge this perception. The idea was simple: invite people who had turned a personal interest, passion, or idea into something more. Some had built successful companies around their interests, while others had developed side projects alongside full-time careers. The common denominator was not disruptive innovation or rapid growth, but motivation, creativity, and the willingness to act on an idea.

The series was designed as a low-threshold format that would appeal to a broad audience. Each event consisted of a 30-minute presentation followed by questions and informal discussion over coffee and waffles. Participants could easily fit the sessions into their daily schedules, making it easier for both students and employees to attend. The format proved highly successful.

Between spring and autumn 2025, seven events were organised at Spir, attracting a total of 126 participants. Speakers represented a wide variety of backgrounds and experiences:

- Marius Skålvoll, known through the social media initiative Snekkerpappa
- Snorri Rasch, founder of Steigtind
- Eirill Pettersen Buvik, founder of Reddel
- Ida Gaustad, Managing Director of Parkenfestivalen, together with internationally recognised songwriter Caroline Ailin
- Lars Vestnes, Managing Director of Kirkens Bymisjon Bodø
- Ellen Mentzoni Nilsen, founder of Trygge Barn
- Sophie Wiik from Too Good To Go



Ida Gaustad, leader of Parkenfestivalen, and Caroline Ailin, a songwriter based in LA, sharing their journeys at Spir. *Photo: Adrian Brunborg.*

The diversity of speakers was deliberate. Participants encountered examples from social entrepreneurship, creative industries, festival management, sustainability initiatives, social media entrepreneurship, and non-profit organisations. Together, these stories demonstrated that there is no single pathway into entrepreneurship or innovation.

The impact extended beyond attendance numbers. One of the most important outcomes was that the series attracted participants from across the university. Students and employees from all five faculties attended the events, helping to break down the perception that innovation activities primarily belong to business and entrepreneurship education. For SFU Engage, this directly supports the ambition of creating an innovation culture throughout Nord University. By presenting entrepreneurship through relatable personal stories rather than technical business concepts, the initiative made innovation more accessible to people from diverse academic backgrounds and professional identities.

The series also played an important role in establishing Spir as a university-wide meeting place following the opening of the new facilities in January 2025. Launched only a few months after the official opening, Fra Hobby til Levebrød became one of the first recurring activities to bring people regularly into the new innovation hub. Importantly, the events targeted not only students but also university employees and external stakeholders. This proved valuable in building awareness and a sense of ownership towards Spir across the institution. Employees who attended gained first-hand experience of the facilities and became more familiar with the opportunities available through Spir. As a result, many contributed by sharing information about events, encouraging student participation, and helping connect academic environments with innovation activities.

The initiative therefore generated impact at several levels. It inspired individuals to explore their own ideas and passions, demonstrated that entrepreneurship can take many forms, and helped strengthen Spir's role as a shared innovation arena for the entire university community.

Perhaps most importantly, the series communicated a message that lies at the heart of SFU Engage's educational philosophy: innovation is not reserved for a few exceptional individuals with revolutionary ideas. It is something that can begin with a personal interest, a local challenge, a creative hobby, or a desire to make a difference. Sometimes, a hobby can become a livelihood. Sometimes it remains a meaningful side project. In both cases, the first step is to believe that your idea is worth exploring.

1.3.5 Gaming Innovation Hackathon

The Gaming Innovation series was a dynamic one-day gathering held at NTNU for three years in a row from 2023 to 2025. It brought together students, industry professionals, and gaming enthusiasts from various disciplines to explore the expansive world of gaming. This event was designed to highlight the diverse career opportunities within the gaming industry, beyond game playing. Topics ranged from game development and VR to sound design, esports, and streaming.

The event aimed to engage students with a passion for gaming and demonstrate how gaming can provide opportunities for innovation across various disciplines. Partnering with Equinor, which recognised the relevance of gaming skills in digitalised industrial environments, and NTNUI E-Sports, Norway's largest student e-sports

team, the event successfully attracted significant interest and participation.

The vision was clear: to show students that their passion could translate into viable career opportunities. The event saw an impressive turnout, with over 170 students and eight companies from different sectors of the gaming industry in attendance. These included VR companies, game developers, and esports organisations like G2 E-sports. Students showcased their own games, contributing to the energetic and engaging atmosphere. The day was structured to balance inspirational content with interactive sessions, featuring talks from industry leaders and streamers in the morning and social gaming tournaments and networking opportunities in the evening at Jotunheimen E-sports. This format highlighted the social aspects of gaming and provided companies with a platform to showcase their innovations, gather feedback, and recruit talent.

The impact of the event was multifaceted, touching on several key areas:

- **Technical Foundation:** The event underscored gamers' natural affinity for technology and digital problem-solving.
- **Design (Interdisciplinary and Multidisciplinary):** Gaming brings together individuals from diverse backgrounds and disciplines, fostering interdisciplinary collaboration and innovation naturally.
- **Real-world Problem Solving:** Companies like Equinor demonstrated the practical applications of gaming skills in creating virtual simulations of oil rigs, emphasising the need for passionate and skilled individuals in future job markets.
- **Global and Multicultural Understanding:** Gaming fosters a global community where people from different backgrounds connect and collaborate.
- **Teamwork:** The event highlighted the importance of communication, teamwork, and problem-solving in gaming, essential skills for any career.
- **Innovation and Entrepreneurship:** The event provided a platform for innovative ideas and entrepreneurial spirit, showcasing how passion can lead to career opportunities.
- **Sustainability and Business:** Companies shared insights into sustainable practices and business strategies within the gaming industry.

In summary, "Gaming Innovation: Chapter Two" was a resounding success, illustrating the broad spectrum of opportunities in the gaming industry and the importance of passion in driving innovation.

1.4 Promoting Diversity in Entrepreneurship

Throughout the period, SFU Engage has supported a range of initiatives that have broadened participation in entrepreneurship and innovation across different groups, disciplines, and contexts. These initiatives have created opportunities for students from diverse backgrounds to engage with entrepreneurial learning, develop innovative solutions, and build connections with external partners. The cases presented below illustrate how SFU Engage-supported activities have contributed to increased diversity in entrepreneurship, strengthened interdisciplinary collaboration, and expanded the reach of entrepreneurial education.





Participants and mentors at the Gaming Innovation Hackathon. *Photo: Pernille Osmundsen.*



Ready for the Boost Henne kick-off. *Photo: Håvard Engen.*

1.4.1 Boost Henne

In 2017, two students at NTNU conducted research on the student organisation Spark* NTNU. Their findings revealed a significant gender imbalance: only 14% of students seeking guidance from Spark* NTNU that year were women. Recognising the importance of addressing this disparity, the students initiated efforts to increase female participation.

In 2018, this initiative was formalised through the establishment of Kvinneprosjektet (the Women's Project), with support from SFU Engage. Its primary objective was to increase the proportion of female idea contributors within Spark* NTNU, while also enabling more women to pursue entrepreneurship by providing access to essential tools, resources, and networks.

From the outset, SFU Engage played a key role as an enabling partner, contributing strategic direction, institutional anchoring, and resources that allowed the initiative to develop from a project into a structured and scalable programme. Boost Henne[7] represents a concrete example of how SFU Engage's mission, strengthening student-driven innovation and entrepreneurship, can be operationalised in practice. Since its inception, the initiative has had a measurable impact. In 2021, Kvinneprosjektet was rebranded as Boost Henne NTNU. That same year marked a peak, with women accounting for 39% of all idea submissions to Spark* NTNU. Boost Henne NTNU has also become a recognised pathway into the entrepreneurship programme at NTNU.

From its early beginnings in 2018, Boost Henne NTNU has organised numerous events aimed at fostering enthusiasm for entrepreneurship among female students[8]. It has also developed a national network of more than 500 members, including current students, alumni, and key stakeholders within Norway's innovation ecosystem, such as investors and industry professionals.

The programme follows a structured developmental journey. At the start of the academic year, students are introduced to entrepreneurship through accessible, low-threshold events that provide foundational knowledge and inspiration. As the year progresses, participants are gradually encouraged to engage more actively, developing ideas, collaborating in teams, and presenting their work. This progressive approach lowers barriers to participation and builds confidence, ultimately leading to increased numbers of women submitting ideas to Spark* NTNU and contributing to a more diverse and balanced innovation ecosystem.

In March 2026, the initiative was further expanded to Ålesund in connection with the establishment of Spark* Ålesund. As part of this expansion, four students were hired locally,

[7] https://boosthenne.no/
[8] https://www.youtube.com/watch?v=gHtKFpW9NIU



Boost Henne is happy to welcome new participants. *Photo: Håvard Engen.*

Key events organised by Boost Henne NTNU include:

- Kick-off Event: An introduction to Boost Henne and the innovation ecosystem at NTNU
- Female Invest x Boost Henne: A collaborative event focused on financial literacy and investment
- Challenging Myths about Entrepreneurship: Female role models challenge common misconceptions about entrepreneurship
- Women's Entrepreneurship Day: A celebration of the international observance, open to all, centred around networking and informal discussions over lunch
- The Business Simulator (Bedriftsimulatoren): A 72-hour programme where 50 students work in teams to develop a startup, supported by workshops on pitching, market research, and investor insights [1.3.3]
- Fearless by ELLE x Feminvest: A trip to Oslo to engage with the local innovation ecosystem

including one dedicated managing director for Boost Henne Ålesund. This marked an important step in scaling the initiative geographically and strengthening its presence beyond Trondheim, enabling more students to access the same opportunities and support system.

Boost Henne collaborates with several key partners within the innovation ecosystem, including Frøya Ventures, StartupLab, and the HER Programme. In addition, Boost Henne contributed to the development of Innovation Norway's role model campaign "Ikke start for deg selv"[9] ("Don't Start for Yourself"), developed in 2025 and launched in 2026, in which Boost alumna Marte Stenvaag was featured as a role model.

1.4.2 Sector Diversity

Throughout the centre period, SFU Engage has been involved in courses and initiatives covering a variety of sectors. From health and aquaculture to arts and technology, these activities have connected entrepreneurial learning with sector-specific challenges and opportunities. The following stories illustrate how SFU Engage has collaborated with students, educators and external partners to make innovation relevant across disciplines and professional contexts.

Engaging health students through DRIV NTNU

In 2018, a medical student, Milena Egiazarian, contacted Spark*NTNU with an idea for an initiative that would connect health students and other students around innovation in the health sector. Dag H. from SFU Engage was chosen as the one from Spark*NTNU to be the initiative's mentor, and he also joined the DRIV NTNU board for several years. The flagship activity of DRIV is the Health-Tech Challenge, where students from diverse backgrounds work together on challenges presented by the Future Operating Rooms infrastructure at the St.Olavs hospital. This initiative was supported by SFU Engage from its first year, and SFU Engage also funded one of the prizes in the competitions. DRIV became a way of recruiting students into Spark*NTNU and NTNU School of Entrepreneurship. Eventually, an innovation lab at the hospital (DRIV Lab) was established in a collaboration between DRIV and the then SFU Engage partner Troll labs to do rapid prototyping of health innovations.

[9] https://www.innovasjonnorge.no/artikkel/ikke-start-for-deg-selv



NTNU DRIV

Oceans workshop
"The future lies in the ocean – the opportunities lie in your education"

The aquaculture industry is changing, calling for innovative and smart solutions to address the challenges that arise. The industry needs creative minds to drive change, and we believe that biology students are important resources even while completing their studies. So we organised this workshop for new biology students both at NTNU and Nord University, aiming to enhance their awareness of entrepreneurship and raise their career aspirations in the aquaculture industry.

The workshop was run in the first week of the Autumn semester of 2020 in parallel on both campuses, with 74 freshmen participating (32 from NTNU and 42 from Nord). It was composed of three parts. Part one was a lecture on entrepreneur mindset and change agents, given by professors from SFU Engage. In part two, students heard a story of Ocean Access[10], a company started by three graduates from NTNU School of Entrepreneurship as part of their master's project. The story provided a practical example of how students can use their entrepreneurial mindsets and skills to become change agents for the better. Then in part three, the students were given opportunity to try themselves as change agents—by brainstorming solutions to real ocean issues in groups using the Wayfaring method. We were impressed by the many innovative ideas generated by the different groups within a limited period. The event was delivered primarily in person, in compliance with COVID-19 prevention guidelines, while also incorporating an online element: a video presentation by Ocean Access.

Students' learning experiences of the workshop were measured with a self-reported questionnaire, that assessed perceived learning gains, enjoyment, and satisfaction. Results showed that the students had positive attitudes towards the workshop. Up to 95% of the students agreed that the workshop was inspiring and enjoyable. The students also reported a high rate (91%) of satisfaction with the workshop. Furthermore, the workshop was found to be effective in increasing students' awareness of entrepreneurship and their confidence in acting as change agents. About 91% of the students reported that these had been their most important learning gains. This workshop is thus a good example of how the SFU Engage organises extra-curricular activities to engage students, while showing clear evidence on its impact through increased students' awareness for entrepreneurship, along with satisfaction and enjoyment.

[10] https://www.oceanaccess.no/

1.4.3 Diversity Beyond Sectors

Entrepreneurial learning can create value far beyond traditional educational and business environments, and SFU Engage has contributed to initiatives with a broader societal focus. The examples in this section highlight efforts to support refugee entrepreneurship, build entrepreneurial capacity in humanitarian contexts, and provide students with transformative learning experiences where they were challenged to be entrepreneurial and find solutions in a new context.



From the Kakuma refugee camp.





From the EiT visit to India.

SHIFT by Spark* Nord — Free Business Guidance for Ukrainian Entrepreneurs

SHIFT is a project run by Spark* Nord, a student organization at Nord University in Bodø. The project offers free mentorship and guidance to Ukrainian refugees who want to start their own businesses in Norway.

The initiative was launched in spring 2025 by Jørgen Hopaneng, a master's student in entrepreneurship at Nord, who noticed through his work at Kunnskapsparken Bodø that many Ukrainian refugees had real business experience and strong motivation, but lacked knowledge of Norwegian regulations and had limited access to startup capital. Their ideas often did not meet the innovation threshold required for formal incubator support, meaning valuable potential was going to waste. He brought the idea to Spark* Nord, whose board chair Eir Lillegard Berg immediately supported it. Together they secured funding through Samfunnsløftet and Bodø municipality's refugee office.

Mentors are students who offer one-on-one guidance in areas such as business development, marketing, idea validation, and finance. Each participant is connected with a main mentor and a contact person in the student group, aiming for up to 20 hours of free guidance per startup. Spark* also collaborates with Brønnøysundregistrene and Skatteetaten to ensure participants receive accurate legal and financial information.

Since its launch, SHIFT has worked with several participants at different stages, some with a clear business idea, others exploring what starting a company in Norway looks like. One participant, Anastasia Kratsova, has already established her own dog grooming business following her time in the program. Currently, Spark* Nord is also in dialogue with Bodø Voksenopplæring to expand outreach and reach more potential participants.

Entrepreneurship Hub at Kakuma refugee camp, Kenya

The Norwegian Refugee Council (NRC) approached NTNU for support in setting up an Entrepreneurship-Hub (E-Hub) in the refugee camp in Kakuma, Kenya. The refugee camp at Kakuma, Kenya, hosts about 180.000 refugees and is one of the largest and long-standing camps in the world which has existed since 1992. The E-Hub was an attempt to break away from the usual vocational training offered to refugees in such camps and establish a model for development of their entrepreneurial skills leading to the establishment of commercial ventures.

A team from NTNU and the University of Nairobi visited Kakuma in June 2017 to interact with the local NRC staff and refugees in the camps there and develop a clear understanding of the need. Following this, NTNU in cooperation with the University of Nairobi developed the plans for the physical design of the E-Hub along with a training program on entrepreneurship for selected participants from Kakuma. Staff from School of Entrepreneurship (NSE) and the Faculty of Architecture and Design from NTNU, in partnership with NRC and the Business School at the University of Nairobi were involved in this and the project was supported financially by NTNU's Rector and NRC. Modelled on the training program for students of entrepreneurship at NSE, the customized training program for Kakuma refugees focused on the generation and refinement of business ideas and aimed to give participants the tools and skills to convert these to ventures.

Experts in Teamwork village in India

In 2020, Experts in Teamwork Village, 'Become a Change Agent! Sustainable innovation through the use of entrepreneurial methods in different contexts' took 25 master students from NTNU to rural India[11,12]. Financed through an INTPART project funded by the Research Council of Norway and supported by SFU Engage, this EiT Village gave students the opportunity to travel to and engage firsthand with a vastly different context from what they were used to. They needed to be entrepreneurial to find solutions in a resource poor and unfamiliar context. In addition, it provided exposure to and more understanding of one of the world's largest and fastest growing economies and markets. For many students this was a motivating experience, to use their knowledge and skills and work together to make a real difference.

1.5 Funding Sources and Challenges

Access to early-stage funding is often a critical factor in transforming student ideas into viable ventures. SFU Engage has contributed to the development and strengthening of funding opportunities for student entrepreneurs through dedicated grants, competitions, investor-focused events, and collaboration with external partners. The initiatives presented below show the range of support mechanisms available to student startups and highlight how SFU Engage has helped connect aspiring entrepreneurs with financial resources, networks, and opportunities for venture growth. Students from NTNU and Nord University have successfully participated in a range of external competitions and challenge programmes, securing awards, funding, and recognition from organizations beyond their home institutions.

These achievements illustrate both the strength of student ventures and the value of the support systems surrounding them at NTNU and Nord University. Some of these funding sources and competitions overlap with other initiatives covered in this report, for instance NTNU Student Investor Day **[1.3.2]** and STUDENT funding from Innovation Norway **[6.2 The Ally Network]**. The examples below show four different ways for student entrepreneurs to access support and funding at different stages from idea to growth.

1.5.1 The Spark* Funding Mechanism

In the process of establishing Spark* as a student-to-student mentoring service for early-stage startups, the financial partner TrønderEnergi saw the

[11] https://www.underdusken.no/eksperter-i-team-english-india/eit-in-india/168231

[12] https://engage-centre.no/experts-in-teamwork-to-india/

need to include a low-threshold funding mechanism. This was put in place to enable student startups to access their first financial support for building prototypes, complete market assessment and general network expansion through relevant conference participation. Any student startup under mentoring from Spark* can apply for and pitch their project proposal for an external jury and potentially be awarded up to 25.000 NOK in project development funding.

There are monthly jury meetings and startups can apply in several rounds to be awarded the funding in tranches. The jury operates as evaluators of the student's business development plan and progression more than acting as evaluators of the business idea itself. However, the jury often offers business development advice and relevant industry contacts from their professional network. The funding mechanism and Spark* have had several financial contributors throughout the years and has thus changed names from "TrønderEnergi-bidraget" to Aneo-bidraget" to the current name "SMN-bidraget" and the total available funds has increased from an average of 500.000 NOK annually to almost 1.000.000 NOK. SFU Engage facilitates for the daily operation of student organisation Spark* through their community manager role and has a seat in the award jury, as well as the initial assessment of the applications from NTNU School of Entrepreneurship.

Historically, since 2013, students have applied for almost 12.5 million NOK in support and been awarded more than 7.5 million NOK.



Spark* mentors during training at Sparebank 1 SMN. *Photo: Oda Laugerud Grusd.*

Year	Awarded annually	Unique business ideas applying
2013	184.726 kr	15
2014	445.347 kr	40
2015	521.087 kr	42
2016	497.167 kr	47
2017	458.280 kr	40
2018	462.047 kr	42
2019	371.112 kr	29
2020	916.543 kr	56
2021	681.893 kr	41
2022	581.681 kr	36
2023	437.760 kr	41
2024	822.034 kr	55
2025	631.490 kr	73
2026 Spring	582.689 kr	44

1.5.2 Innovate for better

As a contributor to the student innovation ecosystem at NTNU, Equinor wished to pilot their own award ceremony and funding opportunity for student entrepreneurs at NTNU. Initially the target was NTNU-based startups, but eventually the opportunity expanded to all Trondheim based startups. Initially named "Together to Innovate"[13,14] the award was launched in 2022 and has been an annual event ever since. The criteria for applying for funding was showing alignment with Equinor's goals. Applications were submitted through Equinor's web-portal, and they were evaluated by their own internal experts and partners. The award ceremony is organized annually by SFU Engage and Equinor in Gruva, where all applicants are invited. Funding is awarded to first (300.000 NOK), second (150.000 NOK) and third (100.000 NOK) place, and in addition "best early-stage concept / prototype" (up to 100.000 NOK) and "shooting star" (50.000 NOK). The on-campus promotion of the Innovate for Better award is a joint effort with SFU Engage, Equinor, Start NTNU and Fram.

Several successful startups have received funding through Innovate for better. One example is the 2025 winner Naya Development[15], a company which provides high-quality data labelling solutions for AI with an all-female labelling force working from North India. Naya combines social entrepreneurship and tech innovation to create global impact as true change agents.



Investor Gustav Magnar Witzoe after sharing his views on the importance of student innovation. *Photo: Håvard Engen.*



Pernille S. Opheim pitching at the Innovate for Better Summit. *Photo: Håvard Engen.*

	2023	2024	2025	2026
1st place	Keplinor	Arctic Protein	Naya	Woolero
2nd place	Versiro	Cerebionics	Kynetix	TuniSea
3rd place	Dep Joint	DrillFeel	Aprotox	Skriptr
Best early stage				Roomie
Shooting star				Trawl Tech

Historical winners Innovate for better.

[13] https://www.sponsorship.equinor.com/en/student/innovate-for-better
[14] https://engage-centre.no/together-to-innovate/
[15] https://www.naya.no/

1.5.3 StageTwo

Stage Two[16] showcases the best startups spinning out from Europe's leading universities, and NTNU sends representatives each year. As NTNU is an active partner in the university alliance, ENHANCE **[6.6.2]**, now in its second period with the name ENHANCE+, the university has been given an opportunity to send a startup participant to represent NTNU in the European business idea competition for nominated startup teams from European universities. Stage Two is a competition for nominated startup teams from European universities. SFU Engage organises the annual local nomination round on behalf of NTNU, selecting the best performing pitch relevant to the competition. SFU Engage staff also contributes to the multi-lateral pitch coaching sessions that competition participants get access to before the competition final.

In 2021, the first StageTwo event was held in Berlin, and an NTNU team, Aviant[17], won together with a team from Chalmers University of Technology. SFU Engage has since the beginning of Stage Two advocated for student startups participating on the same level as university spin-offs, despite that many other universities chose to send teams of university employees with ventures. In 2026, StageTwo has also increased the focus on the support system at the universities, involving SFU Engage people even more in the ecosystem around StageTwo. In 2025, about 90 venture capital institutions were represented at StageTwo, and about 40 universities participated with their entrepreneurial ventures.



StageTwo 2022.

1.5.4 ArcticNext

In an era when the Arctic faces unprecedented environmental, economic and social challenges, the next generation of innovators is stepping forward, and they are doing so together. The ArcticNext Student Challenge was a three-day international collaboration between SFU Engage at Nord University and Memorial University in Canada. The event brought students from across the North into a shared virtual space to tackle real-world innovation challenges.

Held from 26–28 September 2025, the challenge blended synchronous and asynchronous activities, including mentoring, workshops and team-based problem-solving. Students from both universities worked in mixed teams, guided by mentors who provided feedback on their ideas throughout the event. The programme opened with a welcome and problem statement, followed by a keynote that framed the larger context of the challenges facing the Arctic. A highlight of the programme was a workshop on integrating indigenous and local knowledge in innovation. It offered students a powerful example of how traditional knowledge and modern technology can combine to address Arctic challenges. The session underscored a central theme of the challenge: that effective innovation in the North must be rooted in the communities it serves.



Students gathered for an information session during the ArcticNext Student Innovation Challenge 2025 weekend.

Beyond the intellectual work, the challenge prioritised relationship-building. A cross-campus check-in session brought students together in mixed breakout rooms for structured activities designed to foster connection and cultural exchange. Through roundtable introductions, icebreakers and interactive activities, the students built trust and respect essential for effective collaboration. The deliberate mixing of students into new groups for each round ensured that every participant had the opportunity to engage with a wide range of peers.

Over the three days, teams worked intensively during dedicated planning sessions, refining their ideas with input from mentors at both universities. The challenge culminated in a presentation session where six teams delivered five-minute pitches followed by Q&A with a distinguished panel of judges. The event concluded with an awards ceremony celebrating the creativity, rigour and collaborative spirit of all participants.

A team from Memorial University won the first prize for a navigation tool nicknamed Google Maps for the Arctic, which uses satellite data and artificial intelligence to help travellers and ships find safe routes through sea ice. Second place went to a concept for modular indoor farms that grow food all year in northern climates, combining aquaculture and hydroponics to strengthen local food supply. Third place went to a team with a transparent recycling box that rewards users for sorting waste, with points redeemable in local shops or donatable to community initiatives.

The ArcticNext Student Challenge fostered cross-cultural understanding, advanced student-led innovation, elevated indigenous and local knowledge, and built lasting networks between students, mentors and institutions across the Arctic. As the Arctic continues to evolve, initiatives like this will be essential in cultivating the next generation of innovators. The organizers are already planning the next edition for 2026, building on the valuable experience gained and the engagement from students.

[16] www.stagetwo.io
[17] https://www.aviant.no/

2 Curricular Activities and Study-Related Initiatives

As a Centre for Excellence in Education, SFU Engage has worked towards a clear vision: increasing the number of students in Norway and around the world with entrepreneurial skills and the mindset to become change agents for the better. To achieve this, the centre has contributed to the development of educational programmes, courses, and learning experiences that connect entrepreneurship and innovation with real-world challenges, active learning, and collaboration across sectors.

Together, the cases presented in this chapter show how these efforts have generated impact for students, educators, institutions, and professional communities. They illustrate how SFU Engage has contributed to the creation of new study programmes, reinforced existing educational offerings, supported lifelong learning, and influenced the wider development of entrepreneurship education in Norway and beyond.



FIVER students ready to launch their self-made paper rockets outside Andøya Space Center.

2.1 Venture Creation Programmes

SFU Engage has contributed to the development and strengthening of entrepreneurship education through a range of initiatives. Central to these efforts has been the promotion of student active learning, venture creation and close collaboration with the industry and external partners. The examples below illustrate how SFU Engage has supported the establishment and development of educational programs that enable students to work with real-world challenges, create ventures and develop the competencies needed to act as entrepreneurs, innovators and change agents.

2.1.1 FIVER: Building a Venture Creation Programme – Learning by Doing

One of SFU Engage's ambitions has been to strengthen entrepreneurship education through student-active learning and closer collaboration with industry. At Nord University Business School, this ambition resulted in the development of a new master's programme in Entrepreneurship and Business Development, inspired by the Venture Creation Programme at NTNU School of Entrepreneurship and adapted to the needs of Northern Norway. The programme was established to educate future entrepreneurs, innovators and business developers who can create value both in new ventures and within existing organisations. Rather than only teaching entrepreneurship, students work in teams to develop real business ideas, collaborate with external companies and public organisations, and apply research and theory to authentic challenges throughout the programme. The programme was also designed to strengthen regional innovation by building close collaboration with businesses and public organisations from the very beginning.

Building a completely new master's programme has been both rewarding and challenging. Recruiting students to a specialised Venture Creation Programme has required continuous effort, and annual enrolment has typically been between seven and fourteen

students. At the same time, the relatively small cohorts have enabled close interaction between students, faculty and external partners, providing valuable opportunities to experiment with new teaching methods and continuously improve the programme. Perhaps the greatest impact has therefore not been a single educational innovation, but the learning that has taken place over time. Each cohort has contributed to refining courses, supervision, collaboration with industry and the overall student experience. The programme has evolved continuously based on feedback from students, partners and faculty, while remaining true to its core philosophy of learning entrepreneurship through practice.

The impact is also visible through the students themselves. Several graduates have transformed projects developed during the programme into real ventures. One student team developed an innovative business concept that secured first prize in the Babson Collaborative Global Student Challenge and later received national recognition as an award-winning start-up, demonstrating how ideas created in the classroom can develop into viable businesses. The programme has also strengthened students' employability. Even before completing their master's degree, students have secured highly relevant positions in organisations such as Bodø/Glimt and Kunnskapsparken Bodø. In interviews, the students themselves highlight the combination of practical experience, collaboration with external organisations and research-based learning as key reasons why they felt well prepared for working with innovation and business development.



FIVER students in the cleanroom at Andøya Space Center, learning how to build satellites during one of the Acid Test Weeks.

The experience gained over the past years has laid the foundation for the programme's next phase of development. Based on student feedback and changing competence needs, the programme is currently being further developed to offer greater flexibility while preserving the action-based learning philosophy that has characterised it from the beginning.

For SFU Engage, the Venture Creation Programme represents more than a master's degree. It demonstrates how educational innovation is itself an iterative process of experimentation, reflection and improvement. By combining research, practice and strong collaboration with external partners, the programme has contributed to developing graduates who are better prepared to act as entrepreneurs, innovators and change agents in society.



Anne Borg at the 20 year anniversary for the NTNU School of Entrepreneurship.

2.1.2 NTNU School of Entrepreneurship

NTNU School of Entrepreneurship (NSE), a two-year master's venture creation programme at NTNU, was founded in 2003. NSE aims to empower students to become change agents, equipping them with the knowledge, tools, and mindset needed to navigate the challenges of entrepreneurship and drive impactful solutions in various fields. It has been a close partner of SFU Engage since the centre's establishment, and many Engagers play a central role in founding and developing the NSE.

Ever since it was founded, NSE has been a vibrant hub that fosters innovative thinking, creativity, and the development of entrepreneurial skills among its students. It provides a dynamic environment where aspiring entrepreneurs can explore, learn, and cultivate their ideas, supported by a diverse range of programmes, resources, and mentorship opportunities. The Master programme has been ranked at the top of NOKUT's study barometer for many years, indicating high student satisfaction with the programme. The following quotes demonstrate the sentiments expressed by present students and alumni regarding NSE:

“NSE gives all students superpowers, which also comes with responsibility. This was something I felt after I completed my master’s degree. ...being constantly pushed outside your comfort zone does something to you that a typical study program wouldn’t.

Aksel Morris Bjørnø from class 2018

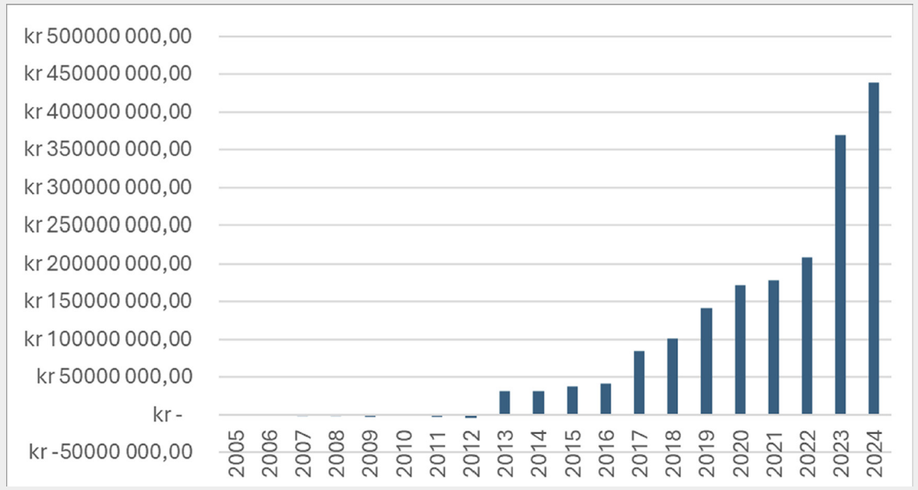
“The commitment, interest, and ability to get something done that I had before was accelerated by NSE and taken to new heights.

Silje Uhlen Maurset from class 2019

“NSE is a growth arena with many different people who are all welcome and allowed to be themselves. We believe that NSE will continue to build on the culture.

-Thomas Klingenberg, class 2024 and Herman Jørstad, class 2025

Value creation





Prince Daniel and his Fellowship meeting student entrepreneurs at NTNU.

The study programme has been widely acclaimed for its exceptional ability to nurture and support budding entrepreneurs. Its innovative approach to education and its emphasis on hands-on experience, coupled with access to industry experts and a robust network, have propelled its graduates toward impactful ventures and groundbreaking initiatives. Each year a multitude of NSE student startups secure awards and funding on both national and international levels, exemplifying the program’s impact and success. NSE’s triumphs have inspired other universities to emulate its approach and methods. Notably, UiA, OsloMet, and Nord University have all launched comparable master's programmes based on the NSE model. The success of NSE has not only enriched the entrepreneurial ecosystem at NTNU and Trondheim but has also contributed significantly to the economic and social fabric by fostering a culture of innovation in Norway and beyond. As one indicator of NSE’s social impact, the figure below presents the economic value created (sum of each firm’s EBIT and salary expenses) by student startups between 2005 and 2024. The accumulated value created by these ventures is more than 1.8 billion NOK.

2.1.3 Setting up Programmes at OsloMet, UiA and HVL

One way of creating impact is to support those who would like to build on the experience and competence at SFU Engage, for instance about venture creation programmes. During the first years of the centre, several other higher education institutions in Norway were interested in developing venture creation programmes. At the University of Agder (UiA) and OsloMet, SFU Engage has not been directly involved in setting up the programmes, but SFU Engage has shared knowledge by the institutions who wanted to set up new programmes. The following paragraphs highlight some overall information about a few VCPs established in Norway during the SFU Engage centre period.

In 2020, the UiA Shift programme enrolled its first cohort of students in a two-year VCP. The programme development and activity was led by Stine Øyna, and she developed the programme alongside her PhD education at UiA. The VCP awarded an MSc. degree in entrepreneurship, and sivilingeniør and siviløkonom degree for those who qualified. The role of SFU Engage was

to host visitors from UiA who wished to learn more about the pedagogy and procedures at NTNU School of Entrepreneurship. UiA Shift was externally funded, and when there were challenges to secure sufficient funding, the last cohort were enrolled in the programme in 2022 and graduated in 2024. At the time of this writing, the UiA Shift programme has been re-established as a specialisation track in the "Master of management and business development" degree, starting from 2026 as a VCP track rather than a VCP programme.

In 2022, a VCP at OsloMet was established. The programme development and activity was led by Even Sønnik Haug Larsen. Even started to do the development work in addition to his faculty role at NTNU School of Entrepreneurship and SFU Engage. In 2020, Even started working full time at OsloMet and still to this date has a 20% position at NTNU as part of the Entrepreneurship faculty. The OsloMet programme was closed down a few years later due to the challenges associated with running and sustaining this type of programme.

Western Norway University of Applied Sciences (Høgskulen på Vestlandet, HVL) initiated establishing a Venture Creation Program (VCP) summer of 2025, starting in 2027, and faculty and alumni from NTNU School of Entrepreneurship have been a part sharing experiences from NTNU. Both through several site visits, discussions of philosophy and pedagogical principles and sharing of documents. HVL reports that the impact of this openness and sharing has had a great impact on their conceptualisation and concretisation, and they will start their VCP in 2027.

From the programme at OsloMet. *Photo: Elin Iversen.*





Building health innovation capacity. *Photo: Elin Iversen.*

2.2 Life-Long Learning

SFU Engage has extended its educational activities beyond traditional degree programs through a range of continuing and further education initiatives (Norw. Etter- og videreutdanning). By adapting entrepreneurship and innovation education to the needs of professionals and life-long learners, SFU Engage has supported competence development across sectors and career stages. The examples below illustrate how these initiatives have strengthened innovation capacity, employability, and the ability to address societal challenges through entrepreneurial thinking and action.

2.2.1 Health Innovation in Practice: Building Innovation Capacity in the Health Sector

Norwegian healthcare services face growing demand, workforce shortages, and increasing pressure to deliver high-quality care with limited resources. Healthcare professionals are often best positioned to identify challenges and opportunities for improvement, but turning ideas into sustainable innovations requires specific knowledge and skills. Recognising this need, Inovacare approached SFU Engage with a request to develop a course that would strengthen innovation competence among healthcare professionals. Through a close collaboration, this resulted in the lifelong learning course Health Innovation in Practice, combining healthcare sector needs with SFU Engage's expertise in innovation, entrepreneurship, and student-active learning methods.

The course was first delivered in Bodø in 2022 and has since been offered in both Bodø and Kirkenes in collaboration with the East Finnmark Knowledge Centre and Finnmark Hospital. Approximately 60 healthcare professionals from primary and specialist healthcare services have completed the 5 ECTS course to date. A key feature of the course is its practice-oriented and interactive learning design. Participants work on real challenges from

their own organisations while applying methods such as design thinking, user involvement, experimentation, and collaborative problem-solving. The course encourages peer learning across professions and healthcare sectors, creating valuable networks and shared learning experiences.

For SFU Engage, the course demonstrates how innovation education can create impact beyond traditional degree programmes by reaching professionals working directly with societal challenges. It also reflects SFU Engage's ambition to connect education, practice, and innovation ecosystems to create long-term value.

Participant feedback has been consistently positive. One participant described the experience as transformative: *"This course has made me even more passionate about innovation and the opportunities that come with taking a small idea and testing it with those closest to us. I hope it has ignited a spark in all of us, because we face major challenges ahead with fewer hands and tighter resources."*

> "I hope it has ignited a spark in all of us, because we face major challenges ahead with fewer hands and tighter resources.

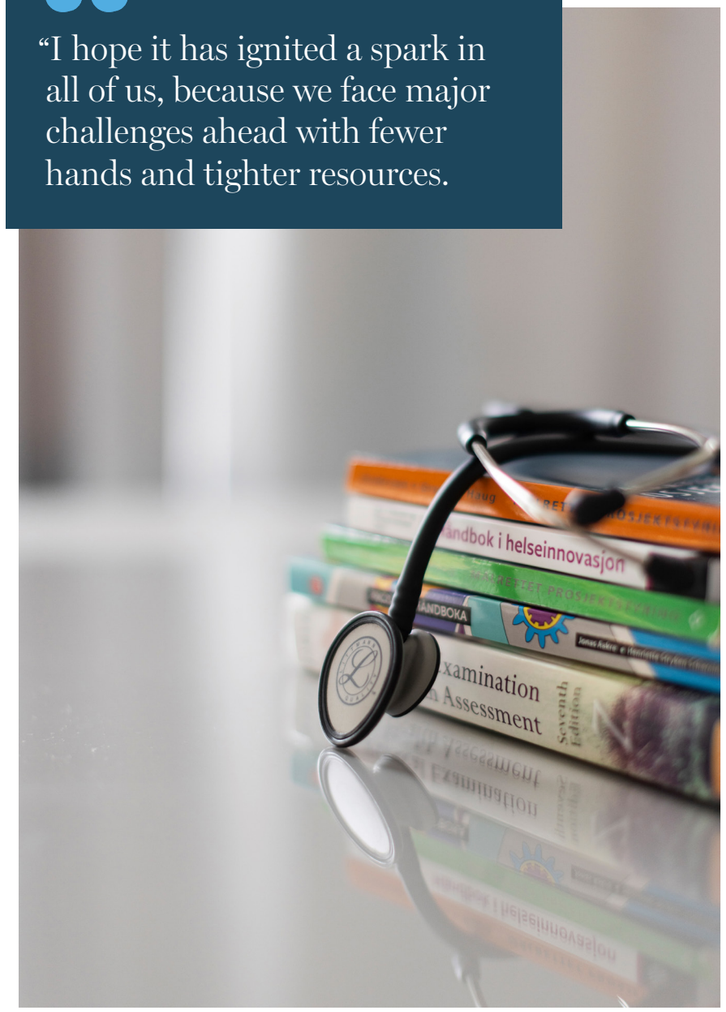


Photo: Elin Iversen.

Beyond individual learning outcomes, the course has strengthened collaboration across healthcare organisations and contributed to a culture of experimentation and continuous improvement. Participants bring innovation methods back to their workplaces, creating opportunities for local development initiatives. The impact of the course extends beyond its participants. Health Innovation in Practice has become the foundation for a new module in the continuing education programme Healthcare Leadership and Innovation Management, targeting healthcare leaders. Supported by HK-dir and scheduled for delivery twice in 2027, the programme has received strong interest, highlighting the growing demand for innovation competence across all levels of the healthcare sector.

What started as a course for healthcare professionals has evolved into a broader platform for competence development, supporting both frontline innovation and leadership capacity. Through this initiative, SFU Engage has contributed to building a more innovative, sustainable, and patient-centred healthcare system.



Screenshot from the digital COVID initiative.

2.2.2 COVID Programme in Entrepreneurship and Business Development for the Unemployed

Unemployment rate in Norway rose as the pandemic in 2020 hit many business sectors. This situation calls for entrepreneurs who can act upon these challenges and have the confidence to be the driving force for change. As a response, SFU Engage offered a digital course in entrepreneurship and business development for the (partially) unemployed in Norway. This important initiative, funded by Diku in a project developed, led, and executed by SFU Engage, was designed and built bottom-up to fit the students in this context. The aim of the course is to give the participants a skill-upgrading in entrepreneurship which can lead to new opportunities. Through the online course, the participants work with self-selected issues that are relevant to themselves and the company they are (partially) laid off from. They learn how to identify new business opportunities, and how to go about doing something with these opportunities. In 2020, the course was run for two rounds: as a result of success from the first round in the summer, it went to a second round in Autumn. For each round, there were about 300 applicants and 55 participants were selected. About 60 % were women and 40 % were men, the age ranging from 24 to 65 years.

The effects of the course were measured through questionnaires with a pre- and post-test design. The questionnaires cover important indicators to entrepreneurial behaviour and learning outcomes. Results from the data showed that the online course was a great success. First, participation in the course resulted in significant improvement in entrepreneurial self-efficacy and confidence in running a sustainable business. Second, participation in the course resulted in enhanced entrepreneurial intentions: percentage of students reporting preference for owning their own business raised from 76.0% to 82.8%, meanwhile percentage of students reporting likelihood for starting their own business in three years jumped from 57.5% to 75.7%. The improved entrepreneurial self-efficacy and enhanced entrepreneurial intentions after the course have spoken a lot about the quality of this course. Excellence in the course is further reflected in consistently high student satisfaction and enjoyment. Overall satisfaction rates

exceeded 93%, with students reporting strong motivation, active engagement, and a genuine sense of achievement—even when tackling challenging assignments and projects.

Furthermore, 100% of the respondents would recommend the course to others. Most importantly, students reported excellent learning outcomes from all different components of the course, ranging from 5.76 to 6.52 on a scale of 1-7. The web-based course was also successful in including social interaction as an important component of the student experience. Students felt they were part of the learning community, and had their network expanded through the course. Some long-term effect of the course, not measurable by questionnaires, but was later reported by some excited students, is that the course is a contributing factor for them to secure a new job. We have reason to expect greater impact of the course in facilitating the individuals to create their own workplace for years to come.

This initiative illustrates how SFU Engage contributes to addressing societal challenges through entrepreneurship education and directly supports the UN Sustainable Development Goals (SDG), particularly SDG 8: Decent Work and Economic Growth. The experiences, educational designs, and insights generated through this project have subsequently informed numerous other initiatives across SFU Engage. In particular, the project strengthened SFU Engage's expertise in designing impactful digital, physical, and hybrid learning environments and has informed ongoing research into their effectiveness.

Building on this success, SFU Engage has received funding from the NTNU Rector to develop and deliver a new digital course, Innovation, Entrepreneurship, and AI. The course will be available to individuals under the age of 40 across Norway in 2027. It will further extend SFU Engage's mission to create accessible educational opportunities that foster innovation, employability, and societal impact.

Photo: Elin Iversen.





Photo: Elin Iversen.

2.2.3 Intrapreneurship in Healthcare

Intrapreneurship in Healthcare (IØ6602)[1,2], was established in response to repeated requests for guest lectures on innovation and entrepreneurship for nursing students, healthcare professionals in continuing education, and employees in the public sector. Over a period of nine years, the course coordinator (Neergård) contributed to teaching approximately 2,000 students through short-format activities such as innovation camps and guest lectures. While these activities were impactful, there was a clear need for a more comprehensive learning experience that would allow participants to engage deeply with entrepreneurship.

As a result, a new course was developed to enable continuing education students to learn through entrepreneurship in practice—more specifically, through intrapreneurship. The course is tailored to healthcare personnel working shifts and awards 7.5 ECTS credits. It is structured around five modules:
(1) an introduction to the field, the course, and the participants themselves
(2) contextualisation, exploring how intrapreneurship manifests in participants' own work settings
(3) learning tools and theoretical perspectives; (4) practical application, where participants test their skills in their workplace; and (5) professional identity development.

The course is fully digital (runs on the learning platform Canvas) and primarily asynchronous, while also offering optional monthly online meetings to facilitate peer interaction. Despite being delivered online, the learning experience is intentionally varied across modules. Activities include watching videos and listening to podcast, personal reflection exercises, written assignments, documentation of meetings with external stakeholders, development of business model canvases and other practical tools, and the creation of vision boards. The course is also flexible in terms of formats and processes, allowing participants to choose between physical tools (e.g. pen, paper, Post-it notes) and digital platforms (e.g. Miro, PowerPoint, Canva) when completing assignments.

The first cohort enrolled in January 2026 and completed the course in May–June 2026. Twelve students enrolled, of

[1] https://engage-centre.no/io6602-intrapreneurship-in-healthcare/
[2] https://www.ntnu.no/videre/gen/-/courses/nv25128

whom ten completed the course. Participants implemented a range of practical improvements in their organisations, including redesigning waiting areas for patients and caregivers and improving post-surgical follow-up procedures, which resulted in significant time savings in weekly operations.

The course is designed as a comprehensive learning experience that emphasises both personal and professional development, including activities conducted outside the digital classroom. While it is not primarily focused on theoretical complexity, its main learning outcomes centre on practical impact at the individual and organisational level. Participants develop an understanding of entrepreneurship, intrapreneurship, and change processes in healthcare, and gain the ability to identify opportunities, initiate projects, and create new value within their organisations. The course also emphasises reflection on professional role development and identity in change processes.

The course is offered twice a year, in the spring and autumn semesters. The course is in Norwegian.

2.3 Courses for students

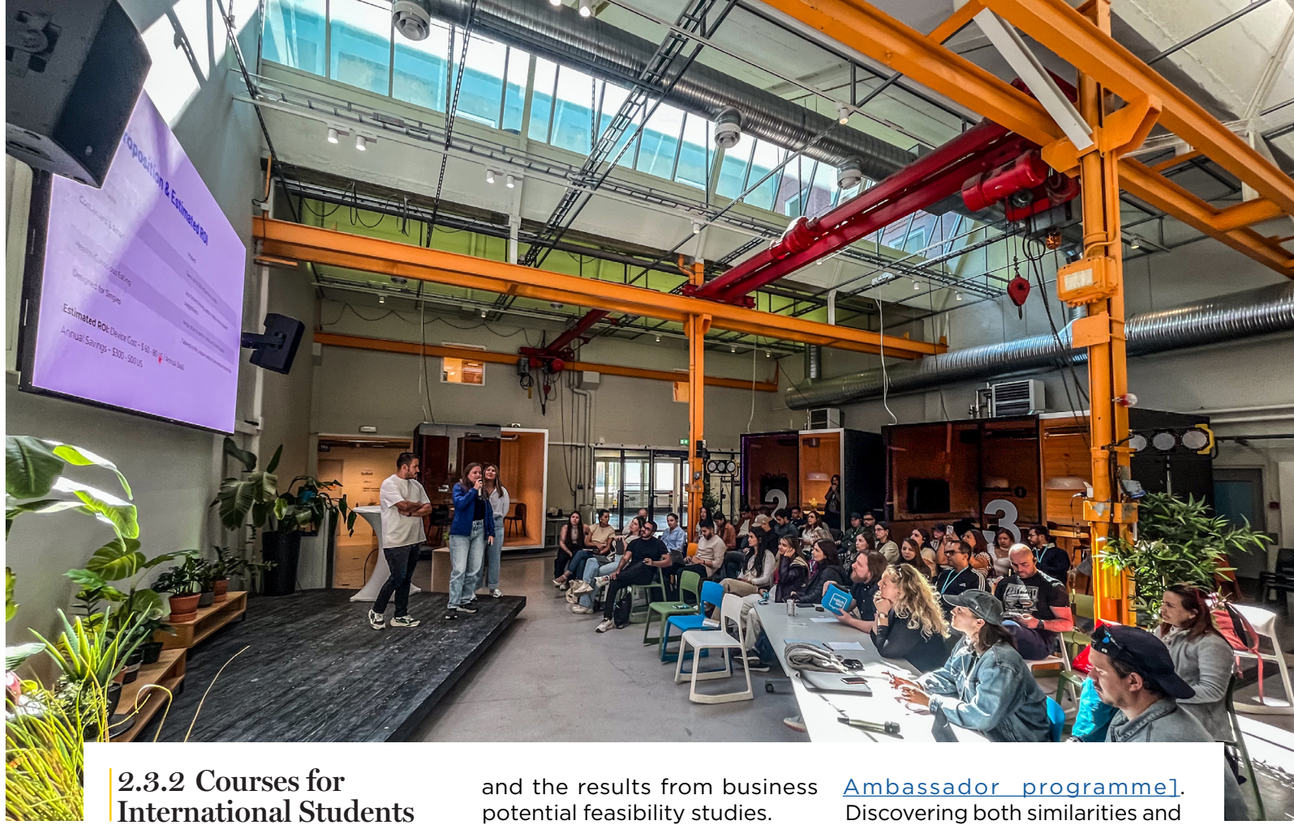
In addition to full degree programs, SFU Engage has contributed to the development of a range of courses that introduce students to entrepreneurship, innovation, and venture creation through hands-on learning experiences. These courses provide opportunities to work with real-world challenges, develop entrepreneurial competencies, engage with external stakeholders, and apply theory in practice. The examples below illustrate how curricular innovation has supported entrepreneurial learning for both Norwegian and international students.

2.3.1 VentureCup or Entrepreneurship in Practice

The course TIØ4250 VentureCup has been run at NTNU since the 2007/2008 academic year and was a course connected to Start NTNUs VentureCup competition. Students who were competing with their startup in VentureCup could attend the course to develop an academic understanding of entrepreneurship topics that supported their venture development. The venturing activities also supported students learning in the course. The principle is similar to that of a VCP. While the VentureCup competition was not held for a while, NTNU still offered the course. In 2025, IØT was asked by NTNU centrally to contribute to the strategic collaboration with the National University of Singapore (NUS). The need was to have a course offering in entrepreneurship to students coming from Singapore to Trondheim for internships in startups. We suggested the TIØ4250 course and promised to offer it every semester in English to suit the needs of NUS. Therefore, it got a new name and code: TIØ4251 Entrepreneurship in practice. However, NUS cancelled their internship activities in Trondheim, and the course was turned towards international inbound exchange students at the BSc level coming to NTNU.

The VentureCup competition is now running again, and students in TIØ4251 are encouraged to sign up and join the competition. SFU Engage has had two main impacts on TIØ4251. First, the student entrepreneurship ecosystem has provided useful "co-curricular" activities for the students in TIØ4250 and TIØ4251. Exchange students have highlighted the value of being introduced for co-curricular and extracurricular activities through the course, both for their entrepreneurial learning process, but also for their integration into the Norwegian society. Second, students express that the course differentiates from courses at their home universities, emphasising action and the development of an entrepreneurial mindset through a curriculum design with an emphasis on ideation and aligned with the fundamental approaches from VCPs and the SFU Engage framework.

https://nus.edu.sg/



2.3.2 Courses for International Students

Student Visit from EAFIT University

After encouragement from Innovation Norway and by request from the Colombian – German collaboration entity IDEEN DMC, SFU Engage, together with NTNU School of Entrepreneurship, created a two-day business development "micro credits" course targeted to master students in Innovation and Knowledge Management at the EAFIT University in Bogota, Colombia. About 40 students visited Trondheim July 3rd-4th as a part of their graduation excursion in 2025. Through the two-day programme, the students attended lectures and were given practical experience with the following topics: Commercialization of research and technology, Opportunity recognition methodology, Market validation, Feasibility studies and Intellectual capital management in the knowledge economy. At the end of the programme the student teams pitched their business ideas and the results from business potential feasibility studies.
The students were excited about the practical approach and opportunity to be working on developing their own business ideas, resulting in devoted pitches and excitement to return to Colombia for their continued entrepreneurial endeavour. The feedback from both students and EAFIT University representatives gave SFU Engage the opportunity to tailor and further develop the micro-credit entrepreneurship course before welcoming the next delegation (Hokkaido University). This time we could offer a full week of experiences in the entrepreneurship ecosystem, including the entrepreneurship through practice course.

Visit from Hokkaido, Japan

During a visit to Japan in 2025, the start-up TuniSea AS from NTNU connected with several actors in the innovation ecosystem in Sapporo. The start-up took part in the SFU Engage Ecosystem Ambassador programme and presented their findings to the centre upon their return [1.2.1 The Ecosystem Ambassador programme]. Discovering both similarities and opportunities for collaboration and learning, North Greenation LLC and SFU Engage organised a one-week visit to NTNU from Hokkaido. In February 2026, SFU Engage hosted a delegation of 18, with 3 professors/professionals and 15 students. The students came from Hokkaido University, Otaru University of Commerce, Hokusei Gakuen University and Future University Hakodate, and included students at the bachelor's, master's and PhD levels.

During the week the students worked closely with SFU Engage and the NTNU School of Entrepreneurship to complete an intensive 2.5-day programme including lectures and conducting a feasibility study. In addition, they visited several actors in the ecosystem and participated in events with the local student innovation ecosystem, such as jumping into a pitching competition on short notice. The week concluded with a series of seven-minute business pitches at Gruva, where students presented a range of



Visitors from Hokkaido.

business ideas, from expanding access to halal food in Japan to solutions for the aquaculture industry.

The experience was described as highly rewarding for both Japanese and Norwegian students. For most members of the delegation, the hands-on and student-driven approach to entrepreneurship education, was a new challenge, but the students quickly adapted to this intense learning environment, committing to real-world assignments, engaging with stakeholders and testing ideas, and exposure to the Norwegian market gave the Japanese students an opportunity to view their ideas and solutions from a new perspective. For SFU Engage, and the local innovation ecosystem, the delegation's visit provided valuable connections, perspectives and insights, and strengthened relationships across borders. While the long-term outcomes remain to be seen, the experience demonstrated the value of international collaboration and has inspired us to explore similar opportunities with future student groups from Hokkaido and beyond.

2.4 Development of Courses

SFU Engage has contributed to the development and continuous improvement of educational offerings that support entrepreneurship, innovation, and student-active learning. Through experimentation, research, and close collaboration with educators and institutions, SFU Engage has contributed to the creation of new courses, learning resources, and pedagogical approaches for both students and educators. The examples below illustrate how these efforts have expanded educational opportunities, strengthened teaching practices, and helped embed entrepreneurship and innovation across disciplines as well as institutions.

2.4.1 From Basic Courses to a Portfolio: Expanding and Deepening Train-the-Trainer Offerings

Since the introduction of the basic Train-the-Trainer (TTT) course in entrepreneurship education at NTNU in 2022, SFU Engage has gradually expanded its course portfolio. What began as a 20-hour basic course has evolved into a system of learning opportunities, including shorter introductory workshops and advanced courses.

A key driver of this development has been continuous experimentation and feedback from participants and institutional stakeholders. The introduction of an online version of the basic course in 2024 has significantly broadened reach, enabling participation from across Norway (OsloMet, University of Agder, Norwegian School of Sport Sciences, The Arctic University of Norway, Nord University, University of Bergen, Western Norway University of Applied Sciences), as well as abroad (Nottingham Trent University and Warwick University).

At the same time, SFU Engage has responded to an emerging needs for shorter, more targeted interventions. Through dialogue with faculties at NTNU – such as the Faculty of Social and Educational Sciences (SU) and others – SFU Engage has developed and piloted a short-format workshop that has so



Participants and teachers in the train-the-trainer course applaud a pitch from a participant.

far been tested for programme leaders at the SU Faculty, delivered in April 2026. This workshop introduced core concepts in entrepreneurship education through highly interactive and experiential activities, offering participants a "taste" of the full course. 14 study program leaders /administrative staff participated. By the end of the event, the associate dean for education at the faculty said that entrepreneurship education, as represented in the workshop, shows how the educators can contribute to shaping the future of higher education, as there is a growing need to change how we think about educating future citizens. After the event, one of the participants said: "I will never forget this experience!"

In parallel, an advanced course has been developed for participants who have already completed the basic course. This course represents a shift from introduction to deepening and application, focusing on participants' own teaching practices and ongoing initiatives. This course is also a part of the UNIPED portfolio . It was piloted in fall 2025 with 9 participants and it is being carried out for the second time in 2026 with 10 participants. This course is based on the principles of peer learning

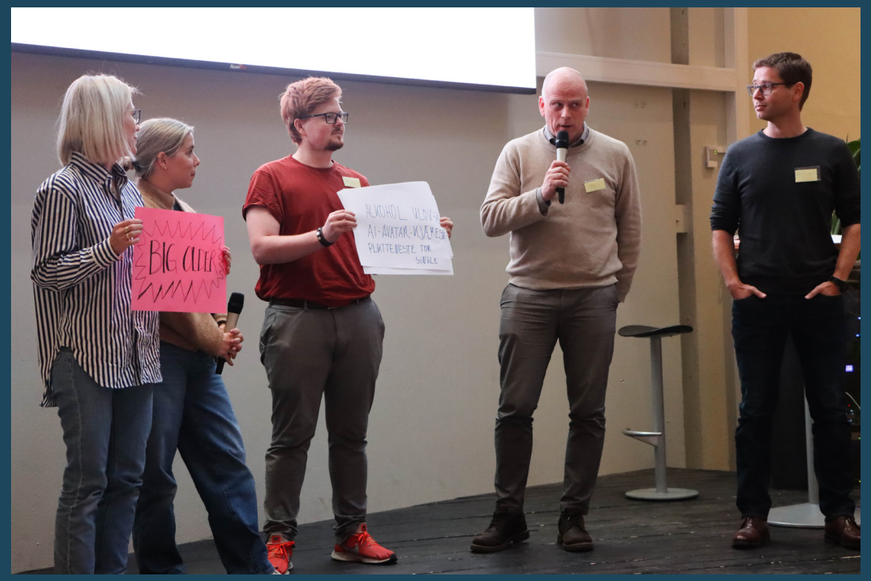


Participants in the train-the-trainer-course get to know about the entrepreneurial ecosystem.

and communities of practice. It consists of two online gatherings and a mid-way assignment where the participants, who have all gone through the basic course, carry out a teaching intervention of at least 2 hours. In the last gathering they give prepared feedback to each other's reflections and reports according to a structured and facilitated method where peer-learning is the basic principle. Preliminary findings from ongoing research on the impact of these conversations can be found in the "TTT alumni network" description.

Importance for the Centre, Target Groups and Stakeholders

The expansion from a basic 20-hour course to both a deeper focus in the advanced module and short initiatives aimed at sparking interest and awareness reflects a strategic shift for SFU



Participants presenting their work on the UN sustainability goals.

Engage from delivering a single course to developing a coherent learning pathway. The portfolio approach allows SFU Engage to meet participants at different stages of their development – from initial exposure to entrepreneurship education, to experimentation, to implementation and refinement.

For the target group, this flexibility is crucial. Not all educators have the time or immediate need for a 20-hour course, while others require more advanced support to develop and sustain changes in their teaching. By offering both short and extended formats, SFU Engage can reach a broader audience while also supporting deeper engagement among highly motivated participants.

For SFU Engage, the development of new course formats strengthens its role as a national competence hub. It also aligns with strategic ambitions to embed entrepreneurial and innovative teaching practices across disciplines and institutions. Collaboration with faculties and institutional leaders ensures relevance and increases the likelihood of long-term impact.

Impact

The development of shorter course formats illustrates how SFU Engage has responded directly to institutional needs. The workshop for programme leaders at the SU Faculty is one example of how entrepreneurship education is being integrated into leadership and programme development contexts. Rather than requiring full course participation, these workshops allow participants to engage with key concepts in a time-efficient way, while still experiencing the core pedagogical principles. In addition, it can have a ripple effect, as these study program leaders can further inspire the groups of educators that they manage in their departments.

At the same time, the advanced course represents a deepening of impact. Unlike the basic course – where participation is often linked to fulfilling UNIPED requirements – the advanced course attracts participants with a strong intrinsic motivation. Many are already experimenting with entrepreneurial approaches in their teaching and use the course as a space to refine and validate their work.

Central to the advanced course is the concept of a provisional community of practice, developed through SFU Engage's research[3]. Drawing on Ibarra's theory of provisional selves[4] , the course creates a space where participants can experiment with new professional identities as educators. Through peer learning, feedback, and shared reflection, participants develop both confidence and competence in entrepreneurial teaching.

The impact of this approach is evident in the way participants engage with each other's work. In the first iteration of the advanced course (autumn 2025), a cohort of 9 participants from different disciplines worked closely together over time. They shared teaching designs, provided feedback before and after implementation, and collectively reflected on challenges and successes. This cohort-based model proved particularly effective in building trust and fostering meaningful exchange.

After the last gathering of the first alumni course, one participant wrote an email, saying: "I have learned the importance of being proactive in developing my career, and one of my learning sources has been you and your team's openness and structured approach. Thank you also for the course! The way it was organised (time constraints, video on, phone off, ...) was so impressive that it became a learning experience on its own, beyond the course content. You have a great team and spirit—congratulations on the excellent work!"

A follow-up session, in terms of an informal online gathering during the course period, to bounce ideas and get feedback from peers and instructors, functioned as a micro-level alumni space. These smaller, focused communities have proven more effective than large, open networks in sustaining engagement and peer learning, as shown in the alumni feedback above.

Participants often go on to influence their local environments. For example, individuals have returned to the basic course with colleagues, thus creating ripple effects within their disciplines. This demonstrates how the course portfolio supports both breadth (through outreach and recruitment) and depth (through sustained engagement and practice development). The evolution from a single course towards a portfolio highlights the importance of adaptability and responsiveness. One key insight is that different formats serve different purposes: large-scale courses support dissemination, while smaller, cohort-based formats enable deeper learning and sustained change.

2.4.2 Innovation and Value Creation in the University-wide Course Experts in Teamwork

Effective solutions to complex challenges require collaboration across disciplines, cultures, professions, and roles. Interdisciplinary collaboration skills are central in this context. Experts in Teamwork (EiT) is a university-wide course at NTNU where around 3000 students form 550 interdisciplinary teams. The student teams work on self-defined projects related to relevant challenges from society and working life. These projects have a significant potential for innovation and value creation beyond the course EiT.

Through the partnership with SFU Engage, the Department of Experts in teams initiated several initiatives to support students' innovation processes during the EiT course. In the period 2017-2023, dedicated resources were developed in the form of an online course and a complementary seminar on how to facilitate value creation from the student projects aimed at educators in EiT, and exercises for EiT educators and students. These exercises are: Create value for others, Common understanding through visualisation, and Assessment of interdisciplinarity and societal value. In the same period, we initiated a collaboration with Spark*, a student-run advisory service for students with business ideas. The aim was to



The first ever winners of the EiT Innovation Awards.

[3] Roald, G. M., & Jin, F. (2026). The Process of embedding entrepreneurship into different disciplines: The educator's perspective. Entrepreneurship Education and Pedagogy. https://doi.org/10.1177/25151274261460453
[4] Ibarra, H. (1999). Provisional selves: Experimenting with image and identity in professional adaptation. Administrative science quarterly. 44(4), 764-791.



All 2026 participants and the winners in front.

support students in realising their project after finalising the EiT course. An introductory video on Spark* was made aiming at EiT students, and Spark* was introduced to EiT educators and students through seminars and the EiT website. In addition, through a pilot project in 2019-2021, EiT teachers were offered the opportunity to develop and test pedagogical methods and tools that support innovation and value creation. One of the outputs of this became the Innovation toolkit EiT.

These separate initiatives formed the basis for initiating a larger project to better realise the potential for innovation and value creation in the EiT course, running from 2023-2024. Specifically, the goal was to increase the number of student projects being realised, either by being implemented in an organisation or through commercialisation. The results are summarised in the report Innovation and Value Creation in Experts in Teamwork [5](Innovasjon og verdiskaping i Eksperter i team). The report includes a mapping of the status and needs, designing and testing new measures, as well as recommendations for future work.

Several initiatives developed through this project have been implemented to facilitate further use of the student groups' results from EiT. To increase student awareness of, and involvement in, the innovation ecosystem at NTNU, two SFU Engage pilot projects were initiated; strengthening the collaboration with SFU Engage partner Spark*[1.1.3] and the student competition the EiT Innovation Awards.

The advisors at Spark* have insight into and practical experience from startup companies. In this further collaboration, Spark* advisors held three guidance sessions with selected EiT classes (villages), and individual sessions with each student group. Each session had a different focus, such as introducing Spark* and the student innovation ecosystem, pitching techniques, guidance on market research, and feedback on project ideas and presentations. The students reported that the Spark* advisors helped demystify the innovation environment and acted as role models showing that it is possible to succeed, lowering the threshold for further developing their EiT projects. The data from this project also formed the basis for the book chapter Supporting student reflection on entrepreneurship in interdisciplinary teams through peer mentoring[6] .

The EiT Innovation Awards[7] were first held in the spring of 2024. This event gave student groups from EiT the opportunity to present their projects to a wider audience and a distinguished expert panel in innovation and interdisciplinary collaboration, with representatives from the innovation community in Trondheim and at NTNU. The event provides a platform for the students to present their innovative project ideas and solutions to real-world and societal challenges and offers EiT students an opportunity to become more familiar with NTNU's student innovation ecosystem. In addition to being a valuable learning experience, participation was encouraged through the opportunity to win a cash prize. Participating student groups also gained valuable insights through feedback from the expert panel, supporting them in the further development of their project ideas and results. The event is an extracurricular activity and participation is voluntary. The event was repeated both in 2025 and 2026, with more teams signing up every year. Prior to the event, students from the NTNU School of Entrepreneurship (the first two years) and Spark* (in 2026) supported the student groups with presentation techniques and advice on their pitch.

The project group has identified different routes to innovation through EiT. The teachers in EiT (or village supervisors) play an important part in increasing innovation and value creation from EiT, both in terms of raising awareness amongst the students regarding the potential for continuing with their project after EiT, and by involving relevant parties, such as external parties, both during the course and once the course is finished. As a result of this work, the Department of Experts in teams have further developed seminars for teaching personnel. These additions to the seminars have been well received, providing EiT educators with insights on facilitating value creation and concrete exercises they can apply in their teaching.

In addition to realizing the potential of existing projects, the report also points to increasing both the number and quality of collaborations with external partners in EiT. This has resulted in a website targeted to external partners and a new webinar for EiT lecturers in 2026. By involving more external partners, the challenges addressed and solutions developed by students become more closely aligned with real-world needs. Following the course, the aim is to facilitate the further use of project outcomes. Three types of IPR agreements have been made, depending on which stakeholder wishes to continue the project work (members of the student group, the university, or an external partner). These agreements are intended to increase the utilization of project outcomes and to create an easier path for their further development and realization.

An ongoing project is currently developing a combined information package and toolkit for innovation and value creation in EiT. This work builds on insights from the earlier SFU Engage pilot project (2019-2021), Innovation toolkit EiT, as well as findings from the 2025 report. Together, the projects and initiatives conducted during this period have contributed to the goal of increasing innovation and value creation within and from EiT. This work continues by establishing structures and practices that support the further development and utilization of the students' innovative ideas and solutions, creating value for others through both commercialization and by creating solutions and services for working life and society.

[5] Verhulst, E., Carvajal, P., Ahmed, S., Martin, T., & Tranås, R. (2025). Innovasjon og verdiskaping i Eksperter i team (ISBN 978-82-7984-403-7). NTNU. https://www.ntnu.no/documents/306199/0/2025_Rapport+Innovasjon+og+verdiskaping+i+EiT_final.pdf/
[6] Verhulst, E., Carvajal, P., Ahmed, S., & Martin, T. (2026). "14: Supporting student reflection on entrepreneurship in interdisciplinary teams through peer mentoring". In Reframing Entrepreneurship Education. Cheltenham, UK: Edward Elgar Publishing. https://doi.org/10.4337/9781035345274
[7] https://www.ntnu.no/eit/innovation-awards

3 Staff Development

Lasting educational impact depends not only on students, but also on the educators, researchers, and leaders who shape learning environments and institutional development. Recognising this, SFU Engage has invested extensively in staff development through educator training, professional learning communities, collaboration projects, PhD education, and initiatives designed to build innovation competence across higher education. By supporting both individual development and organisational learning, the centre has sought to build long-term capacity for educational innovation within and beyond its partner institutions.

The activities presented in this chapter highlight how SFU Engage has contributed to the development of educators, researchers, and academic leaders at local, national, and international levels. Collectively, they demonstrate how the centre's work has influenced teaching practice, strengthened entrepreneurship education, expanded professional networks, informed institutional development, and supported the emergence of a growing community of scholars and practitioners dedicated to entrepreneurial learning and educational change.

3.1 Train-the-Trainer

SFU Engage has supported the development of educators and staff through a range of programs, courses, and collaborative initiatives focused on entrepreneurship, innovation, and student-active learning. By equipping educators with new pedagogical approaches, tools, and networks, these initiatives have contributed to strengthening educational quality and innovation capacity across disciplines and institutions. The examples below illustrate how staff development has helped embed entrepreneurial learning in teaching practices, educational programs, and organisational development.

3.1.1 Basic Course in Entrepreneurship Education for Higher Education Educators

Description of the Courses

Since 2022, SFU Engage at NTNU has developed and delivered a series of courses for university educators, embedded within an existing pedagogical development programme (UNIPED). The 20-hour basic course, *Entrepreneurship Education for Better Learning*, forms part of the required portfolio for academic staff developing formal pedagogical competence through the mandatory 200-hour program for faculty at NTNU.

The integration into UNIPED has been a key design decision. Participants are required to complete a set number of hours focused on teaching development, and the SFU Engage course directly responds to this need. At NTNU, the course has been delivered 17 times between 2022 and June 2026, reaching more than 250 participants across disciplines.

The course is offered both in-person and online. The latter was introduced in 2024, enabling participation from the two other campuses of NTNU (Ålesund and Gjøvik), multiple Norwegian institutions (Oslo Met, University of Agder, Norwegian School of Sport Sciences, The Arctic University of Norway, Nord University, University of Bergen, Western Norway University of Applied Sciences), as well as abroad (Nottingham Trent University and Warwick University). Interestingly, the course evaluations show that there is no significant difference in the overall satisfaction of the online and physical version of the course (Jin & Roald, 2025a[1]).

The course is designed around experiential and student-active pedagogies. Participants engage in a range of activities that they can customise to their own teaching. These include reflective exercises on their own personal and disciplinary relationship to entrepreneurship, object-based storytelling, interdisciplinary group work, ideation and problem-solving linked to the UN Sustainable Development Goals, and playful pitching exercises (Jin & Roald, 2025b[2]). The courses are structured around the SFU Engage "I-CARE" framework (Interact, Challenge, Act, Reflect, Embrace (uncertainty)), which is both applied in practice and explicitly introduced as an educational tool. The course has been designed, delivered, researched, and continuously refined by SFU Engage.

Importance for the Centre, Target Groups and Stakeholders

The UNIPED course *Entrepreneurship Education for Better Learning* is central to SFU Engage's strategy of embedding entrepreneurial and innovative teaching practices across disciplines. By integrating into an existing institutional programme, SFU Engage has ensured both relevance and accessibility. Recruitment has largely taken care of itself because the courses fulfil concrete requirements faced by academic staff.



Engaged participants, in the train-the-trainer course share their reflections with each other.



The participants in a cohort of the basic course invest in ideas that have been pitched using paper notes representing one million NOK each.

During the four years that the course has been offered, SFU Engage has experienced a gradual shift in the wider educational landscape. Increasingly, course participants come with explicit mandates to innovate teaching and learning within their disciplines and prepare their students for interdisciplinary collaboration and the competence to drive innovation. This creates more fertile ground for the ideas and practices promoted in TTT courses.

[1] Jin, F., & Roald, G. M (2025a). From Outsiders to Insiders: Empowering University Teachers to Foster the Next Generation of Entrepreneurial Graduates. *Education Sciences*, 15(12), 1643. https://doi.org/10.3390/educsci15121643

[2] Jin, F., & Roald, G. M. (2025b). Training university educators to foster embedded entrepreneurship education: an evaluation, *Cogent Education*, 12:1, 2564255. https://doi.org/10.1080/2331186X.2025.2564255



Visit from student entrepreneurs in a Train-the-Trainer course.

It seems like the course addresses a growing need to rethink teaching in line with expectations around interdisciplinarity, innovation, and societal engagement. Participants increasingly enrol with concrete mandates to develop new educational offerings or revise existing ones. The courses therefore resonate more directly with participants' professional responsibilities than in earlier phases.

For SFU Engage, this work supports the ambition to move from isolated initiatives towards systemic impact. By equipping educators from a wide range of disciplines with shared concepts, tools, and experiences, the courses contribute to building institutional capacity for educational innovation.

Course Impact

A key example illustrating this development is a participant from psychology who attended the online introductory course in December 2025. She expresses that she had low expectations to the course, expecting to feel alienated among business educators. However, she soon realized that the content directly aligned with her ongoing responsibilities – specifically, the development of a new interdisciplinary master's programme in health promotion involving external stakeholders. The course provided both a language and tools to navigate this work.

Importantly, this engagement did not stop at course completion. The participant later returned with a colleague to take the same course again, however in the physical format, demonstrating how impact extends into participants' home environments and contributes to recruiting new participants. A defining feature of the courses is the creation of transformative learning experiences. By placing participants in the role of learners and engaging them in hands-on, interdisciplinary activities, the courses often lead to shifts in how participants understand both entrepreneurship and their own teaching practice. This transformative learning, the process from entrepreneurial «outsiderness» to «insiderness», is described in Jin & Roald (2025b). Early exercises – such as reflecting on one's disciplinary relationship to entrepreneurship or sharing symbolic objects – reveal diverse interpretations and challenge preconceived notions.

As the course progresses, participants work collaboratively to identify and develop solutions to real-world challenges, using tools such as the Business Model Canvas. The integration of playful elements, such as pitching fictional products based on random word combinations, contributes to a safe learning environment where experimentation and failure are valued (Jin & Roald, 2025b). This, in turn, builds confidence and lowers the threshold for applying similar methods in their own teaching.

Evaluation studies and research outputs provide further evidence of impact. A mapping conducted at NTNU in 2022 showed that only around 5% of NTNU's study programmes contain courses that explicitly reference the word entrepeneur - while the percentage is 13 for innovation - prior to the introduction of SFU Engage's train-the-trainer courses (Aadland & Neergård, 2022)[3]. Subsequent qualitative studies – including focus group interviews with participants – indicate that educators increasingly integrate entrepreneurial elements into their teaching after completing the courses (Jin & Roald, 2025a, b).

Research published in Jin and Roald (2025b) demonstrates how the courses foster "insiderness" in entrepreneurship education, enabling participants to see themselves as legitimate contributors to the field. Another study (Neergård & Roald, 2025)[4] highlights how the courses help bridge perceived gaps between disciplines and reduce barriers associated with entrepreneurship as a concept.

Concluding Reflections

The success of the course *Entrepreneurship Education for Better Learning* highlights the importance of institutional anchoring for educational innovation. Embedding the courses within existing programmes has been crucial for both recruitment and impact.

At the same time, the experience points to areas for further development. While participation numbers are strong, a further step will be to more systematically track long-term effects, including how teaching practices evolve over time, how students are affected, and ultimately, whether and how they end up driving change in their respective contexts after their studies.

3.1.2 EngagePed: *Building Capacity for Student-Active Learning Across Disciplines*

One of the ambitions of SFU Engage has been to strengthen innovation and entrepreneurship education across disciplines by equipping educators with new pedagogical approaches. While student-active learning is increasingly recognized as essential for developing competencies such as creativity, collaboration, problem-solving, and the ability to navigate uncertainty, many educators continue to seek practical guidance on how entrepreneurship can be integrated into teaching outside traditional business education.

To address this need, SFU Engage Nord developed *EngagePed*, a train-the-trainer course for educators in higher education. The course was designed to help participants understand entrepreneurship as a pedagogical approach and explore how entrepreneurial teaching methods can be adapted to different disciplines and educational contexts.



Participants in the Train-the-Trainer course share their initial understanding of the term entrepreneurship. *Photo: Håvard Engen.*

The course was developed through collaboration between SFU Engage, Nord University, NTNU, and KOLT, and was first delivered in 2022. It was built around SFU Engage's educational framework. Through discussions, group work, practical exercises, and peer learning, participants learned about entrepreneurial pedagogy and explored how methods such as design thinking, prototyping, authentic challenges, and reflection activities could be integrated into their own teaching.

For SFU Engage, the course represented an important strategy for scaling impact. Rather than reaching students directly, EngagePed aimed to influence teaching practices across programmes and faculties. By equipping educators with entrepreneurial teaching methods, the course had the potential to affect a much larger number of students

[3] https://engage-centre.no/wp-content/uploads/2023/08/Kartlegging_av_innovasjon_i_utdanningene_web.pdf

[4] Neergård, G.-B., & Roald, G. M. (2025). Competent to teach? Educators' perceptions of entrepreneurship. *International Journal of Entrepreneurial Behavior & Research*, 31(8), 2027–2048. https://doi.org/10.1108/IJEBR-07-2023-0712

and contribute to long-term educational development within higher education.

Feedback from participants highlighted the value of the practical exercises and the opportunity to exchange experiences across disciplines. Participants particularly appreciated working with authentic challenges and concrete teaching methods that could be implemented in their own courses. The pilot also generated valuable insights for further development, including the importance of balancing theory with practical examples and creating opportunities for interaction and reflection.

Although EngagePed is no longer offered in its original format, its impact continues through new initiatives. The pedagogical principles, learning design, and train-the-trainer approach developed through EngagePed have been integrated into subsequent projects, including CinnovatE and the Social Innovation Programme. In CinnovatE, this legacy is continued through Competence for Change, a staff development course that combines SFU Engage's entrepreneurial pedagogy with the Inner Development Goals framework and a stronger focus on sustainability transitions. The course supports educators in translating entrepreneurial methods into their own teaching, helping students develop the confidence, creativity and collaborative skills needed to act on complex sustainability challenges.

The Social Innovation Programme extends the same capacity-building logic into the field of social innovation and social entrepreneurship, enabling educators and facilitators to support students and staff, particularly from SHAPE and professional disciplines, in developing, testing and implementing solutions to real societal challenges. Together, these initiatives build on EngagePed's core ambition of strengthening educators' capacity to facilitate innovation and entrepreneurship learning, while adapting this approach to more targeted disciplinary and societal contexts.

The legacy of EngagePed therefore extends beyond the course itself. It contributed to building institutional capacity for student-active learning, helped disseminate SFU Engage's pedagogical framework across disciplines, and provided a foundation for new educational initiatives aimed at developing innovation competencies among both educators and students. Through this train-the-trainer approach, EngagePed has helped ensure that the centre's methods and educational philosophy continue to influence teaching practice and innovation education beyond the lifespan of the original course.

3.1.3 Creating Holistic Innovation Capacity (CHIC)

SFU Engage coordinated the CHIC project and consortia from July 2021 to July 2023 on behalf of NTNU and Nord University. The CHIC project received EUR 1,2 million in funding from the European Institute of Innovation and Technology (EIT) through the programme Higher Education Initiative.

The work packages of SFU Engage were 'Spark* dissemination' and 'Teaching Entrepreneurial Mindset' to ensure establishment of local student-to-student mentoring service and train-the-trainer courses for the university partners of the consortium. Additional work packages were 'Engineering Ladder' by NTNU (Department of Electronic Systems) and the 'E3 Initiative' by University of Split and University of Malta.

The consortium contributed to increasing the entrepreneurial and innovative capacity of the higher education sector across Europe and, consequently, boosted sustainable economic growth and competitiveness in the EU.

Through Spark* dissemination, we shared practice and experience from a student-driven peer-to-peer mentoring service and how this ensures low-threshold encouragement and support for student entrepreneurship based on unique insights from student entrepreneurs.

A two-day workshop, *Teaching Entrepreneurial Mindset*, provided educators from all disciplines with the teaching tools necessary to implement entrepreneurial skill set and mindset development in their courses. This, in turn, allowed educators to encourage creative problem solving and teach students how to become change agents.

Finally, the Engineering Ladder is a holistic restructuring of suitable existing courses to increase study programmes' work relevance and industry connection. This also provides students with project and collaboration experience through problem solving for real stakeholders.

By piloting these activities locally at selected higher education institutions, the consortium measured and documented increase in local entrepreneurship and innovation involvement among students, university staff, and other representatives from the knowledge triangle. The activities increased engagement among students and university staff to decrease the limitations of hierarchy, enabling the use of students as a resource for impact within university-based innovation and entrepreneurship.

The E3 Initiative workshops, led by Split University, highlighted what technology transfer is, the advantages of collaborating, and how technology transfer offices can be an asset. The target audience gained better understanding and knowledge, which eventually stimulated integration of the knowledge triangle.

Sharing these activities among the participating partners enabled the institutions to strengthen their local entrepreneurship and innovation ecosystems, as well as the Knowledge and Innovation Communities and EU alliances in which the different consortium members participated.



Spreading Spark* to Split, Croatia.

3.1.4 From Sustainability Challenges to Entrepreneurial Action: SFU Engage's role in CinnovatE

How can students and educators learn to see sustainability challenges not only as problems, but also as opportunities for action? This is one of the questions Nord University explores through CinnovatE, a European collaboration project that started in April 2025 and will continue until April 2027.

CinnovatE brings together five higher education institutions, IE University, Architectural Association School of Architecture, Lietuvos verslo kolegija, JUNIA and Nord University, together with innovation and communication partners. The project aims to strengthen entrepreneurship, circular economy and sustainable urban development in higher education. Through SFU Engage, Nord University contributes as an entrepreneurship and innovation partner, sharing experience in entrepreneurial education, student innovation and collaboration with external stakeholders.

At Nord University, the work has focused particularly on two areas: course development and ecosystem building. Both areas aim to strengthen the university's capacity to support students and staff in working with sustainability, innovation and circular solutions across disciplines.

One important impact of CinnovatE has been the closer collaboration between SFU Engage and Nord Innovation, which is Nord University's Technology Transfer Office. Through this collaboration, the project has worked to make innovation support more visible and accessible across the university. Activities have brought together students, educators, researchers, and innovation advisors to explore how ideas can be developed, supported, and connected to relevant expertise.



CinnovatE partners participating in a social activity at Tuvsjyen during the consortium gathering in Bodø. *Photo: Elisabeth Lund.*

The collaboration has also contributed to new externally funded initiatives between SFU Engage and Nord Innovation, showing how CinnovatE has helped strengthen the relationship between educational development, student innovation and the university's wider innovation support system.

This work builds on a clearer understanding of existing needs at Nord University. Through CinnovatE, SFU Engage and Nord Innovation have used findings from the university's innovation report to better understand what different faculties need in order to strengthen student innovation. The report showed that there is interest in innovation across the university, but also that more work is needed to reach students and staff from a wider range of disciplines. This has given the project a more informed basis for further developing activities, support structures and meeting places for innovation.

The work has also reached beyond Nord University. In November 2025, SFU Engage hosted a gathering for ALLY members in Bodø, bringing together 27 advisers and others who work with student innovation across institutions. The gathering created a space to share experiences, discuss common challenges, and explore how universities can better support students with innovative ideas. This strengthened the national network around student innovation and gave CinnovatE a broader foundation for developing support structures and future activities.

The impact is also visible in course development. Through CinnovatE, SFU Engage has further developed learning activities for both students and staff. One example is *Competence for Change*, a course for Nord University employees developed in collaboration with Kraft Sustainability Center. The course combines the Inner Development Goals framework with entrepreneurial teaching methods, helping educators strengthen their own capacity to handle change while also supporting students in becoming more resilient, reflective, and action-oriented.

Eleven employees took part in the course, which combined digital activities with in-person sessions. In a follow-up meeting, participants shared how they had started to use the methods in their own teaching, including SFU Engage's pedagogical framework and tools from the Inner Development Goals. In this way, the impact reaches beyond the individual course participant: it influences how educators design learning activities and how students are prepared to meet change and complexity in society.

For students, the project builds on *Sustainability in Practice.* This elective course was originally developed within SFU Engage, but through CinnovatE it has been further strengthened with a clearer focus on circular economy and entrepreneurship. The course is open to students from across Nord University and usually attracts students from business, biology, engineering and teacher education. Working in interdisciplinary teams, students explore real sustainability challenges in the blue economy and develop ideas for sustainable and circular solutions.

The course is action-based and practice-oriented. In collaboration with Løvold Havpark and actors from the maritime sector, students work with real cases and receive mentoring along the way. The Faculty of Biosciences and Aquaculture also contributes with examples of sustainability challenges in the blue economy, helping students understand both the complexity of the field and the opportunities for innovation. Nord Innovation has also been involved by presenting how research projects can move towards commercialization, giving students insight into how ideas can be developed beyond the classroom.

Together, these activities show how SFU Engage's impact through CinnovatE is not limited to one course or one event. The project strengthens students' entrepreneurial mindsets, equips educators with tools for change-oriented teaching, and builds bridges between academic environments, innovation support structures, and external partners. It also places sustainability and circular thinking at the centre of entrepreneurship education, encouraging students and staff to see environmental challenges as possibilities for value creation.

As the project continues into 2027, we aim to build on this impact by developing sustainable teaching resources, strengthening collaboration with Nord Innovasjon and external partners, and embedding circular thinking and entrepreneurial learning across Nord University. The CinnovatE consortium meeting in Bodø in September will further support this work by creating an opportunity to share experiences from Nord and strengthen collaboration across the European partners.



Nord University staff attending the Competence for Change course as part of the CinnovatE project . *Foto: Adrian Brunborg.*



Marianne Bahr Simonsen presenting Kraft during the Competence for Change course. *Foto: Adrian Brunborg.*

3.2 PhD Courses

Through the development of courses and innovation-focused initiatives, SFU Engage has also worked to strengthen innovation competence among PhD candidates. These activities provide opportunities to explore the societal relevance of research, develop entrepreneurial skills, and engage with stakeholders beyond academia.

3.2.1 Courses on Research-Based Innovation

Starting in 2020, SFU Engage has offered courses to PhD candidates aimed at raising their awareness of and competence in developing innovation from research.

Developed initially as a short course for PhD candidates from a single faculty at NTNU, the offering has developed into a portfolio of courses that are available to PhD candidates from all disciplines. SFU Engage now offers two courses on Research Based Innovation at NTNU: an introduction course (2.5 ECTS) and an advanced course (5 ECTS). In addition, PhD candidates can also take a course on understanding and formulating the value of their research and its impact. The course, Research Value: From Insight to Impact (3 ECTS) is co-developed with the Stockholm School of Entrepreneurship Studies (SSES) under the joint initiative between SFU Engage and SSES for establishing a Nordic Academy for Entrepreneurship (NACENT).

These courses on innovation from research are a response to a growing demand for competence in innovation in the academic world and for more impact from the high-quality research conducted at Norwegian and European universities[5, 6, 7].

Initiated in response to a need expressed by NTNU's Faculties of Information Technology and Electrical Engineering (IE) and the Faculty of Engineering (IV), the offering on research-based innovation from SFU Engage has been offered in different formats, duration, with and without credits, to meet the needs of different stakeholders including EU projects and research groups – for example energy researchers at NTNU.

This has enabled SFU Engage to develop a more complete offering to promote and develop the competence of researchers in entrepreneurship and innovation. This portfolio of courses enables students to evaluate their own role in creating an impact with their research and develop the competence to pursue a pathway to impact utilising entrepreneurial skills and mindset. Researchers with these skills are key to meeting NTNU's Commitment to Impact[8].

To date, close to 250 participants have been part of the different courses and interventions on research-based innovation. For PhD candidates, surveys conducted show an increase in motivation and confidence to take on the role of an innovator, and an increase in knowledge of the key topics of entrepreneurial thinking and action, theories related to innovation and commercialisation of research, intellectual property and skills in communication.

Statements from former participants:

"I learnt how to present my work to different audiences, how to tailor my research in a more accurate business perspective. The course gave me more confidence in my academic, personal and business-oriented skills.

- Student in 2022

"I really appreciate the workshop session with the other researchers, listen to different pitches and learn how to communicate the idea.

- Student in 2023

"During the course, I learned innovative problem-solving techniques and the importance of interdisciplinary collaboration, which will be crucial for future projects.

- Student in 2024

[5] NOKUT. (u.å.). Nasjonalt kvalifikasjonsrammeverk for livslang læring. Hentet 11. september 2026, fra https://www.nokut.no/norsk-utdanning/nasjonalt-kvalifikasjonsrammeverk-for-livslang-laring/
[6] Draghi, M. (2024). The future of European competitiveness: Report by Mario Draghi. European Commission. https://commission.europa.eu/topics/competitiveness/draghi-report_en
[7] NTNU. (2023). Helhetlig plan for innovasjonskompetanse ved NTNU. https://www.ntnu.no/documents/1272503658/1276139892/131143_Helhetlig+plan+for+innovasjonskompet._05.09.2023.web.pdf/



Professor Roger Sørheim teaching research based innovation. *Photo: Håvard Engen.*

3.2.2 Knock-on Effects from the PhD Courses Offered by SFU Engage

The Nordic Academy of Entrepreneurship (NACENT)[9] is a collaboration between the Stockholm School of Entrepreneurship (SSES) and SFU Engage. Emerging from discussions aimed at developing a shared educational platform that could extend the principles of entrepreneurship and innovation to doctoral candidates from all disciplines across the Nordics, NACENT has been actively offering a joint course since 2024. NACENT enables interdisciplinary collaboration between SFU Engage and the member institutions of SSES, which includes Royal College of Music (KMH), Konstfack University of Arts, Crafts and Design, Karolinska Institute, The Royal Institute of Technology (KTH), Stockholm School of Economics and Stockholm University to jointly develop and offer courses and other programs.

The joint course offered through NACENT has been offered 3 times and 24 students from across different disciplines and institutions have taken this course. This includes students not only from NTNU and SSES, but also from other institutions in Europe. We are currently in discussions with other institutions in the Nordics to widen the scope of offerings available under the NACENT umbrella and writing joint applications for this.



The jury giving feedback to the pitches from the students. *Photo: Håvard Engen.*

The offering on PhD courses from SFU Engage has been institutionalised at NTNU, through initial funding for a pilot course offering for all disciplines. This course has now been extended to the basic and advanced course being made available to PhD candidates from all disciplines. These courses are also an important part of NTNU's plan for innovation competence and led to the development of a proposal for a comprehensive offering to contribute to

[8] NTNU. (2026). Societal impact 2026: Toolkit (Versjon 1.0). https://www.ntnu.no/documents/1272503658/0/TOOLKIT+SOCIETAL+IMPACT_JUNE+2026.pdf
[9] https://nacent.se/



Participants from NACENT course in Stockholm.

increased innovation and entrepreneurship activity throughout NTNU, labelled the 'Innovation Academy'. This proposal encompasses four areas of interventions, namely

- Student-driven innovation and entrepreneurship – student-driven initiatives, ecosystem and links to education
- Innovation and entrepreneurship in education – support for teachers and study programmes
- Competence enhancement for employee innovation – competence and progression enhancement related to commercialisation among employees up to TTO
- Evaluation, performance measurement and dissemination

The thinking around an innovation academy also relates to starting the societal contributions from the P1 building in the NTNU Unified Campus project[10]. A central aim is to bring together entrepreneurship support structures and academic environments in order to further the development of innovation competence among students, PhD candidates, faculty, administrative staff, industry and the public sector.

This proposal has already led to funding being allocated to student driven initiatives, PhD courses, a mentorship program for employees with research-based innovations and the development of a deep-tech business bootcamp at NTNU.

3.3 Capacity Building of PhD Students within SFU Engage

One significant contribution of SFU Engage is developing future entrepreneurship educators and researchers. Since its inception, the centre has supported a growing community of doctoral candidates whose work aligns with SFU Engage's objectives.

To date, SFU Engage has been affiliated with more than 25 PhD projects, some fully funded by the centre, others connected through its partner institutions NTNU and Nord University. Together, the completed and ongoing theses cover a wide range of topics, and when you look at them as a whole, several clear areas of contribution stand out.



PhD Candidate Ragnhild Nordeng Fauchald. *Photo: Elin Iversen.*



PhD Candidate Mariel Hjelle.

Assessment and Learning in Action-Based Entrepreneurship Education:
Two theses have focused on a significant challenge in the field: understanding assessment methods in entrepreneurship education and how they enable students' learning. Torgeir Aadland's thesis specifically addressed the design, learning outcomes, and assessment objectives in entrepreneurship education. Åshild Wilhelmsen's ongoing research builds on this by closely examining assessment practices in venture creation programs. Taken together, this body of work advances the field by moving away from traditional assessment methods in entrepreneurship education and toward practices that foster student learning in line with action-based education.

Role of Extracurricular Activities in Entrepreneurship Education:
Another key focus of the topics concerns extracurricular activities in entrepreneurship education. Dag Håkon Haneberg examined how student entrepreneurs learn through action and interaction in the context of extracurricular activities. Ragnhild Nordeng Fauchald's study focuses on the students' involvement in the entrepreneurship-related extracurricular activities and its influence on entrepreneurial learning. Ongoing work by Vårin Vaskinn examines learning in interdisciplinary, extracurricular student teams that commercialize medical technology.

Team-based Learning:
Three PhD projects have explored how students learn in teams with a focus on entrepreneurship programs. Iselin Kristine Mauseth Steira's thesis examined the role of new venture teams in entrepreneurship education, while Sigrid Westad Brandshaug examined the challenges that student teams face in action-based settings and the learning process associated with them. Ongoing work by Jicky Isabell Lullies focuses on how nascent venture teams cope with uncertainty and build resilience.

Entrepreneurial Identity:
The topic of entrepreneurial identity development in the context of venture creation programs is also a major focus. Gunn-Berit Neergård's thesis examined how nurses develop an entrepreneurial identity and why that matters for healthcare. Ongoing projects by Sonia Ahmadi examine how entrepreneurial identity forms among students and the role motivation plays in becoming entrepreneurial.

Inclusive and Contextual Approaches:
There are also research topics that have unique research focus. Mariel Hjelle's recently completed thesis examines how entrepreneurs manage stress, focusing specifically on the role of metacognition in entrepreneurs' stress management and its development in entrepreneurship education. Ben Toscher's thesis examines the role of entrepreneurship education in higher music education and how it can facilitate the entrepreneurial learning of music students. Cecilie Haukland's thesis asked how entrepreneurship education could be rethought for students with ADHD, a perspective rarely explored in the field. Vivek Sinha's work took an entirely different context, looking at how new ventures grow in off-grid communities at the base of the pyramid.



PhD Candidate Iselin Kristine Mauseth Steira.



PhD Candidate Cecile Haukland.

Thirteen candidates have successfully completed their doctorates, and their chosen career paths tell an interesting story. Several of them have transitioned directly into academic roles. Torgeir Aadland, Dag Håkon Haneberg, and

[10] https://www.ntnu.edu/campusdevelopment/unified-campus

Sigrid Westad Brandshaug are now Associate Professors at NTNU. Iselin Kristine Mauseth Steira works as an Associate Professor at Nord University. Matthew Patrick James Lynch is an Associate Professor of Innovation at Østfold University College in Norway.

Others have chosen to continue their research. Gunn-Berit Neergård is currently employed as a researcher at NTNU. Ragnhild Nordeng Fauchald is engaged in postdoctoral research, also at NTNU. Additionally, others are working in various roles within corporate environments or are involved in startups they have founded.

In addition, twelve PhD projects are still ongoing, covering topics such as entrepreneurial identity, motivation, assessment practices, and learning within new venture teams. Several of these candidates are expected to complete their work in the coming years, which will further enhance the field.

This picture illustrates a network of individuals who have dedicated years to thoughtfully consider how entrepreneurship is taught and learned. They are now in positions to apply those insights in practical ways. As educators, researchers, and practitioners, the PhD community at SFU Engage is helping to shape the next generation of students throughout Norway and beyond.



Torgeir Aadland.
Photo: Geir Mogen.



Øystein Widding.
Photo: Geir Mogen.



Marianne Arntzen-Nordqvist.



Roger Sørheim.
Photo: Geir Mogen.

3.4 Developing Teaching Excellence Through SFU Engage

Over the past ten years, SFU Engage has brought together people who are interested in improving entrepreneurship education and creating engaging learning experiences for students. Through educational development projects, new teaching approaches, workshops, research, and collaboration across institutions, teaching and learning have been a natural part of many of the centre's activities.

During the centre period, four members of the SFU Engage community have been awarded the status of Excellent teaching practitioner[11] or Accredited Teacher[12]. The recipients are Professor Roger Sørheim (NTNU), Professor Øystein Widding (NTNU), Associate Professor Torgeir Aadland (NTNU), and Associate Professor Marianne Arntzen-Nordqvist (Nord University). Three of the awards have been granted at NTNU (with three more currently applying for this status) and one at Nord University. All four have contributed to SFU Engage through teaching, educational development, workshops, and research related to entrepreneurship education. SFU Engage has played an important part in the applications, both in shaping the applicants' growth as teaching practitioners and in reflecting how their development, in turn, has informed SFU Engage and its activities.

[11] https://www.ntnu.edu/pedagogical-merit/
[12] https://www.nord.no/en/about/working-at-nord/skills-development/distinguished-lecturer

Excellent Teacher Practitioner (NTNU) and Accredited Teacher (Nord University) status are awarded to educators who can document a long-term commitment to student learning and the development of teaching practices. The recognition is based on evidence of educational development over several years, both in one's own teaching and through contributions to colleagues and the wider educational environment. While the awards recognise individual achievements, they also reflect a community where teaching and learning have been an important focus. Throughout the SFU Engage period, members have shared experiences, explored new teaching approaches, and contributed to the development of entrepreneurship education across institutions.

For SFU Engage, it is encouraging to see members of the community receive recognition for work that aligns closely with many of the themes that have been central to the centre's activities over the past decade. Together, the recognitions reflect a sustained commitment to teaching quality, student learning, and educational development across the institutions involved in the centre.

3.5 Internal Staff Development

The examples below highlight how SFU Engage has contributed to staff development with direct efforts towards strengthening influence on the systems and management, while also promoting SFU Engage activities, promotional initiatives, and participation in boards and committees.

3.5.1 Influencing the System and Management

Throughout the centre period, SFU Engage staff have actively contributed to discussions on entrepreneurship, innovation, and educational development at both institutional and national levels. While much of SFU Engage's impact has been directed towards students and educational practices, the centre has also sought to influence the wider systems in which entrepreneurship education operates.

A key mechanism for this influence has been participation in committees, working groups, and strategic processes. SFU Engage faculty have contributed to national and institutional reviews, including work related to the FTS (Future Engineering Education) reports, bringing evidence and experience from entrepreneurship education into discussions on educational quality, learning environments, and the role of innovation in higher education. Through these activities, the centre has contributed perspectives grounded in research as well as practical experience from developing and delivering entrepreneurship education.

Another important contribution has been the preparation of analyses and reports commissioned by university leadership. These include work on the NTNU Campus Pilot and on innovation in education, both carried out at the request of university leadership. By combining insights from research, educational practice, and student innovation activities, these reports have provided input to institutional discussions and decision-making processes.

SFU Engage representatives have also presented the centre's



National SFU network gathering hosted at NTNU.



Talking to study programme leaders.
Photo: Håvard Engen.

work and insights to governing bodies and leadership groups, including the NTNU Board, faculty boards, faculty leadership, and other management forums. These engagements have provided opportunities to share experiences from the centre's educational initiatives, discuss implications for educational development, and contribute perspectives on innovation, entrepreneurship, and student learning.

In addition, centre staff have maintained continuous dialogue with faculties, departments, and institutional leaders throughout the centre period, both at NTNU and Nord University. These interactions have ranged from discussions on programme development and educational practices to broader conversations about student innovation, entrepreneurship, and the role of experiential learning in higher education. Through these formal and informal arenas, SFU Engage has contributed knowledge, perspectives, and practical experience to ongoing development processes. The dialogue has also led directly to new initiatives, including PhD courses and seminars for programme leaders, and development of Train-The-Trainer courses.

An important principle underlying this work has been that, while SFU Engage seeks to equip students with the skills and mindset to become change agents, centre staff also need to act as change agents within the systems in which entrepreneurship education operates. This has included advocating for institutional conditions that enable student-driven, co-curricular and extracurricular innovation and entrepreneurship, as well as contributing knowledge and experience to discussions about how universities can better support such activities.

Taken together, these activities have enabled SFU Engage to contribute beyond its own programmes and projects. Through participation in committees and strategic processes, commissioned analyses, dialogue with university leadership, and advocacy for entrepreneurship and student innovation, SFU Engage has brought insights from entrepreneurship education into institutional discussions and decision-making related to the development of higher education.



Startup from the School of Entrepeneurship presenting.
Photo: Håvard Engen.

3.5.2 Cultivating Influence, Recognition, and Systemic Impact

Since its inception, SFU Engage has not only advanced entrepreneurship education across Norway but has also actively invested in the professional growth of its staff, enabling them to shape the systems and structures that define the field. The summary of examples below illustrates how this commitment to development translates into tangible influence, through recognition, leadership roles, and the promotion of SFU Engage's core activities.

At the individual level, SFU Engage staff have consistently been celebrated for their teaching and research excellence. Professors Roger Sørheim (2022), Øystein Widding (2023), and Torgeir Aadland (2025) have all been awarded the prestigious Excellent Teaching Practitioner (Merittert underviser) status at NTNU, while Marianne Arntzen-Nordqvist received Accredited Teacher status at Nord University in 2024. These awards demonstrate how SFU Engage nurtures pedagogical leadership across institutional boundaries. Roger Sørheim and Vårin Vaskinn were named Best Supervisor respectively in 2024 and 2025, further underscoring the centre's dedication to mentoring the next generation.

Beyond teaching, SFU Engage staff have earned acclaim for their scholarly contributions. Karin Wigger (2020) and Roger Sørheim (2021) received publication prizes, while Gunhild Marie Roald and Fufen Jin were awarded «Best Paper using Transdisciplinary Methods» at ACERE 2024 for their work on embedding entrepreneurship education across disciplines. PhD candidates have also distinguished themselves, with Ragnhild N. Fauchald earning both a Best Paper Award (ESU 2021) and a Best Reviewer Award (RENT 2023), and Jicky Isabell Lullies receiving a Best Reviewer Award (ESU 2023) and a nomination for Best PhD Proposal (3E 2023).

This culture of excellence extends to the classroom and beyond. In 2021, NTNU's Expert in Teamwork programme won the Education Quality prize from DIKU (now HK-dir), and in 2024, the NTNU School of Entrepreneurship was ranked highest in study quality among 263 master's programmes. These are testaments to the pedagogical impact fostered by SFU Engage-affiliated educators.

SFU Engage has also empowered its staff to take on leadership roles that influence the broader entrepreneurship ecosystem. In 2025, Professor Lise Aaboen was elected to the Board of Directors of the European Council for Small Business and Entrepreneurship (ECSB). That same year, Ragnhild Nordeng Fauchald, Lise Aaboen, and Roger Sørheim won the Best Panel Symposium award from the MED-division at the Academy of Management (AoM) 2025, recognising their ability to address global issues through management education.

SFU Engage's promotional reach and visibility have grown through conference leadership and high-profile engagements. The centre hosted a digital 3E conference in 2021 and a physical 3E conference in 2026, positioning itself at the forefront of international dialogue. In 2023, an SFU Engage team received the Best Practitioner Development Workshop award at the 3E Conference, and in 2025, several papers earned nominations for Best Paper awards.

The ripple effects of SFU Engage's staff development are visible in the success of student ventures and entrepreneurial ecosystems. From STUD-ENT funding awarded to dozens of student startups across NTNU and Nord University (2020–2023), to top placements at the Babson Global Student Challenge, Stage Two, Arctic Ignite, and Venture Cup, SFU Engage staff have consistently mentored students toward national and international recognition. Ventures such as Woolero, Acoustic Design, CapiPro SB, Cortex Robotics, Naya, Demp, and Equafish all bear the mark of SFU Engage's developmental ethos, where staff investment directly fuels student innovation.



Student entrepreneurs at Arctic Ignite.



4 Conferences and Active Knowledge Sharing

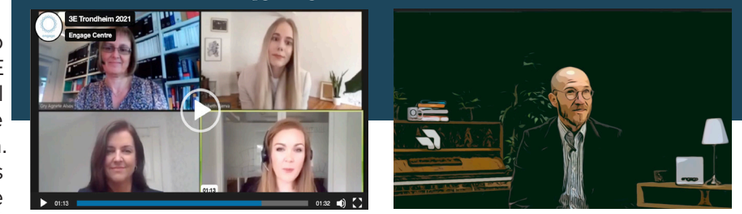
SFU Engage has actively contributed to national and international communities of practice through conferences, professional networks, collaborative forums, and other knowledge-sharing initiatives. These activities have provided opportunities to disseminate research, exchange educational practices and build partnerships

The examples highlighted here show how SFU Engage has extended its influence beyond its own institutions through active participation in, and organisation of, knowledge-sharing arenas. They demonstrate how the centre has contributed to shaping international discussions on entrepreneurship education, strengthening professional networks, generating new research collaborations, and promoting the dissemination of educational innovations developed through SFU Engage.

4.1 3E Conference

The ECSB Entrepreneurship Education Conference (3E Conference) is the leading annual European research conference in entrepreneurship education. In 2020, SFU Engage was preparing to host the conference in Trondheim at NTNU and welcome scholars from around the world. Due to the Covid-19 pandemic, the conference was transformed into a fully digital event and reborn as 3E 2021. Five years later, in 2026 SFU Engage hosted the 3E conference again. This time as the first ever 3E held above the Arctic Circle, with Nord University as the local organiser. Together, these events demonstrate SFU Engage's important role in shaping and connecting the international entrepreneurship education community.

Screen shots from video inviting participants to 3E 2021.



(video at https://3e2021.wordpress.com/)

4.1.1 Hosting the Conference

2021 Virtual Conference

The virtual conference centred around the theme of "Entrepreneurship education in the 2020ies". The three-day event was held in May 5-7, 2021, via Zoom, featuring keynote speeches by best paper nominees in main sessions, and paper presentations and Professional Development Workshops (PDWs) in parallel sessions. To capture some of the informal networking that takes place at regular conferences in the virtual setting, the first day started with an escape room exercise for all participants and ended with a seminar for young scholars. The seminar for young scholars included an inspirational session where junior scholars presented their actions in creating new teaching methods, courses, new organisations, and networks.

All research papers at the conference included a 'question that we care about' instead of a traditional 'purpose', following the 3E tradition. Topics ranged from experiential learning, learning design and settings where an entrepreneurial mindset may be useful, to discussions about why we teach entrepreneurship the way we do. For each research paper, two or three discussants were appointed to ensure that all authors would get valuable comments on their papers. The PDWs are characterised by interaction and hands-on trying out of tools that can be implemented in the teaching practice of the entrepreneurship educators as soon as they come home from the conference.

At the end of the conference, the best paper award and the best PDW award were announced. Yvette Baggen and Lisa Ploum from Wageningen University in the Netherlands won the award for best PDW for "Entrepreneurship education canvas: Designing education activating students' entrepreneurial mindset". Helle Neergaard and Sarah Robinson from Aarhus University in Denmark, got the best paper award for "Entrepreneurship as existential learning: The missing link in effectual learning".

The first all-digital 3E Conference was very well received according to the post conference evaluation survey. The 128 participants came from all over Europe as well as from countries like Canada and New Zealand. SFU Engage researchers formed one of the largest communities at the conference, with seven paper presentations, two PDWs, in addition to serving as discussants and session chairs. This clearly demonstrates SFU Engage's prominent role in entrepreneurship education research.

Planning and hosting an event like this require a lot of hard work and dedication, but the results are equally rewarding. Ulla Hytti, President-Elect of ECSB / Professor, University of Turku, complimented SFU Engage on the event:

> "ECSB is thrilled with the great success of the virtual edition of the 3E conference in 2021. The great planning and organising from SFU Engage ensured that the main features of the 3E concept – active engagement, interaction and strong sense of community – carried over to the virtual sphere."

The conference was highly valued by junior researchers as well:

> "3E was my first research conference and where I presented my first research article in the field of Entrepreneurship Education. The 3E conference was a great experience for a nascent PhD-student, thanks to all the nice, dedicated discussants and participants.

Papers from the digital 3E Conference have been published in a variety of international journals and that a PDW from the conference has resulted in the collaborative PhD course on Entrepreneurship Education "Emerging perspectives in the Entrepreneurship Education" held in 2022 and the special issue in International Journal of Entrepreneurial Behaviour and Research that was initiated already for the 2020 edition was published later in 2021. Through the digital 3E Conference, SFU Engage made its mark in the international community in research on entrepreneurship education.

2026 3E in Bodø

The 2026 3E conference was organised in collaboration with the European Council for Small Business and Entrepreneurship (ECSB) and brought together around 180 participants from 22 countries. Researchers, educators, practitioners, and policymakers travelled to Bodø



Norwegian folk dance at the reception of 3E 2026.



Engaged Audience at 3E in Bodø 2026.



Dean Gry Alsos at the opening of 3E 2026. *Photo: Håvard Engen.*

from across Europe and beyond, including participants from the United States, Canada, Australia, South Africa, and Hong Kong. For SFU Engage and Nord University, hosting the conference was an opportunity not only to showcase the institution's work in entrepreneurship education, but also to introduce national and international participants to Bodø and Northern Norway.

The theme of this year's conference was "Developing Change Agents through Entrepreneurship Education." The conference explored how education can empower individuals to create positive social, economic, and environmental change in a rapidly evolving world. The need for people who can navigate uncertainty, identify opportunities, collaborate across disciplines, and turn ideas into action has never been greater. These questions were at the heart of the discussions, Professional Development Workshops (PDWs), and research presentations throughout the conference.

The 3E Conference is known for its innovative and highly interactive format, where participants engage in roundtable discussions centred on questions, challenges, and ideas, having read papers in advance. The conference combined research presentations with PDWs, where participants actively explored and tested new educational tools, methods, and approaches together. This format encourages deeper dialogue, collaboration, and reflection among participants, making 3E a unique meeting place for the international entrepreneurship education community.

One of the highlights of the conference was the plenary session "Building Entrepreneurship Education Together: How Collaborative Initiatives Can Drive the Next Generation of Change Agents in Europe", a sofa conversation moderated by Professor Gry Agnete Alsos. During the discussion, Professor Andrew Corbett reflected on the unique role of entrepreneurship educators and the impact they have on future generations. His message was simple yet powerful: entrepreneurship educators should not forget that they have "the best job in the world."

By working with students every day, educators can shape future innovators, problem-solvers, and change makers. Entrepreneurship education is not only about creating new ventures; it is about helping individuals develop the mindset, confidence, and capabilities needed to create positive change in their communities and beyond. The message resonated strongly with participants who had spent several days discussing how education can contribute to addressing some of society's most pressing challenges and how universities can help develop the change agents needed for the future.

When asked about the best elements of conference, participants highlighted the sense of community, opportunities for interaction and networking, the conference format, and the overall organisation. Some of their comments included:

> "This was one of the best conferences I have been to for a long time."
>
> "Meeting a community of educators, curious and willing to change things."
>
> "The interactions with others, including the no PowerPoint sessions because that stimulates the discussions."
>
> "Excellent PDWs, which were both engaging and of high quality."
>
> "Degree of interaction, collaboration, openness and friendliness."

Bringing the 3E Conference to Bodø represents an important milestone for both SFU Engage and Nord University Business School. Over the past decade, the academic community has contributed significantly to the development of entrepreneurship education research and practice, both nationally and internationally. Hosting around 180 participants from 22 countries demonstrated the strength of this community and its shared commitment to developing educational approaches that prepare students to shape the future. A version of this text has also been published on the SFU Engage website[1].

4.1.2 Contributions to the Conference

SFU Engage has contributed to the 3E conference every year since the conference in Leeds 2016. 3E is the major European conference for entrepreneurship education and has therefore been a priority for SFU Engage with internal seminars to ensure that many Engagers are able to attend and that the papers get published. During the years that SFU Engage has attended, the research field of entrepreneurship education has developed. There are now several PhD students and junior researchers (several from SFU Engage) that have entrepreneurship education research as their primary focus instead of being entrepreneurship researchers occasionally publishing something about their entrepreneurship education practice.

The development of the field is seen not least in the theoretical and methodological rigour of the papers and the discussions at the conference, that has also made entrepreneurship education research increasingly established as a research field in established entrepreneurship journals.



Book launch at 3E in Bodø with world premiere of «The I-CARE song» together with the audience.



[1] https://engage-centre.no/3e-2026-conference-in-bodo/

SFU Engage has had a significant number of contributions to the 3E conference, averaging 6–7 paper presentations and 2 Practitioner Development Workshops per year. The centre reached a peak in 2023, where SFU Engage was responsible for 16 % of the contributions to the conference. Engagers are among the people with the most contributions to the conference, through its history. Lise Aaboen averages 2 contributions per year, making her one of the biggest contributors, and several other Engagers are among the most active contributors to the conference.



Workshop at 3E in Aarhus

4.2 The Venture Creation Program Forum: Building a Global Community for Venture Creation Education

The Venture Creation Program (VCP) Forum was a revitalization of the Chalmers School of Entrepreneurship initiative dating back to 2012. The ambition is to connect VCPs around the world to share and develop best practices.

SFU Engage launched their version of the VCP Forum in Trondheim, hosted at NTNU, in September 2018. During this event 32 participants from 12 institutions shared practice and strengthened collaboration between VCPs around the world.

Participants exchanged experiences on topics such as effective teaching methods, student perspectives, and program design. Research conducted by SFU Engage's PhD candidates was presented, and opportunities for cross-institutional collaboration were explored. The visitors were also introduced to NTNU School of Entrepreneurship through student feasibility study presentations, providing a practical example of venture creation education in action.

The outcome was highly positive. Participants established new professional relationships, expanded their international networks, and gained ideas they could implement in their own institutions. The enthusiasm generated during the event led to the decision to continue the forum as an ongoing international initiative. Following the conference, SFU Engage established shared communication channels through Google Drive, LinkedIn, newsletters, and institutional visits to ensure that collaboration continued beyond the event itself. This event had a particularly positive impact for institutions considering starting a new VCP.

Strengthening the Network

The second VCP Forum was hosted by North Carolina State University in Raleigh, USA, in 2019. The purpose of this second gathering was to strengthen the emerging international network and continue developing knowledge on venture creation education.

The conference brought together approximately 50 representatives from participating institutions. During this event, participants shared experiences from their own programs and presented new research related to venture creation. The meetings provided



Active participants. *Photo: Ficky Isabell Lullies.*

valuable opportunities to compare approaches across different educational and cultural contexts. This event was particularly impactful to share insights and ideas when it comes to stimulating relevant research related to VCPs.

The fifth edition of the VCP Forum was held in September 2022 by SFU Engage in cooperation with the University of Buckingham (UoB). Hosted at the UoB campus and the Buckingham Enterprise and Innovation Unit, the forum brought together 21 participants from seven institutions in Norway, Sweden, and the United Kingdom. The key topics were assessment within VCPs and VCP development post the pandemic era. Further, a key topic of this forum was VCPs role in ecosystem development. This VCP Forum was particularly impactful when it comes to sharing and developing practices related to assessment and role in the ecosystems.

The Impact of the VCP Forum

The key purpose with the forum has been to share and develop best practice among VCPs. The result is a growing international network, stronger institutional partnerships, new research collaborations, and a shared commitment to continually improving how we can develop VCPs. The strengthened focus on VCP research has been particularly important in order to legitimize these programmes.



VCPs inspire many discussions. *Photo: Ficky Isabell Lullies.*



Plenary session in 2019.

4.3 Other Conferences

In addition to its involvement in the 3E Conference and other dedicated entrepreneurship education forums, SFU Engage has actively participated in a range of international conferences to disseminate research, strengthen academic networks, and contribute to the development of entrepreneurship education. These conferences have provided important opportunities to share research findings, establish new collaborations, and enhance the international visibility of SFU Engage's work.

The following section highlights SFU Engage's contributions to the Australian Centre for Entrepreneurship Research Exchange (ACERE) Conference and the CDIO Conference, which have served as important platforms for research dissemination, knowledge exchange, and international collaboration.

4.3.1 ACERE - The Australian Centre for Entrepreneurship Research Exchange Conference

Since the establishment of SFU Engage, participation in the ACERE (Australian Centre for Entrepreneurship Research Exchange) conference has played a strategic role in the centre's international engagement and research dissemination. Researchers from SFU Engage have participated in ACERE on three occasions (2024, 2025 and 2026), contributing to both scholarly output and network building within the global entrepreneurship education community.

Across all three participations, SFU Engage has consistently contributed to high-quality academic sessions and maintained a visible presence at one of the most important international conferences in the field of entrepreneurship and entrepreneurship education in Australia/Asia.



Gunhild Marie Roald and Meike Siefkes after having received awards at the ACERE conference in Sydney in 2024.

Participation in ACERE aligns closely with SFU Engage's vision of improving learning through entrepreneurship education and its strategic goal of internationalisation and knowledge dissemination. Following the 2024 conference, Gunhild Marie Roald established connections with researchers at the University of Technology Sydney (UTS), which directly enabled a two-month research stay in spring 2026, during which the edited book *Reframing Entrepreneurship Education* was launched in collaboration with Mile Katic (UTS Business School). This has, next, led to new research collaborations, thus significantly strengthening SFU Engage's global network.

For SFU Engage, ACERE has therefore functioned as a gateway to international academic networks. For stakeholders, including educators and students, the impact is reflected in improved course design based on internationally recognised research. In addition, it has increased the visibility of SFU Engage methodologies beyond Norway and provided opportunities for collaboration and knowledge exchange. ACERE has allowed SFU Engage to position itself as a Nordic voice in a global conversation, contributing perspectives grounded in interdisciplinary and practice-oriented education. It has thus played a crucial role in extending SFU Engage's influence beyond the European/American context.



4.3.2. CDIO Conference in Trondheim 2023

In 2023, Dag Håkon Haneberg from SFU Engage was in the organising committee for the Conceive – Design — Implement — Operate (CDIO) conference in Trondheim and led the CDIO Academy summer school. During the summer school, SFU Engage framework and pedagogical developments from the SUPER project [2] were applied for a group of students from all over the world.

The first part of the summer school was to a large degree hosted by Nina Tvenge from Experts in Teamwork who organised a digital teamwork experience. The Ocean Autonomy Cluster [3] was a partner providing challenges for the students to work on. After the conference, we contributed with knowledge and experiences for the later organisers of CDIO Academy.

[2] https://www.ntnu.no/fremtidensteknologistudier/piloter/super

[3] https://oceanautonomy.no/

5 Publications and Resource Dissemination

Generating new knowledge has been an important part of SFU Engage's contribution throughout the centre period. Equally important has been ensuring that this knowledge is shared, debated, adapted, and applied by educators, researchers, students, policymakers, and practitioners. Through publications, edited volumes, research reports, digital resources, podcasts, and media engagement, SFU Engage has sought to make insights from the centre accessible to audiences both within and beyond higher education.

This chapter highlights how knowledge developed through SFU Engage has been disseminated nationally and internationally through scholarly publications, educational frameworks, open-access learning resources, and public communication. These activities demonstrate the centre's contribution to advancing entrepreneurship education as a field of research and practice, while supporting the wider adoption of entrepreneurial approaches to learning, teaching, innovation, and societal value creation.

5.1 Papers and Publications

SFU Engage has contributed to shaping the field of action-based entrepreneurship education through influential publications, the initiation of special issues in leading journals, and research-based evaluations. These activities have strengthened the visibility, rigor, and impact of entrepreneurship education research while creating platforms for collaboration between scholars, educators, and practitioners. Together, the special issues and reports presented in this section demonstrate SFU Engage's role in advancing both the scholarly development and practical implementation of entrepreneurship and innovation education.

5.1.1 Building and Sharing Knowledge Through SFU Engage Publications

Research and publication have been central to SFU Engage's ambition to advance entrepreneurship education (EE) and make knowledge developed within the Centre available to educators, researchers and educational communities beyond its immediate activities. Since receiving SFU status in 2016, SFU Engage has developed a substantial and increasingly diverse body of scholarship addressing how entrepreneurship can be taught, learned and embedded across higher education.

An analysis of SFU Engage's EE outputs identified 142 scholarly publications and outputs between 2017 and 2025, including 86 journal articles, 30 book chapters, four edited volumes, eight conference proceedings papers and 14 working papers. A full list of the published journal articles and book chapters is found in Appendix A. Publication activity grew considerably over the Centre period: from between two and seven outputs annually during 2017–2020, it increased rapidly from 2021 and reached 27 publications in 2025.

Importantly, SFU Engage research has developed into six interconnected areas of scholarship: Venture Creation Programmes as a core pedagogy; pedagogical methods and frameworks; entrepreneurial learning and competency development; contextualising and embedding entrepreneurship education; ecosystems and support structures; and field-building and introspection. These areas demonstrate how the Centre's research has expanded from understanding entrepreneurship education within dedicated programmes to exploring its relevance across disciplines, learner groups, institutions and innovation ecosystems.

A particularly important contribution has been to connect research closely with educational practice. SFU Engage scholars have studied Venture Creation Programmes and their learning processes, developed and examined pedagogical methods and frameworks, investigated entrepreneurial competencies, passion and identity, and explored how EE can be adapted to contexts ranging from nursing and the arts to engineering and technology. Research has also increasingly addressed university educators themselves, recognising their role in embedding entrepreneurship within different disciplines.
Through this work, SFU Engage has helped advance an understanding of entrepreneurial learning as experiential, action-oriented, contextual and connected to wider educational ecosystems. The publications have also provided a means of sharing knowledge generated through SFU Engage with wider scholarly and educational communities. Approximately 37% of the identified outputs involved collaboration beyond SFU Engage, including partnerships with other Norwegian, Nordic and international researchers.

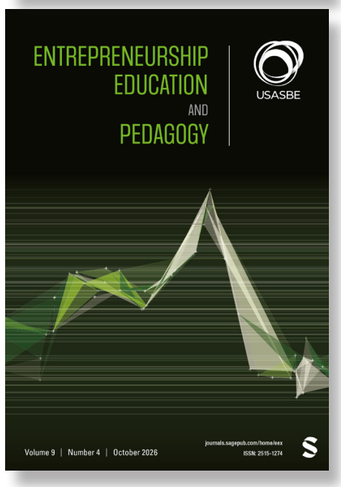
The impact of this publication activity should nevertheless be understood carefully. Publications make pedagogical principles, experiences, frameworks and research findings accessible beyond the settings in which they were developed. They can provide other educators with ideas and evidence that can be interpreted and adapted in their own contexts. Publications alone, however, cannot demonstrate that these approaches have subsequently been adopted, institutionalised or sustained elsewhere. Evidence of such wider educational impact needs to be traced through changes in teaching practices, curricula, institutions and student learning.

SFU Engage's publication legacy is therefore both a body of knowledge and a platform for continued development. Over the Centre period, research has documented educational experimentation, developed concepts and pedagogical frameworks, and connected EE with questions of learner development, disciplinary adaptation and educational ecosystems. This accumulated knowledge provides a foundation that researchers and educators can continue to test, adapt and build upon after the Centre period.

5.1.2 Special Issues Initiated and Special Issue Editors

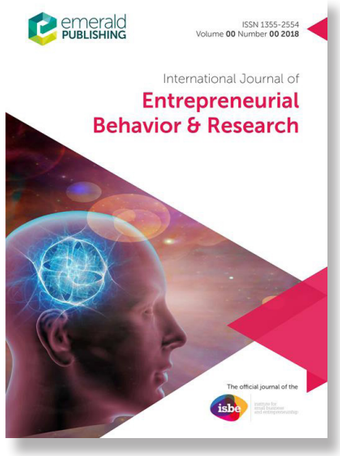
Four special issues have been initiated through the centre period. The special issue on students creating real ventures in universities in the International Journal of Entrepreneurial Behavior & Research (IJEBR)[1] was initiated as part of organising 3E 2020/2021 **[4.1.1]** as a potential outlet for the conference papers. The topic was closely connected to the core of SFU Engage with action-based education in both curricular and extra-curricular settings and IJEBR is one of the core journals in entrepreneurship that also welcomes entrepreneurship education research. The papers included in the final issue were both papers presented and not presented at the conference. The IJEBR special issue was edited by Lise Aaboen, Roger Sørheim, Torgeir Aadland and Dag Håkon Haneberg from SFU Engage. Lise became co-editor of the journal following the special issue.

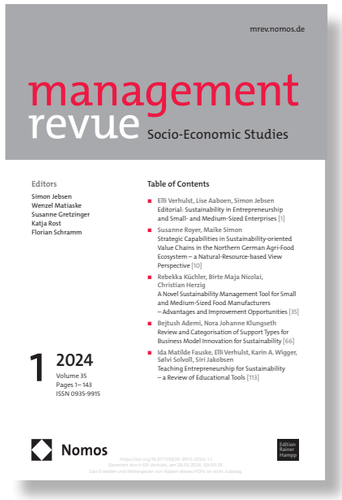




The special issue on sustainability in entrepreneurship and small- and medium-sized enterprises in Management Revue (MREV)[2] was initiated as part of organising the Its21 conference in 2020/2022 and a track on sustainability at the Nordic Conference on Small Business Research (NCSB) conference in Kolding 2022. The track on sustainability has continued and grown at the NCSB conferences in Turku 2024 and Bodø 2026. Sustainability was not the main focus of the Its21 conference but still chosen for the special issue since it was an important focus of SFU Engage at that time with initiatives such as a report mapping tools for teaching sustainability in EE in progress. The special issue was therefore an attempt to highlight SFU Engage as an actor within sustainability. The MREV special issue was edited by Elli Verhulst, Lise Aaboen and Simon Jebsen.

The special issue connecting entrepreneurship and entrepreneurship education research in Entrepreneurship Education and Pedagogy twas an attempt to address the need for increased rigour in entrepreneurship education research. EEP was a rather new journal at the time but quickly became a central journal to the entrepreneurship education research community. Before the submission deadline of the special issue there was a seminar series for paper development consisting of digital sessions and a physical session in Bologna. Since the physical session was rather close in time to the 3E conference that year it attracted a different part of the entrepreneurship education research community compared to the first special issue. The EEP special issue was edited by Johan Wiklund, Einar Rasmussen, Riccardo Fini and Lise Aaboen. Lise Aaboen and Torgeir Aadland became members of the editorial review board of EEP following the special issue.





Finally, in the journal Technovation, the special issue Linking Innovation and Entrepreneurship: Real-World Challenges in High-Cost Economies[4] is part of the collaboration with Norsi[5]. The focus is therefore on junior scholars in innovation and entrepreneurship in the Nordic countries. Student entrepreneurship is one of four potential main topics for paper submission. The special issue was initiated at the Norsi conference in Stockholm 2023, and a hybrid seminar was organised at the Norsi conference in Bergen 2024 to discuss paper drafts. Technovation is a well-established journal within innovation and entrepreneurship, making it an excellent outlet for junior scholars to publish a well cited paper. A handful of the SFU Engage researchers took the opportunity to submit a paper. The Technovation special issue was edited by Lise Aaboen, Tommy Høyvarde Clausen (Nord University), Åsa Lindholm Dahlstrand (Lund University), and Christian Richter Østergaard (Aalborg University).

[1] https://www.emerald.com/ijebr/article/27/5/1105/124873/
[2] https://storage.imrpress.com/imr/journal/MRev/article/504040/1752843001775.pdf
[3] https://journals.sagepub.com/doi/full/10.1177/25151274251328510
[4] https://www.sciencedirect.com/special-issue/285284/linking-innovation-and-entrepreneurship-real-world-challenges-in-high-cost-economies
[5] https://norsi.no/

5.1.3 The Campus Pilot for Student Innovation

The Campus Pilot for student innovation and entrepreneurship was established at NTNU in 2020. The background was to test the potential of dedicated areas and initiatives for:

- new forms of educational collaboration and student-active learning across institute and faculty boundaries
- identity spaces, arenas, and facilities for student innovation and entrepreneurship, with strong conditions for supporting student-active learning
- new collaborations and partnership models with selected industry partners
- new ways to strengthen the visibility, scope, and impact of student innovation activities among the broader NTNU student population in Trondheim (Translated from Mandate letter for the project evaluation, dated 24.2.2025)

SFU Engage received the assignment of evaluating the project activity and impact after the five-year test period. The mandate included offering recommendations for the future of the pilot based on findings from the evaluation work. The report results were based on a comprehensive evaluation of findings from interviews with students, partners, educators, university leaders and project managers, relevant research and reports related to the pilot and survey results. Overall, the insights showed impressive results regarding increased student engagement and activity development throughout the pilot period. That said, certain challenges were identified

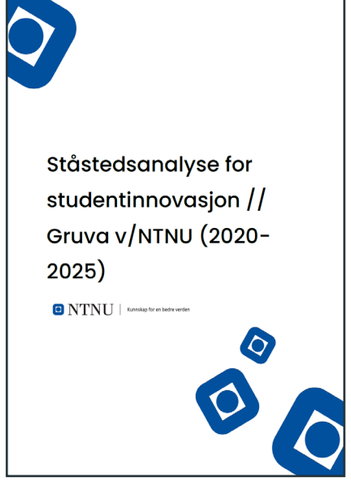
Student innovation from the School of Entrepreneurship and extra-curricular activities.



related to leadership and scope for action for student initiatives. These challenges were in many ways related to unclear ambitions and knowledge about the campus pilot among students from other disciplines than innovation, entrepreneurship, economy, and technology.

Based on the findings, the project group offered the following overarching recommendations:

- Establish a robust governance structure with dedicated resources and clear role distribution.
- Anchor student innovation in NTNU's education and innovation strategies and ensure long-term commitments to follow this up in coordination with the rectorate.
- Allocate time to develop shared ambitions and goals for continuing the pilot, in collaboration between partners, the rectorate, students, and academic communities.
- Develop structures for collaboration between academic communities, students, and partners, including annual cycles and contact points. Further develop Gruva (the physical innovation hub) and new campus facilities as identity-building, inclusive, and flexible innovation arenas. Increase the visibility of the student innovation environment internally and externally and strengthen its links to NTNU's broader innovation infrastructure.
- Develop incentives and resources for innovation activities among staff, including competence development. Additionally, leverage and further develop synergies between resource and competence development among staff and activities in the student innovation ecosystem.[6]



The report was one of the foundational documents for NTNUs renegotiation of contracts with the industry partners that funded the Campus Pilot from 2020-2025. To date (September 2026), one of the four partners has signed a new collaboration agreement with NTNU (lasting until 2030) and the university is still negotiating with two of the remaining partners. The new agreement is highly ambitious and includes 100 million NOK funding. Aligned with the recommendations from the evaluation report, this extensive funding shows great ambitions for commitment to enhance innovation and entrepreneurship in collaboration between industry and university. Further, the agreement reaches broader in terms of ambitions for competency development and training among employees, in addition to further focus on student innovation and entrepreneurship. NTNU rector Tor Grande refers to the importance of the agreement in achieving ambitions of being a leading university of innovation and entrepreneurship highlighted in NTNUs strategy for 2026-2035.[7] SFU Engage has received responsibilities for following up on several of the tasks in the new agreement, including coordination of student innovation activities and events, mentoring programs for employees and training programs for scientific staff and educators.

As highlighted in the report, it must be noted that people in SFU Engage have been strongly involved in organising for and coordinating and supporting student innovation and entrepreneurship during the five-year pilot period.[8] This includes, in particular, faculty at the NTNU School of Entrepreneurship, and advisors supporting student organisations. The findings from the Campus Pilot evaluation highlighted the importance of continuity of these responsibilities to ensure conditions and mechanisms in, and between, curricular and extracurricular activities to foster innovation and entrepreneurship activity among students.

[6] Fauchald, R.N. Neergård, G.B., Killingberg, N.M., Aadland, T. (2025). Ståstedsanalyse for studentinnovasjon // Gruva v/NTNU (2020 2025). NTNU.
[7] NTNU (2025) Strategy – NTNU 2035. https://www.ntnu.edu/strategy
[8] https://www.ntnu.no/documents/1272503658/0/Sta%CC%8Astedsanalyse+for+Campuspilot+for+Studentinnovasjon.pdf/

5.2 Edited Volumes on Entrepreneurship Education

Books and edited volumes have been an important channel for disseminating SFU Engage's research, educational frameworks, and pedagogical approaches to a broad international audience. Through contributions ranging from practical teaching resources and case collections to research handbooks and conceptual frameworks, SFU Engage researchers have helped advance both the theory and practice of entrepreneurship education. The examples presented in this section have strengthened international networks, supported educators across disciplines, and increased the visibility and impact of SFU Engage's work within the global entrepreneurship education community.

5.2.1 How to Become an Entrepreneur in a Week

How to Become an Entrepreneur in a Week is an edited book where each chapter describes a one-week initiative for entrepreneurship education.[9]



How to Become an Entrepreneur in a Week Workshop.





Book launch in Mo i Rana.

The book was published by Edward Elgar in 2021. At the time of the book, hackathons and other short initiatives were very popular and often promised a lot. The introduction of the book was therefore an attempt to critically discuss what could actually be accomplished by such initiatives while the chapters represented inspiration for potential organisers of such initiatives. The initiatives represented different European countries, universities and target students. As part of the book-project, SFU Engage hosted a workshop in Trondheim where all chapters were represented. The workshop created a coherence between the chapters and since this book was SFU Engage's first book it was also a nice opportunity to present the newly established centre and develop the European network of SFU Engage.

5.2.2 Reframing the Case Method in Entrepreneurship Education

In the type of entrepreneurship education that SFU Engage often promotes, different types of cases are used. We saw a need and an opportunity to not be solely dependent on cases developed in the USA context, using for instance the traditional Harvard Business School case method, but instead collect, document and develop case approaches suited for the Nordic context, and also cases from and for the Nordic context. The resulting book, *Reframing the Case Method in Entrepreneurship Education*[10],

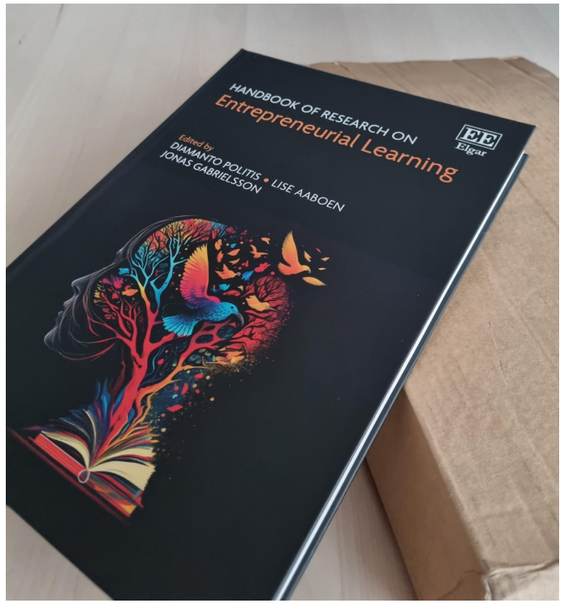
[9] https://www.e-elgar.com/shop/gbp/how-to-become-an-entrepreneur-in-a-week-9781788979276.html
[10] https://www.elgaronline.com/edcollbook-oa/book/9781800881150/9781800881150.xml

published by Edward Elgar in 2022, involved authors from different Nordic countries, who contributed chapters about the case method and specific cases. Feedback from readers has shown that the cases have been used quite extensively in courses, and that there is a need to provide further collections of cases. The chapters about the case method and the introduction in the book have been cited 35 times (retrieved June 3, 2026, on Google Scholar).

5.2.3 Handbook of Research on Entrepreneurial Learning

Handbook of Research on Entrepreneurial Learning is an edited book on entrepreneurial learning published by Edward Elgar in 2025.[11] The handbook features chapters from junior and established scholars from North America and Europe, including those affiliated with SFU Engage. The idea of the book is to provide a starting point for scholars who wish to engage in the entrepreneurial learning literature. The chapters therefore focus on different sub-streams and contexts of the entrepreneurial learning literature. Compared to the other books, this book was more theoretical and research heavy and therefore complemented the more practice-directed books in positioning SFU Engage in the research community. Working with the authors also enabled us to keep in contact with and further develop relationships with relevant researchers.

Photo: Lise Aaboen.



5.2.4 From Educational Framework to International Reach: The Impact of I-CARE

Developing a Framework

In the early years of SFU Engage, a key need emerged: to articulate a clear theory of change. How could SFU Engage concretely realise its ambition to increase the number of students, nationally and globally, who develop entrepreneurial skills and the mindset to act as change agents? This question led to the development of a simple, yet powerful educational framework built around five core pillars: Interact, Challenge, Act, Reflect, and Embrace (uncertainty) – collectively known as the I-CARE framework.

The framework reflects SFU Engage's grounding in experiential learning and student-active pedagogies, while also capturing a defining feature of entrepreneurship education: enabling students not only to cope with uncertainty, but to work with it productively. The five verbs were deliberately chosen to be memorable and practical – pillars that educators can use to design, deliver, and evaluate their teaching.

From its inception, I-CARE became central to SFU Engage's activities. It was embedded across courses, workshops, presentations, it was visual in various merchandise and documented in annual reports. However, it also became clear that to reach beyond the centre, the framework needed to be documented and disseminated through more formal academic channels. This led to the development of an edited book: Reframing Entrepreneurship Education: Teaching Change Agents in Different Disciplines, published open access by Edward Elgar in January 2026.

The book project began with an open workshop during the centre's gathering in fall 2022 and evolved into a collaborative effort involving contributors from SFU Engage and partner institutions. A total of 17 abstracts were submitted, forming the basis of the final manuscript (16 chapters), which was delivered on 1 May 2025, following a structured development and peer review process.



Fufen Jin, one of the editors of «Reframing Entrepreneurship Education», presents the I-CARE framework at the Trondheim book launch.

Importance for the Centre, Target Groups and Stakeholders

The I-CARE framework and the resulting book represent a core contribution from SFU Engage to the field of entrepreneurship education. For the centre, the framework provides a shared language that connects research, teaching, and outreach activities. It strengthens SFU Engage's identity and enables consistent communication across contexts.

For educators from different disciplines – the primary target group – the framework offers both conceptual clarity and practical tools. It makes entrepreneurship education accessible across disciplines, allowing academics from psychology, engineering, data science and nursing, to name a few, to interpret and apply it within their own teaching.

For stakeholders, including partner institutions and international networks, the framework provides an evidence-based and adaptable model for developing educational practices aligned with broader goals around innovation, interdisciplinarity, and societal impact.

Importantly, the decision to publish the book as open access via Edward Elgar Publishing ensures that the framework is freely available, enabling wider dissemination. By early May, the book had been downloaded 1700 times since publication in January 2026.

Impact

The impact of I-CARE can be traced through both its integration into educational practice and its growing international visibility.

At NTNU and Nord University, the framework is embedded in all the Train-the-Trainer courses, in which more than 500 educators have participated. Participants consistently use I-CARE to rethink their teaching, often moving from lecture-based formats to more interactive, experiential approaches. The framework provides a concrete structure for this transition. One chapter in the book looks specifically into how course alumni used the framework to develop and interpret their teaching (Arntzen-Nordqvist, 2026)[12].

The book has also had impact beyond teaching and educator development. Its development process, which involved contributors from multiple disciplines and institutions, functioned as a capacity-building initiative in itself. Internally, it also served as a culture-building project, strengthening collaboration within SFU Engage.

[11] https://www.elgaronline.com/edcollbook/book/9781803922218/9781803922218.xml

[12] Arntzen-Nordqvist, M. (2026). Teaching for and through uncertainty in experiential entrepreneurship education. In Reframing Entrepreneurship Education (pp. 114-134). Edward Elgar Publishing.

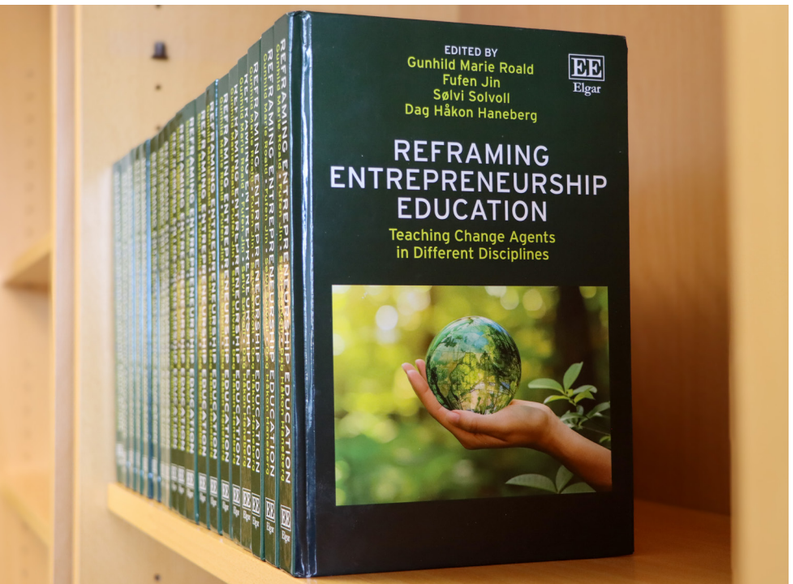


Gunhild Marie Roald and Mile Katic are ready to launch the book Reframing Entrepreneurship Education in Sydney. *Photo: Bluebell Rae.*

Following publication in January 2026, the book has been actively disseminated through a series of launch events and presentations, both for an open audience in Sydney, with a focus on the train-the-trainer alumni network in Trondheim and for all participants at the 3E conference in Bodø.

The book has also been strategically distributed to key educators and collaborators in Norway, the UK, and Australia.

One concrete example of impact is an educator in Australia who encountered the book through professional networks, engaged deeply with its content, and subsequently contributed to organising the Sydney book launch. He later travelled to Norway to participate in the 3E conference and in the Trondheim book launch, illustrating how the framework facilitates international connections and knowledge exchange.



Another example is an educator in Norway who received the book prior to attending a course and is now using it actively in an European consortium focused on competencies for change – demonstrating how the framework extends into collaborative projects beyond SFU Engage.

Concluding Reflections

The development and dissemination of the I-CARE framework highlight how educational innovation can evolve through a combination of practice, research, and strategic communication. A key insight is that impact spreads through people and relationships. While the book provides a tangible output, its influence depends on how it is shared, discussed, and applied in different contexts. Strategic distribution – such as targeted gifting of copies – has proven effective in creating ripple effects, including new collaborations and invitations. At the same time, the experience shows that impact is not only a question of scale but of depth. While large audiences increase visibility, some of the most meaningful outcomes emerge through smaller interactions, such as workshops, alumni events, and one-to-one exchanges.

5.3 SFU Engage Resources

To support the dissemination of entrepreneurship education beyond individual courses and institutions, SFU Engage has developed a range of open-access digital resources. Central among these is the Engage Resource Hub, which brings together teaching materials, methods, tools, videos, and research-based resources that help educators integrate entrepreneurship and innovation into their teaching. Complementing the Engage Resource Hub, SFU Engage has also produced digital resources such as Engage Talk, a knowledge-sharing initiative that made entrepreneurial knowledge and practices accessible to educators, students, and practitioners across disciplines. Together, these initiatives have expanded the reach of SFU Engage's work and supported entrepreneurship education both nationally and internationally.

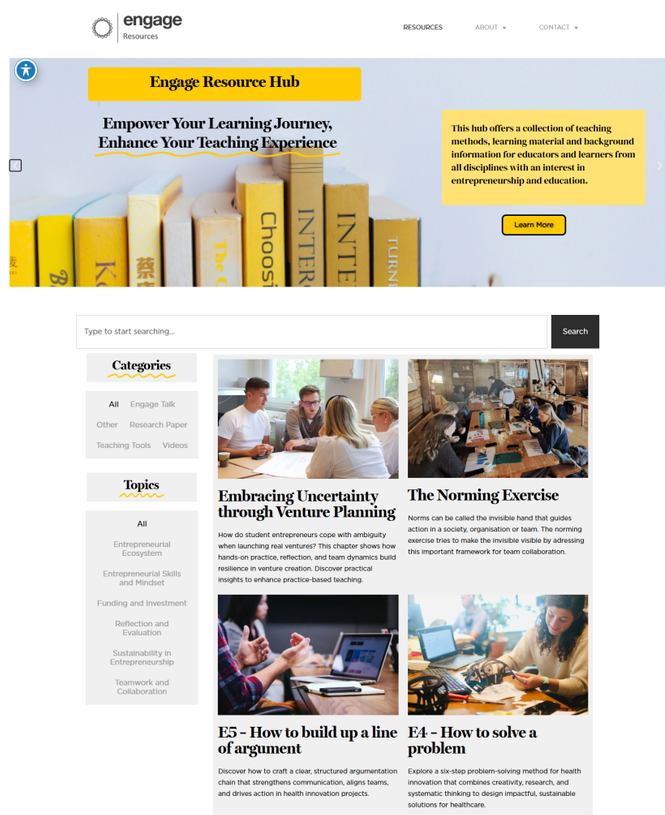
5.3.1 The Engage Resource Hub

The Engage Resource Hub (ERH) has since 2021 served as a valuable and practical platform for educators and practitioners who want to integrate entrepreneurship and innovation into their teaching.[13] By gathering teaching methods, learning materials, and research-based insights in one place, it enables educators within and across disciplines to explore and apply new approaches, fostering a more entrepreneurially oriented way of teaching.

A key strength of the ERH is its combination of diverse materials and tools that both inspire educators and support practical application. The mix of research articles, cases, exercises, introductory videos, and Engage Talks familiarises educators and practitioners from different fields with concepts, theories, and methods related to entrepreneurship, value creation, and innovation. Ultimately, this encourages educators to adopt a more entrepreneurial approach to the subjects they teach. This makes the content both relevant and actionable, supporting flexible integration of an entrepreneurial mindset into teaching practices across disciplines. By collecting and categorising resources, the ERH also helps educators and practitioners find relevant materials more easily and select resources that match their specific needs.

The SFU Engage I-CARE framework adds an important dimension to the ERH. By emphasising elements such as acting, interacting, challenging, embracing, and reflecting, it provides a clear pedagogical foundation for designing and implementing learning activities, both online and in the classroom. This supports the development of more student-centred and experiential forms of teaching, where students are encouraged to take an active role in shaping their own learning process.

Another important contribution of the ERH is its role as a shared space for educators, practitioners, and other stakeholders interested in entrepreneurship and innovation. The aim of the ERH is not only to provide access to resources developed by the SFU Engage and its partners, but also to create opportunities for sharing practices and learning from others across disciplines. This supports a more collaborative approach to educational



[13] https://engage-resources.no/

development and encourages continuous improvement in how entrepreneurship and innovation are integrated into different teaching contexts.

Overall, the ERH represents a meaningful contribution to advancing entrepreneurial approaches in higher education, while also supporting the broader ambition of the SFU Engage to strengthen students' entrepreneurial mindset and their ability to act as change agents. By providing educators and practitioners with a wide range of resources, as well as opportunities to share knowledge and practical insights, the platform enhances teaching practices and helps educators support students in developing skills such as creativity, initiative, collaboration, and reflection. In this way, the impact of the ERH goes beyond the classroom, contributing to the development of more engaged, confident, and capable students prepared to address real-world challenges and act as change agents.

5.3.2 Video series: Health Innovation and Engage Talk

SFU Engage has also created video resources focusing on different topics related to innovation and entrepreneurship to different target groups.

Health Innovation
In 2024 SFU Engage published a 6-part video series on Health Innovation[14], aiming to inspire and empower healthcare professionals with knowledge and tools to foster innovation in their practice. The project involved several SFU Engage scholars combining expertise in healthcare and entrepreneurship. The videos were developed by SFU Engage PhD candidate Vårin Vaskinn in close collaboration with two students from the NTNU School of Entrepreneurship Elise H. Høvik and Marie A. Sommerud. All three have nursing backgrounds. The videos have been embraced by healthcare educators at several Norwegian universities and the Norwegian nursing association. For instance, nursing education programs at the University of Tromsø have integrated them into their courses at both the bachelor's and master's levels, and SFU Engage scholars were invited to deliver guest lectures on health innovation.

Engage Talk - Building Entrepreneurial Mindsets Beyond the Classroom
In spring 2020, universities across Norway faced an unprecedented challenge. Campuses were closed, teaching moved online, and many of the informal meeting places that normally support learning and collaboration disappeared overnight. For SFU Engage, this raised an important question: How can we continue to inspire entrepreneurial thinking when students, educators, entrepreneurs, and external stakeholders can no longer meet physically? Engage Talk became one of the answers.

What started as a response to the COVID-19 pandemic developed into a digital knowledge-sharing platform that reached audiences far beyond the university campus. Through a series of online conversations, SFU Engage brought together researchers, entrepreneurs, practitioners, students, and experts to discuss topics related to entrepreneurship, innovation, and value creation. Rather than focusing narrowly on startup creation, each episode explored a different theme through an entrepreneurial lens. The ambition was to demonstrate that entrepreneurial thinking is relevant across industries, professions, and areas of society.

Over the course of 15 episodes between 2020 and 2022, Engage Talk addressed topics such as uncertainty, digital transformation in the cultural sector, healthcare innovation, virtual teamwork, student entrepreneurship, gender and entrepreneurship, creativity, innovation, ecosystems, prototyping, access to investment capital, ADHD and entrepreneurship, circular economy, crowdfunding, intrapreneurship, and performance mindset.

The diversity of themes was deliberate. By connecting entrepreneurship to healthcare, culture, sustainability, education, sports, and organizational development, SFU Engage challenged the perception that entrepreneurship belongs exclusively to business education. Instead, the series demonstrated how entrepreneurial competences can be applied to a wide range of societal and professional challenges.

Reaching New Audiences
One of the most significant outcomes of Engage Talk was its ability to reach people beyond traditional educational settings. The digital format removed geographical barriers and enabled participation from students, staff, entrepreneurs, and members of the public regardless of location. Episodes were first released as Facebook premieres and later made available through Vimeo, YouTube, SFU Engage's website, and the Engage Resource Hub, allowing audiences to engage with the content both live and on demand. Most episodes were later subtitled in English, making the content accessible to a broader international audience and increasing their value as educational resources. The recordings were also used as educational resources in entrepreneurship courses at Nord University and became part of SFU Engage's growing collection of openly available learning materials.

The international reach of the series became evident when staff at the University of Brest in France, a partner institution through the CHIC project, reported watching Engage Talk episodes after being introduced to SFU Engage and its Resource Hub. This demonstrated how a format originally developed to address local challenges during the pandemic also contributed to sharing entrepreneurial knowledge and increasing awareness of SFU Engage internationally.

Between April and December 2020, the series reached approximately 1,955 people, demonstrating a level of dissemination that would have been difficult to achieve through traditional campus-based activities alone. Some topics generated particularly strong engagement. The episode on entrepreneurship and ADHD attracted around 1,200 views, illustrating how Engage Talk successfully connected entrepreneurial thinking to topics that resonate

Recording Helseskift. *Photo: Elin Iversen.*



[14] https://www.youtube.com/playlist?list=PLOJoShu3i71RcKRU-B09n_kMofBW9uc2r

with broader audiences. One of the participants in the episode was Cecilie Haukland, an SFU Engage PhD candidate whose research focused on the relationship between ADHD and entrepreneurship. Together with fellow panelists, she explored the potential links between ADHD-related traits and entrepreneurial behavior. The discussion showed how qualities often associated with ADHD can also be valuable entrepreneurial strengths.

Beyond viewership numbers, Engage Talk generated considerable interaction and feedback from participants who watched the discussions live or engaged with the recordings afterwards. Many guest speakers also shared the episodes through their own professional and social networks, helping increase awareness of SFU Engage and extend the reach of the conversations far beyond the university community.

Creating Networks and New Collaborations

The impact of Engage Talk extended beyond dissemination. Each episode required collaboration between researchers, entrepreneurs, practitioners, and external organisations. Through the planning and production process, SFU Engage developed new relationships and strengthened existing networks both regionally and nationally.

A particularly important milestone was the special live edition of Engage Talk organised in collaboration with KPB (Kunnskapsparken Bodø) during GNIST Gründeruke. Bringing together representatives from business, academia, local government, and the entrepreneurial ecosystem, the discussion highlighted how different actors can collaborate to strengthen innovation and entrepreneurship in Northern Norway. These collaborations contributed to positioning SFU Engage as a visible and relevant contributor to conversations about innovation, education, and entrepreneurship.

Lasting Impact

While Engage Talk originated as a response to a global crisis, its impact extended well beyond the pandemic itself. The series demonstrated that entrepreneurship education can take place outside traditional classrooms, and that





Podcast hosts Gunn-Berit Nergaard and Thea Eng Brenden. *Photo: Elin Iversen.*

entrepreneurial thinking can be made relevant to a wide range of audiences through accessible and engaging conversations.

Perhaps most importantly, Engage Talk helped communicate one of SFU Engage's core messages: entrepreneurship is not limited to starting companies. It's a mindset that can be applied to creativity, healthcare, sustainability, culture, leadership, education, and societal development.

Through 15 episodes, hundreds of participants, and thousands of viewers, Engage Talk contributed to spreading entrepreneurial thinking beyond disciplinary boundaries and beyond the university campus. In doing so, it helped fulfil SFU Engage's mission of making entrepreneurship education more inclusive, accessible, and relevant for society as a whole.

5.4 Media Appearances

In addition to research publications, books, and educational resources, SFU Engage has actively contributed to public debate and knowledge dissemination through podcasts, media appearances, opinion pieces, and interviews. These activities have helped bring entrepreneurship education, innovation, and entrepreneurial mindsets to broader audiences beyond academia. Through initiatives such as the Helseskift podcast and regular coverage in regional and national media, SFU Engage has increased awareness of entrepreneurship across disciplines and professions, while strengthening its role as a visible voice in discussions about education, innovation, and societal development.

5.4.1 The Podcast Helseskift

Helseskift – Framtidas helsevesen *(eng. Health Shift – the Future of Healthcare)* is a podcast that aims to raise awareness of entrepreneurship and intrapreneurship among healthcare professionals, present diverse entrepreneurial role models from healthcare, disseminate research-based knowledge, and recruit participants to SFU Engage's courses. It was originally developed as course material for continuing education targeting healthcare audiences but was later made publicly available on Spotify to broaden access.

Across 22 episodes, the podcast presents stories of entrepreneurship and intrapreneurship in healthcare, with a focus on how to engage in areas such as

teamwork, regulatory processes, and the entrepreneurial ecosystem. It also contributes to increased contextualisation of entrepreneurship by portraying it within the specific context of healthcare and across multiple geographical settings, including India, Kenya, Sierra Leone, and Nepal. 76% of listeners are women, and the majority are between 35 and 60 years old.

The initiative contributes directly to SFU Engage's vision of increasing the number of students in Norway and internationally with entrepreneurial skills and the mindset to become change agents. For healthcare students and professionals, the podcast lowers the threshold for engaging with entrepreneurship by providing relatable examples and practical insights. It has also been adopted as learning material in educational programmes beyond SFU Engage. Feedback from students participating in an innovation camp indicates that the podcast has influenced how they perceive entrepreneurship in healthcare:

> "I did not think entrepreneurship was relevant to my profession or to healthcare. Because I listened to an episode of Helseskift beforehand, as we were asked to do, I came to class with an open mind. I found the episode very engaging and motivating, especially because the guest developed an idea based on her experience as a nurse. It was interesting to hear how important innovation is in healthcare.
>
> Student feedback on the podcast as learning material in an innovation camp.

Documented impacts include the production of 22 episodes, open-access publication on Spotify, close to 100 followers and over 1,500 plays, use as learning material in external programmes, and qualitative feedback demonstrating learning effects.

The podcast is developed by Gunn-Berit Neergård, senior researcher at SFU Engage, and Thea Eng Brenden, Master's student at the NTNU School of Entrepreneurship. Both hosts bring complementary backgrounds in nursing and business development. The production is fully developed by SFU Engage, delivered by a core team consisting of the hosts (Neergård and Brenden), Peter Nystøyl (editing), Emilia Weisser Eide (marketing), and Håvard Engen (coordination). The podcast is recorded in the studio at the NTNU School of Entrepreneurship.


Adresseavisen NYHETER SPORT KULTUR DEBATT NYTTE PLAY

Sykepleierstudenter lærer seg å se etter feil i helsevesenet

Én gruppe vil lage en egen vennetjeneste for hjelpetrengende eldre. En annen vil lage et datasystem for turnus i helsevesenet.


Adresseavisen NYHETER SPORT KULTUR DEBATT NYTTE PLAY

NTNUs verksted for fremragende utdanning

NTNU-studenten er med på å utvikle fremragende utdanning ved NTNU. Onsdag åpnet to nye sentre som skal være i ypperste verdensklasse.

5.4.2 Media Coverage

In addition to scientific articles, reports and books, SFU Engage has also received coverage in national and regional media, and centre members have contributed to public discourse. Throughout the centre's history there has been media coverage every year, peaking in 2021 with 11 contributions.

Various themes related to SFU Engage's focus areas have been covered, such as entrepreneurship education, student innovation, sustainability, educational development, and collaboration with industry and society. The stories have both contained specific student and venture achievements and broader discussions about the future of higher education and entrepreneurship. Opinion pieces and interviews have contributed to national debates on the importance of educational quality and innovation. Finally, the media coverage reflects SFU Engage's role as a connector between universities, industry, public-sector actors, and regional innovation ecosystems. A full overview of articles and news items found searching for «SFU Engage», «Engage», «Nord» and «NTNU» in the media monitoring server Retriever's database June 2026 is provided in Appendix B.

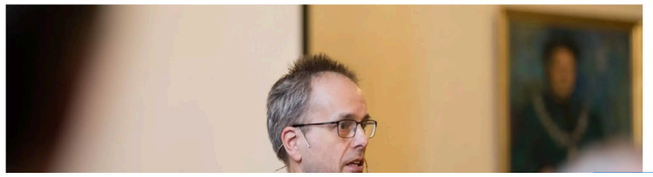

MN24 Midtnorsk Næringsliv Nyheter Regnskapsnytt Eiendomsnytt Meninger Skattetall Bil Kjøp stillingsannonse Rentekalkulator

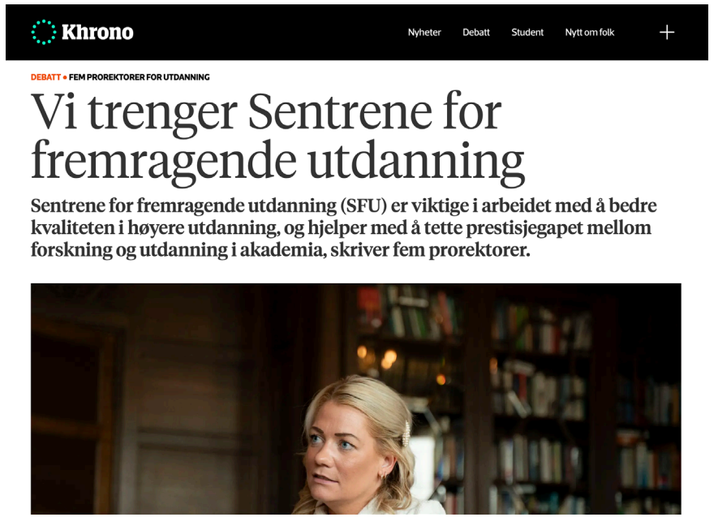
16 studentprosjekter ved NTNU får hver én million kroner


UA Start Nyheter Ytring Meny

NTNU fikk ros for satsingen på utdanning og innovasjon

- Vi vil skape et faglig og sosialt fellesskap som gjør at studentene møter opp på campus og har lyst til å lære, sa Guttorm Sindre da rektor Gunnar Bovim onsdag inviterte til offisiell åpning av NTNUs to sentre for fremragende utdanning.




Khrono Nyheter Debatt Student Nytt om folk

DEBATT • FEM PROREKTORER FOR UTDANNING

Vi trenger Sentrene for fremragende utdanning

Sentrene for fremragende utdanning (SFU) er viktige i arbeidet med å bedre kvaliteten i høyere utdanning, og hjelper med å tette prestisjegapet mellom forskning og utdanning i akademia, skriver fem prorektorer.

6 Networking and Collaboration

Collaboration has been a central mechanism for many of SFU Engage's outcomes. By working with universities, industry partners, public-sector organisations, funding bodies, students, alumni, and international networks, the centre has extended the reach of its educational activities and created opportunities for innovation, learning, and knowledge exchange that would not have been possible through individual initiatives alone.

The collaborations described in this chapter demonstrate how partnerships, networks, collaborative projects, and alumni communities have contributed to amplifying the impact of SFU Engage. They illustrate how the centre has helped connect educational institutions, innovation ecosystems, researchers, educators, students, and external stakeholders across local, national, and international contexts. Collectively, these collaborations have enhanced entrepreneurship education, supported capacity building, generated new opportunities for students and staff, and created lasting foundations for continued development beyond the centre period.

6.1 External Funding and Partnership-Based Grants

External funding and collaborations have enabled SFU Engage to extend its impact beyond its core educational activities. Through collaboration with industry, educational institutions, and international partners, SFU Engage has developed and participated in projects that support educational innovation, student-active learning, entrepreneurship, and societal impact. These initiatives have created opportunities to experiment with new pedagogical approaches, strengthen collaboration across disciplines and institutions, provide students with opportunities to work on authentic challenges, and connect education more closely to working life and societal needs. The projects presented in this section illustrate how external funding and collaboration have amplified the reach and impact of SFU Engage's work.



Ingrid Berg Sivertsen, Åshild Wilhelmsen and Dag Håkon Haneberg receiving the award for best PDW. Ole Andreas Alsos and Sølvi Solvoll not present.

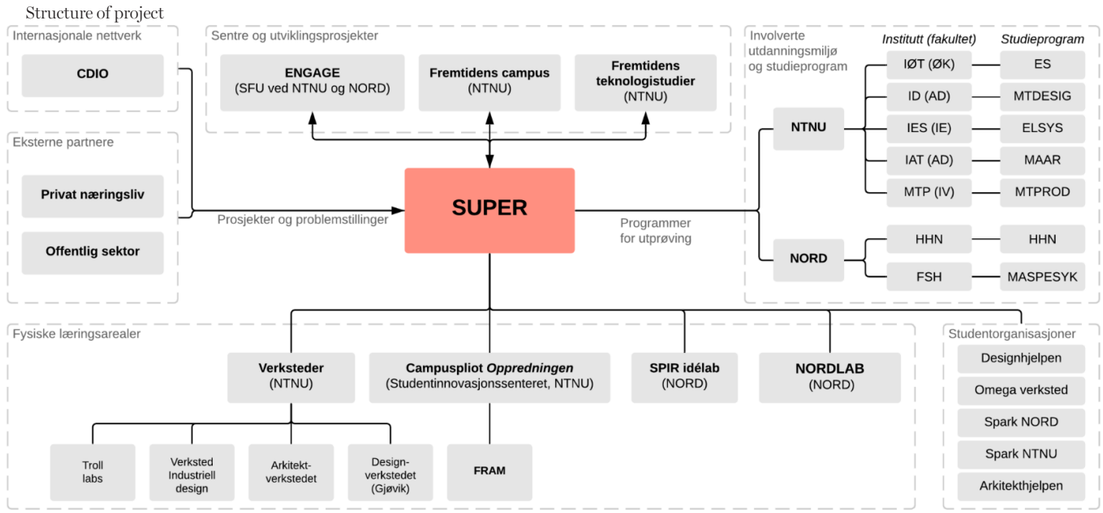
6.1.1 The SUPER Project

The SUPER project was an interdisciplinary project focusing on student-active learning through wicked problems, where SFU Engage was a partner.[1] The project ran across six different departments at both NTNU and Nord. The project was funded by Diku (which now is replaced by HK-dir) and ran from 2021-2024. The head of the project was Dag Håkon Haneberg from SFU Engage and several SFU Engage colleagues were part of this project, including duty work for PhD candidates.

The project contributed to positioning SFU Engage at the centre of student-active learning at NTNU. The project led to higher levels of student-led learning, learning environments, testing of new approaches to teaching and assessing and implementation of interdisciplinarity.

The project was divided into five work packages: 1) Interdisciplinary sharing culture, 2) Real cases and external projects, 3) Spaces of physical realization, 4) Formative and summative assessment, and 5) Competency building and sharing.

Structure of project



[1] More information about the project is available here: https://www.ntnu.no/fremtidensteknologistudier/piloter/super

Main results from the project:

- **Interdisciplinary sharing culture:** Learning assistants from design studies strengthened students' ability to work in processes and groups. Students also learned subject matter from the learning assistants.
- **Real-life cases:** Increased motivation and work-life-relevant experience among students. Students reported that they learned a great deal from direct communication with companies and external partners.
- **Learning spaces:** Documentation of the importance of adapted learning environments and the need for non-academic functions within learning spaces.
- **Assessment methods:** A shift from traditional assessment methods to innovative and adapted methods, including workshops using game-based tools. This led to higher student motivation and helped them work in a more goal-oriented way.

Conclusion:
The project has contributed to developing educational competence related to student-active learning methods and assessment forms. It has shown that interdisciplinary collaboration, real-life cases, and adapted learning environments and assessment methods can strengthen student learning and better prepare them for working life. Further research and development are needed to optimize these methods and ensure effective implementation within the educational system.

SUPER Assessor
One specific outcome is the development of SUPER Assessor, a pedagogical tool designed to enable educators to develop and work with their own assessment methods. The tool was developed in the SUPER project for the 3E conference, where it won best Practitioner Development Workshop (PDW).

The popularity of the game and the positive response it received prompted the team to continue its development and sell a number of printed copies. The game has also been presented at different conferences, and an introduction video is made available online[2].



[2] https://engage-resources.no/super-assessor-intro/

6.1.2 Gruva Partners

In order to establish Gruva as an innovation hub for students, NTNU sought funding from partners. Relying on and expecting an increase in innovation and entrepreneurship activities on campus, SpareBank 1 SMN, Equinor, DNB and Element Logic became financial contributors. The funding model entailed that the financial contributors were "owners" of project rooms (houses) built in Gruva [1.1.1], and they have co-organized events seeking to increase student innovation activity through activities tailored to students, by students. Events are often organised by a student organisation together with a selected partner, based on a topic or industry relating to the specific event.
SFU Engage's role has been facilitating the collaboration between student organisations and partners. SFU Engage has also been involved in organising and facilitating events to ensure partner expectations were met during particularly busy periods for the students, such as exam periods. A core task of SFU Engage has also been maintaining equipment in Gruva and adjacent facilities (workshop, 3D printer lab and meeting spaces). The Campus Pilot for Student Innovation (2020-2025) [5.1.3] was a part of preparing and unifying the student innovation community, before the 2027 move into Kaupang, a new university building housing many central university actors in the fields of entrepreneurship and innovation.









SFU Engage's involvement in community management has led to 1 of 4 partners increasing financial support massively for the period 2026-2030, and 2 of 4 partners are still contributing to the ecosystem, while negotiations to renew for the next period are underway. The pilot project has also allowed SFU Engage to tailor the facilities in the new building to meet the expectations and needs of the student innovation community and even including more student organisations joining with physical presence than from the original pilot and co-locating efforts.

Engaging in tight collaboration with the Gruva partners has not only resulted in specific co-developed events for SFU Engage (NTNU Student Investor Day, Innovate for Better, Innovasjonsdagene), but also resulted in direct collaboration between external partners and the student organizations i.e. Koble (by FRAM) and Bedriftsimulatoren (by Boost Henne).

6.1.3 The Social Innovation Programme - Building a More Diverse Ecosystem for Social Innovation and Entrepreneurship

Social Innovation in Practice (SIP) is a new competence and innovation programme at Nord University that will be launched for the first time in autumn 2026. It was developed to address a clear gap in the current innovation ecosystem: while existing entrepreneurship programmes provide opportunities for venture creation and commercialisation, there is a need for a dedicated, practice-oriented offering focused on social innovation and societal impact.

Funded by Innovation Norway, the SIP programme consists of four structured sessions running in autumn 2026. The programme is designed for students and employees across Nord University, with a particular focus on the SHAPE disciplines – Social Sciences, Humanities and the Arts, for People and the Economy. These disciplines represent a significant share of the university community but have traditionally had more limited access to entrepreneurship and innovation programmes. By creating an accessible pathway into social innovation for these groups, SIP aims to contribute to a more diverse and inclusive innovation ecosystem.

The programme focuses on social innovation in practice: how knowledge, research, lived experience, and teaching can be transformed into new solutions, services, ways of working, or collaborative models that contribute to positive societal change. During the programme, participants work with real societal challenges emerging from research, teaching, professional practice, or lived experience. Employees will get an opportunity to translate research into societal solutions.

SAMFUNNSINNOVASJON
I PRAKSIS

Through interdisciplinary teams and a structured learning, they will explore these challenges and develop concrete, value-creating solutions.

Importance for the Centre, Target Groups and Stakeholders

SFU Engage contributed to the development and implementation of SIP as part of its broader mission to strengthen student-active learning, authentic challenges, and competence development for societal impact. For SFU Engage, SIP is important because it extends the centre's focus on entrepreneurship and innovation beyond traditional start-up and commercialisation activities. It introduces social innovation and impact-oriented approaches to new groups within the university and in doing so, SIP supports SFU Engage's ambition to promote student-active learning, interdisciplinary collaboration, and competence development for societal impact.

For the target group, the programme provides practical methods, networks, and support to develop ideas that emerge from research, teaching, professional practice, or lived experience. It strengthens participants' ability to identify, develop, and implement solutions to societal challenges, while giving them the confidence and tools to pursue entrepreneurial and innovation opportunities. A particular ambition is to increase participation among groups that have traditionally been underrepresented in entrepreneurship, including female and student entrepreneurs, and to encourage more students—especially women—to view entrepreneurship and innovation as realistic pathways for creating societal change.

At the end of the programme, participants will be introduced to possible pathways for taking their projects further. Students will gain access to relevant stakeholders and networks and may be eligible for funding of up to 20,000 NOK per student group/project to support further development. In this way, SIP aims to ensure that promising ideas do not stop at the programme itself but have opportunities to mature and continue in relevant environments.

In the longer term, SIP aims to contribute to increased diversity and inclusion in the regional entrepreneurship ecosystem and to strengthen Nord University and SFU Engage's role in regional and national societal development. We aim to establish a lasting offering in social innovation that complements existing entrepreneurship programmes and addresses a clear gap in the current ecosystem. We will therefore contribute to strengthening the culture of innovation at Nord University and position the university as a national and regional actor in entrepreneurship and innovation—with a particular emphasis on sustainability, inclusion, and the welfare sector.

6.1.4 From Space Research to Student Innovation: Building an Entrepreneurial Space Ecosystem

Nord University is a partner in the Interreg Aurora project AuroraSpace, an initiative designed to strengthen collaboration, competence development, and innovation within the growing space sector in Northern Europe. While the project primarily focuses on cross-border collaboration between industry, academia, and public actors, its impact at Nord University has extended far beyond the project itself. Through SFU Engage and associated educational initiatives, knowledge, networks, and opportunities emerging from AuroraSpace have been integrated into both curricular and extracurricular student activities. This has created significant spillover effects, enabling students at bachelor's and master's level to engage with authentic challenges related to the space industry and the use of satellite data.



Jakob Brattli Sørensen, winner of the pitch competition at DNB NXT in Bodø, where he presented his startup Eagle AI. *Photo: DNB.*

One example is Space Innovation Day, an event introducing 50 bachelor students in Business to opportunities within the space economy and demonstrating how innovation methods can be applied to real-world challenges. The initiative has increased awareness of the space sector among students who would otherwise have had limited exposure to the field.

AuroraSpace has also inspired the development of international Space Hackathons, bringing together students from different countries, disciplines, and institutions to collaborate on space-related challenges. An example was the Space Hackathon hosted at SPIR in February 2025, where 37 students from multiple countries worked in eight interdisciplinary teams to explore business opportunities within the space industry. The winning team developed a concept focused on reducing space debris and supporting sustainable future space exploration, earning both a cash prize and a summer internship with KSAT. The event was organised through a broad partnership involving industry, academia, and regional innovation actors, demonstrating the strength of the emerging space innovation ecosystem.

At the master's level, AuroraSpace has influenced educational activities within entrepreneurship and innovation programmes, particularly in the course Ideation and Entrepreneurial Opportunities (FIVER). As part of the course, students spend a week at Andøya Space, working closely with industry partners to develop solutions based on real challenges from the space sector. Satellite data has proven particularly valuable, inspiring students to explore applications in areas such as fisheries, geology, agriculture, environmental monitoring, and sustainability. The impact extends beyond learning experiences. Several student teams have transformed ideas developed through













How can we support student innovation across Norway?

these activities into start-up ventures. Some have gone on to commercialise their solutions, receive awards, attract external funding, and gain recognition within regional and national entrepreneurial ecosystems. These outcomes demonstrate how exposure to authentic challenges, industry collaboration, and entrepreneurship education can contribute to both student learning and innovation-driven regional development.

For SFU Engage, AuroraSpace demonstrates how strategic collaboration can amplify impact. By connecting the project's knowledge, networks, and industry partnerships with SFU Engage's educational activities, new opportunities for student learning, innovation, and entrepreneurship have emerged. The result has been a range of activities and outcomes that extend far beyond the project itself.

Sofa talk during Ally gathering in Bodø.





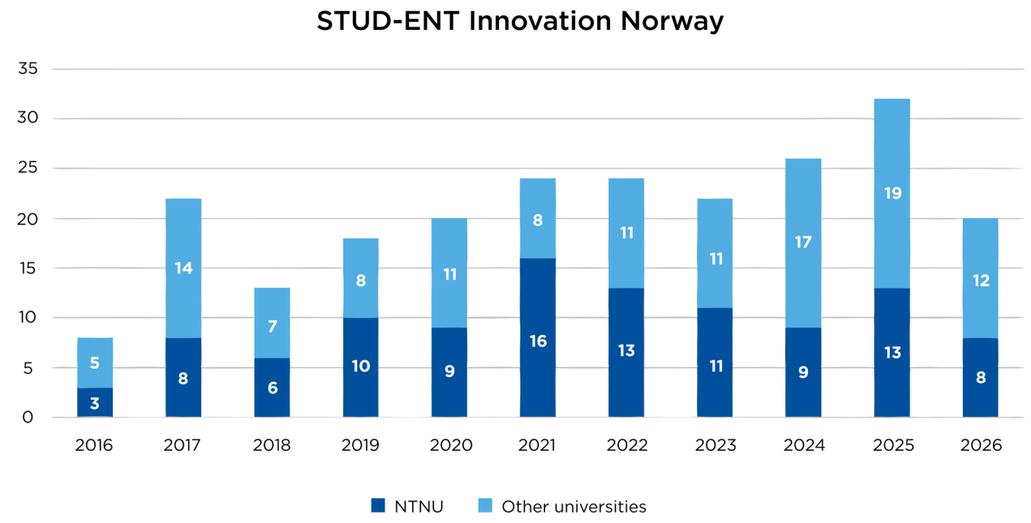
Networking and waffles.

6.2 The Ally Network

Ally is a Norwegian network dedicated to strengthening entrepreneurship and innovation in higher education. It brings together leading universities, and other key stakeholders across Norway, to create a coordinated approach to supporting student innovators. Established in 2022, Ally aims to ensure that students with innovative ideas have access to the guidance, resources, and networks they need to develop and realize their projects.

The Formation and Development of the Ally Network

The Ally Network was created by two SFU Engage members in 2022, PhD student Vårin Vaskinn and advisor Charlotte Sørensen, after identifying a need to provide a structure for sharing SFU Engage's knowledge and experience. Prior to the formation of Ally, different initiatives and projects were active, such as Application Guidance for Innovation Norway's STUD-ENT funding, Spark* [1.1.3] and CHIC [3.1.3]. With these initiatives and projects Vårin and Charlotte understood that SFU Engage had acquired a skillset and experiences that might be useful for other universities in Norway. In parallel, different universities visited NTNU and the innovation ecosystem in the fall of 2022, resulting in the search for more efficient ways to disseminate SFU Engage's knowledge. Furthermore, Vårin's experience as a consultant at another Norwegian university prior to the PhD, informed the design and development of Ally.



The creation of Ally started with mapping the major Norwegian universities' student innovation ecosystems and identifying drivers of innovation within the ecosystems. A list of potential members was compiled from the Mentoring Entrepreneurs initiative, and the mapping process continued from that initial network. The first year was dedicated to mapping university innovation ecosystems, expanding the number of participating universities, and identifying and understanding challenges across the network. Every month a Teams meeting was held providing an accessible forum for sharing and supporting one another.

One area of knowledge-sharing through the network has been applying for STUD-ENT funding from Innovation Norway. As illustrated in the figure below, the number of awards has grown considerably over the period, rising from a total of 8 in 2016 to a peak of 32 in 2025. Notably, while NTNU accounted for the majority of early awards, applications from other universities in Norway have increased steadily, reflecting a broader distribution of funding across the sector. Creating this environment of sharing has contributed positively to the development of awarded funding throughout the years, and an increase in the number and quality of applications from different universities in Norway.

In the early stages of the Ally Network, the focus was to dynamically build the network focusing on stable and predictable structures as well as creating trust between the participating universities representatives. The structure of monthly meetings, combined with a yearly physical meeting, remains in place today.

Mission and Activities

The mission of Ally is to contribute to a Norwegian innovation ecosystem where students can benefit from competent mentors and a supportive environment based on collaboration, knowledge sharing, and inclusive innovation. To achieve this, the network focuses on empowering university staff, providing them with the skills and knowledge required to guide student entrepreneurs effectively.

Ally creates value through four main areas of activity. First, it facilitates networking by organizing regular meetings that connect innovation support professionals from different institutions. Second, it offers seminars, courses, and workshops designed to strengthen competencies in

entrepreneurship and innovation support. Third, the network promotes knowledge sharing by collecting and distributing best practices, case studies, and useful tools among its members. Finally, Ally supports student innovators by providing frameworks and resources that help staff guide students from the early stages of idea development to validation and launch.

Today, the network includes 19 strategic member institutions from across Norway, ranging from Tromsø in the north to Kristiansand in the south. Members and partners include universities such as NMBU, UiT, UiB, and the UiA, as well as other organisations involved in supporting student innovation. By encouraging collaboration between educational institutions and innovation actors, Ally helps create a stronger national support system for student entrepreneurship. As a result, more students can transform their ideas into innovative solutions.

6.3 Research Partners at Chalmers and Lund

SFU Engage has developed close collaboration in both education and research with two key partners in Sweden: Chalmers School of Entrepreneurship in Gothenburg and the Sten K. Johnson Centre for Entrepreneurship at Lund University. Both institutions share a similar approach to entrepreneurship education through venture creation programmes, comparable to NTNU School of Entrepreneurship and Nord University's FIVER programme. While collaboration has often taken place through individual research projects and co-authored publications, a more sustained joint effort has centred on understanding the longer-term outcomes of such educational models.

The Entrepreneurship Program Alumni Study (EPAS) was initiated early in the centre's lifetime as a joint research effort across these institutions. The aim was to explore alumni trajectories, including career paths and how graduates reflect on their educational experiences. With three programmes of slightly different design, the project also enabled comparative analysis across institutional and national contexts. Two rounds of data collection were conducted, with the second building on earlier findings and introducing new themes and questions.

The project has generated insights into how alumni apply entrepreneurial competencies in different types of roles, as well as how prior experience and exposure, including family business background, relate to entrepreneurial careers. These findings have contributed to a stronger empirical understanding of the outcomes of venture creation programmes and have informed the development of subsequent research projects on entrepreneurship education and its impact.

The collaboration has also extended beyond the EPAS project. An important element has been the adjunct professor position held by Diamanto Politis, Director of the Sten K. Johnson Centre, at NTNU. Through this role, she has contributed to supervision of PhD candidates, mentoring of early-stage researchers, and feedback on research projects and manuscripts, strengthening the academic environment and linking the centre's work to an international research community.

In addition, collaboration with Chalmers has contributed to the development and continuation of the Venture Creation Program (VCP) Forum **[4.2]**, originally initiated by Chalmers faculty. This forum brings together educators involved in venture creation programmes to exchange experiences and discuss educational practices. Through these interactions, ideas and approaches have been shared and adapted across institutions, contributing to incremental development of programmes and teaching practices.

Professor II Diamanto Politis from Lund University was the discussant at the midway seminar for Åshild Wilhelmsen. *Photo: Håvard Engen.*







Norwegian forum for entrepreneurship education hosted at NTNU in 2023.

Selected publications stemming from the EPAS project include:

- Mitigating the lack of prior entrepreneurial experience and exposure through entrepreneurship education programs.[3]
- Graduates of venture creation programs–where do they apply their entrepreneurial competencies?[4]
- Re-viewing entrepreneurial universities through alumni engagement.[5]

6.4 Non-Grant Networks

Beyond funded projects, SFU Engage has contributed to the development of entrepreneurship education through networks that connect educators, researchers, students, and practitioners across institutions and disciplines. These networks have created arenas for knowledge sharing, exchange of experiences, and joint learning around educational practices and research. The examples presented in this section illustrate how network-based collaboration has supported the development and dissemination of entrepreneurship education and sustainability education at both national and international levels.

6.4.1 The Norwegian Forum for Entrepreneurship Education

The Norwegian Forum for Entrepreneurship Education (Norw. *Norsk forum for entreprenørskap i høyere utdanning*) was originally established in 2019 as a national network for educators and researchers in the field. The initiative aimed to create a collaborative arena centred around an annual seminar hosted by different institutions, alongside ongoing collaboration on shared challenges such as educational practices, research, and the development of the field. A key ambition was to strengthen cross-institutional collaboration and provide a platform for sharing teaching methods, involving students, and engaging both early-career and senior scholars. However, activities were put on hold during the COVID-19 pandemic that caused lock-down of society in 2020 and 2021.

In May 2023, SFU Engage re-initiated the forum through a full-day seminar at NTNU in Trondheim, marking an important step in rebuilding this national network. The seminar gathered approximately 90 participants from more than 10 higher education institutions and ecosystem organisations, including NTNU, NMBU, University of Agder, Nord University, University of Stavanger, BI, NIH and HVL, as well as actors such as 6AM and student organisations like Driv NTNU. The participants represented educators, researchers, advisors, and students, reflecting the diversity of the entrepreneurship education ecosystem.

The theme of the seminar was student-driven ecosystems for innovation and entrepreneurship, guided by the question: How can we best utilise ecosystems

[3] Aadland, T., Hägg, G., Lundqvist, M. A., Stockhaus, M., & Williams Middleton, K. (2024). Mitigating the lack of prior entrepreneurial experience and exposure through entrepreneurship education programs. International Journal of Entrepreneurial Behavior & Research, 30(11), 19-44.
[4] Alsos, G., Hägg, G., Lundqvist, M., Politis, D., Stockhaus, M., Williams-Middleton, K., & Djupdal, K. (2023). Graduates of venture creation programs–where do they apply their entrepreneurial competencies? Small Business Economics, 60(1), 133-155.
[5] Politis, D., Aaboen, L., Eide, A. E., & Haneberg, D. H. (2024). Re-viewing entrepreneurial universities through alumni engagement. Small Business Economics, 63(2), 655.



for student innovation in formal entrepreneurship education? The programme featured speakers including Alf Inge Wang (NTNU), Matthew Lynch (NMBU), Ola Edvin Vie (NTNU), Milena A. Egiazarian (Driv NTNU), Charlotte Irene Sørensen (NTNU/SFU Engage), and international contributor Ken Singer (UC Berkeley), who travelled from the United States to share perspectives.

The seminar was designed around SFU Engage's I-CARE pedagogical framework, emphasising interaction, challenge, action, reflection, and embracing uncertainty. This was operationalised through interactive sessions, designed and led by students with central roles in student innovation ecosystems, reflecting early ideas from 2019 about involving students directly in developing and improving entrepreneurship education.

The seminar also connected closely to the development of the Ally network by bringing together stakeholders working to build and sustain student-driven ecosystems. SFU Engage staff contributed significantly to the academic content and facilitation of the programme, while also ensuring broad institutional representation. The day concluded with a social gathering, strengthening relationships and re-establishing the forum as a national arena for collaboration and development in entrepreneurship education.

6.4.2 Teaching Tools for Sustainable Entrepreneurship

Entrepreneurs are often driven by an urge to solve problems and create change. The link between sustainability and entrepreneurship is often discussed in relation to change agency, with sustainable entrepreneurs taking the role of change agents in the transition towards sustainability. Higher education institutions have a central role in training students to acquire knowledge, skills and mindset that are geared towards sustainable actions. This entails equipping educators with the capacity to facilitate students' learning to act for a sustainable future. A team of researchers, educators and students, representing different partners within SFU Engage, collaborated in the period 2021-2024 around *which learning approaches, pedagogical methods and teaching tools educators at higher education institutions can use to teach sustainable entrepreneurship.*

The collaboration started with a literature review and interviews with practitioners and educators. The findings were gathered in a report providing a hands-on toolkit for educators, offering an overview and discussion of 13 learning approaches, 15 pedagogical methods and 24 teaching tools for sustainable entrepreneurship education[6]. The mapping included teaching methods developed within SFU Engage and applied in different teaching initiatives within the centre. For example, the teaching tool 'Create value for others' which offers a framework for students to focus on sustainable value creation towards different stakeholders, has been developed and applied in the university-wide course Experts in Teamwork at NTNU[7]. Results from this work were disseminated as a resource on the Engage Resource Hub[8], and as workshops at the 3E conference in 2021 and the Its21 conference in 2022, where participants were introduced to sustainable entrepreneurship education in general and tested and discussed some selected teaching methods.

This first collaborative work served as a basis for further research and educational development, bringing SFU Engage's expertise on sustainable entrepreneurship education into the international Erasmus+ project 'Teaching Entrepreneurship for Sustainability'.[9] It also led one of the participating students to apply for a PhD position on sustainable entrepreneurship at Nord University.

A next research phase focused on mapping how educational tools for higher education intend to train different competences for sustainable entrepreneurship. The team mapped a sample of 51 relevant educational tools that are all connected to SFU Engage initiatives. It also discusses the intended sustainable entrepreneurship competences that each tool seeks to impart and the underlying pedagogical traditions upon which these tools



[6] Ida Matilde Fauske, Harrshinny Vallipuram, Benedicte-Elise Foldnes, Elli Verhulst, Karin Andrea Wigger, & Sølvi Solvoll (2022). Teaching sustainable entrepreneurship: Learning approaches, pedagogical methods and teaching tools (Report No. 2022;82). Nord universitet. https://hdl.handle.net/11250/3033999
[7] Verhulst, E., Johnsen, M. M. W., Brandshaug, S. W., & Andersen, N. H. (2025). Creating value for others. In Developing Entrepreneurial Mindsets, Ideas, and Opportunities (pp. 380-387). Edward Elgar Publishing.
[8] https://engage-resources.no/teaching-sustainable-entrepreneurship-learning-approaches-pedagogical-methods-and-teaching-tools/
[9] https://www.teserasmus.com/
[10] Fauske, I. M., Verhulst, E., Wigger, K. A., Solvoll, S., & Jakobsen, S. (2024). Teaching entrepreneurship for sustainability–a review of educational tools. Management Revue, 35(1), 113-143. https://doi.org/10.5771/0935-9915-2024-1-113

are built.[10] This led to a journal publication, including a video abstract of the publication.[11] The article was cited in, among other publications, an editorial of Entrepreneurship Education and Pedagogy on research on entrepreneurship education[12] and in a literature review presenting key themes and future research agenda on the role of educational institutions in sustainable entrepreneurship.[13] The work also was disseminated as a webinar in 2024, co-organised with NTNU SEED – Center for Science and Engineering Education Development.[14] This interactive webinar provided the participants with insights in competences for sustainable entrepreneurship, and how educational methods can support sustainable entrepreneurship in their own teaching.

SFU Engage's efforts on sustainability in entrepreneurship education are included in the report on 'Education for sustainable development' ('Utdanning for bærekraftig omstilling'), developed and written by a working group led by Professor Anne Borg, with representatives from all faculties at NTNU. One of SFU Engage's employees, Elli Verhulst, was part of this group, representing the Faculty of Economics and Management. She has since August 2025 a part-time position as educational developer and researcher at NTNU SEED to work further on the integration of sustainability in education at NTNU.

6.5 Alumni Engagement

Alumni engagement has become an important way for SFU Engage to extend the impact of its educational activities beyond individual courses and programmes. Through alumni initiatives connected to both the Train-the-Trainer courses and the NTNU School of Entrepreneurship, SFU Engage has explored how former participants can contribute to continued learning, knowledge, sharing and educational development. The examples presented in this section illustrate different approaches to alumni engagement and their contribution to strengthening entrepreneurship education over time.



Alumnis from the basic Train-the-Trainer course work creatively in the Trondheim launch of the book «Reframing Entrepreneurship Education».

6.5.1 Train-the-Trainer Course Alumni Network: From Informal Ambitions to Structured Communities of Practice

Description of the Network

Over the past years, SFU Engage has explored the development of an alumni network linked to its Train-the-Trainer (TTT) courses. The original ambition was to establish a vibrant, self-sustaining community where former participants could meet across disciplines, share experiences, and continue to develop their educational practices beyond the course setting. Planned activities included alumni gatherings and workshops. This is closely tied to SFU Engage's vision of strengthening innovative educational practices and building sustainable entrepreneurship education capacity among educators across disciplines.

SFU Engage has therefore established a Microsoft Teams group consisting of individuals who have been through the basic and advanced courses offered by SFU Engage. The idea was for this to be a low-threshold arena for the participants to share and comment on each other's thoughts, ideas, projects etc., and for SFU Engage to share information about events, courses, and other opportunities related to embedded entrepreneurship education.

Importance for the Centre, Target Group, Stakeholders

SFU Engage's role has been central in initiating, maintaining, and facilitating the network, as well as in reflecting on and adapting its format in response to what has proven viable and impactful. In practice, the alumni initiative has, however, evolved in a different direction than what was originally intended. This is because the initial idea of an organically driven alumni network proved more demanding than anticipated. While participants often express strong engagement during the courses – frequently describing a sense of community and shared purpose – this momentum has proved difficult to sustain once participants return to their everyday institutional contexts and get caught up in their regular, every-day duties. The attempts to share information in the «general» channel in Teams, of which all former course participants have access, has typically sparked responses from two or three members. However, while sharing information within the channels reserved for each cohort of the course, more response has been given. This has led us to think that the overall, general forum based on all former participants is perhaps too big – people are more likely to interact with people that they know. However, even in the channels, most initiatives have come from SFU Engage employees, which has made it more of a one-way channel for information sharing rather than the vibrant online meeting place it was meant to be.

This insight has been important for SFU Engage. It highlights that lasting impact requires more than informal networking opportunities. It requires structured, facilitated interventions that align with participants' professional responsibilities and institutional demands. This has led to the idea of creating an advanced module for those who really want to pursue their plans created in the basic course, of bringing entrepreneurship to their students.



The alumni forum aims at continuing the interdisciplinary interaction, experience sharing and relation building that occurs in the basic Train-the-Trainer course.

The development of an advanced module is also a result of an observation SFU Engage has made over time, in terms of a gradual shift in the wider educational landscape. Increasingly, course participants come with explicit mandates to innovate teaching and learning within their disciplines and prepare their students for interdisciplinary collaboration and the competence to drive innovation. This creates more fertile ground for the ideas and practices promoted in TTT courses.

The alumni initiative has therefore become more relevant over time, as participants seek continued support, peer exchange, and legitimisation of new approaches. However, from being regarded as a large network of alumni sharing ideas and practices, its core is now more a community of practice consisting of a limited group of committed, engaged and motivated educators from different fields who test new ideas in their teaching, share, give and receive feedback and iterate - in a more formal and structured way. The larger network still exists, however, and is still used as a communication channel for information sharing and recruitment.

Impact

Through experience, SFU Engage has realised that the most meaningful alumni engagement takes place within structured formats – particularly in relation to the advanced course that was first carried out during fall 2025. This course functions as a form of alumni arena, where participants return to test, refine, and discuss their own educational practices. Peer learning is a central element: participants meet colleagues from different disciplines, gain new perspectives, and reframe their own work through dialogue.

[11] https://www.youtube.com/watch?v=nDsW6c1z1eo
[12] Wiklund, J., Rasmussen, E., Fini, R., & Aaboen, L. (2025). Connecting Entrepreneurship Research and Practice in Entrepreneurship Education. Entrepreneurship Education and Pedagogy, 8(3), 345-370. https://doi.org/10.1177/25151274251328510
[13] Luu, T. M. N., & Hue, T. T. (2026). The role of educational institutions in sustainable entrepreneurial intentions: What are the key themes and future research agenda? The International Journal of Management Education, 24(2), 101351. https://doi.org/10.1016/j.ijme.2025.101351
[14] https://www.ntnu.no/seed/center-for-science-and-engineering-education-development

This has led to the development of what SFU Engage, in recent research, describes as a provisional community of practice.[15] In this model, participants engage in a temporary but highly meaningful community where they draw inspiration and support for their own teaching. The interdisciplinary nature of the group is crucial, as it enables participants to challenge assumptions and adopt new approaches.

Participants frequently report gaining confidence through this interaction – confidence to experiment with new teaching formats and to introduce changes within their own disciplinary contexts.[16] In turn, this can lead to broader cultural shifts in their home environments, as participants influence colleagues and encourage others to engage with similar practices.

Research in progress from the alumni courses suggests that educators do not just need new teaching tools – they also need spaces where they can make sense of them together and feel supported in using them. Peer interaction plays a crucial role. First, peers help legitimise new teaching practices. When educators try approaches that differ from traditional disciplinary norms, these can feel uncertain or even inappropriate. However, when colleagues recognise and validate such practices, it gives them legitimacy. For example, an educator responded to another educator's use of cards in teaching by saying: «Something that picked my curiosity was the fact that you were using cards. I'm a big card fan as well... for interactive and playful learning.» Such responses make it easier for educators to see alternative, more playful methods as meaningful and appropriate rather than trivial.

Second, peer interaction supports pedagogical reframing. What may initially appear to be a simple classroom technique can, through dialogue, be understood as a broader teaching principle. In the same exchange, the educator continued: «I liked how you have used this particular activity to help students to reimagine and to reframe their problem... while also using a quite simple kind of trick.» Here, a specific activity is reinterpreted as a way of helping students rethink problems, making it more transferable across teaching contexts.

Overall, this shows that the real impact lies not just in introducing new teaching methods, but in facilitating structured peer conversations where educators can validate, reinterpret, and strengthen their practices. This helps build confidence, supports experimentation, and increases the likelihood that new approaches are actually implemented and sustained in different disciplinary contexts.
Looking ahead, alumni engagement continues to be developed through events such as a planned panel discussion at the SFU Engage anniversary conference, where selected alumni will discuss key dilemmas in embedded entrepreneurship education.

The Trondheim launch of the edited book «Reframing Entrepreneurship Education» specifically targeted the Train-the-Trainer alumni forum.



[15] Roald, G. M., & Jin, F. (2026). The Process of embedding entrepreneurship into different disciplines: The educator's perspective. Entrepreneurship Education and Pedagogy. https://doi.org/10.1177/25151274261460453
[16] Jin, F. & Roald, G. M. (2025a) Training university educators to foster embedded entrepreneurship education: an evaluation, Cogent Education, https://doi.org/10.1080/2331186X.2025.2564255

6.5.2 Alumni From Study Programmes

Since 2003, the NTNU School of Entrepreneurship has educated students who, upon graduation, become members of the NTNU School of Entrepreneurship Alumni Network (ESAF).[17] The student body has always been characterised by its multidisciplinary composition, attracting individuals with diverse educational and professional backgrounds prior to joining the programme, including nursing, policing, engineering, economics, and a wide range of other disciplines. Over more than two decades, ESAF has developed into a highly engaged community of entrepreneurs, founders, investors, business developers, and innovation professionals who continue to contribute to the NTNU School of Entrepreneurship and its students.

Today, approximately 660 graduates are members of the ESAF Alumni Network. While the largest concentrations of alumni are in Oslo, Trondheim, and Bergen, the network also extends across other countries and regions worldwide. ESAF represents a valuable professional and entrepreneurial community that is regularly engaged by current students, fellow alumni, and staff at the NTNU School of Entrepreneurship.

One of the most significant and long-standing examples of alumni engagement is the annual ESAF Weekend. Each year, alumni return to the NTNU School of Entrepreneurship to support current students in developing their ventures and entrepreneurial projects.[18] During the weekend, alumni provide mentoring, feedback, industry insights, business







[17] https://www.entreprenorskolen.no/alumni
[18] https://www.trondheimtechport.no/nyheter/derfor-kommer-suksessgrunderne-tilbake-til-es

development advice, and practical experience drawn from their own entrepreneurial journeys. Over time, this has created a unique culture of peer-to-peer learning and represents a well-established and sustainable model for integrating alumni into educational activities.

As part of SFU Engage's ongoing efforts to strengthen entrepreneurship education, a development project has been initiated to further enhance the systematic use of the ESAF Alumni Network in educational activities at the NTNU School of Entrepreneurship. While alumni have long played an active role in teaching, mentoring, and venture development, the project focuses on how academic staff can more effectively identify, engage, and utilise alumni with relevant expertise and experience. The objective is to ensure that the most appropriate individuals are involved in specific educational activities, whether as guest lecturers, mentors, project advisors, or contributors to venture development processes. Through a more structured approach to alumni engagement, the project seeks to maximise the educational value of the extensive expertise available within the ESAF Alumni Network.

The impact of SFU Engage can therefore be seen in providing a framework for further developing and strengthening an already well-established practice. This work contributes to stronger connections between education, and professional practice, while ensuring that the knowledge and experience within the ESAF Alumni Network are more effectively aligned with the learning needs of current students.

6.6 Cooperation with Other Institutions

Collaboration with external institutions has been an important part of SFU Engage's work to strengthen entrepreneurship education, develop educational practices, and contribute to knowledge exchange across national and international contexts. Through partnerships with leading universities and educational alliances, SFU Engage has shared experiences, supported student and faculty mobility, and contributed to collaborative educational and research initiatives. These collaborations have provided valuable opportunities for mutual learning while helping disseminate and further develop entrepreneurship education practices beyond NTNU.

6.6.1 The Nordic Five Tech Alliance

NTNU are members of the Alliance of the Leading Nordic Technical Universities, Nordic Five Tech[19], together with Chalmers University of Technology, DTU Technical University of Denmark, Aalto University and KTH Royal Institute of Technology. It is a formal collaboration on the university level including collaboration between several parts of the universities. The NTNU School of Entrepreneurship are members of the group focusing on entrepreneurship education. Previously the group has focused on exchanging ideas about how to facilitate VCPs, like education and desk surfing for VCP students. For SFU Engage, this has provided an opportunity to present and exchange experiences regarding initiatives such as the Ally network **[6.2]** and the courses for PhD students and researchers commercialising research with Nordic relevant colleagues. The collaboration was also the starting point for spreading Spark* to Chalmers during the CHIC project **[3.1.3]** and several research stays for PhD students.

[19] https://www.nordicfivetech.org/

6.6.2 Enhance

Enhance[20] is an alliance of ten European universities funded through the Erasmus+ European Universities Initiative. The alliance explores and develops new approaches to collaboration in education and research, including joint educational activities, student mobility, and staff development initiatives across institutions.

Within Enhance, SFU Engage has contributed to selected activities related to sustainable entrepreneurship. Since the early phase of the alliance, the centre has been involved in the corresponding work package, primarily through mentoring activities across partner institutions. In this role, SFU Engage has supported entrepreneurial student teams in different local contexts, contributing competence and experience in venture development and sustainability-oriented entrepreneurship. This has provided an opportunity to apply and test SFU Engage's approaches in diverse institutional settings, while also learning from the practices of partner universities.

SFU Engage has also participated in a year-long collaborative training programme in sustainable entrepreneurship, where educators and practitioners share experiences, reflect on their own teaching practices, and co-develop new approaches to learning and supervision. Through this work, teaching approaches developed within SFU Engage have been shared with participants in the programme, and insights from the collaboration have informed the further development of these approaches, which have also been incorporated into the Engage Resource Hub **[see details in 5.3.1]**. In addition, faculty affiliated with the centre have contributed to summer schools within the alliance, exposing international student groups to perspectives and methods related to sustainable entrepreneurship.

SFU Engage has also contributed to the Stage Two competition by sending and preparing student teams for participation in the competition in Berlin, including providing guidance and support in the run-up to and during the event **[see 1.5.3 StageTwo]**. Several teams have performed very well over the years, reflecting the quality of the teams and the support they have received. Furthermore, SFU Engage has been represented in the alliance's advisory structure, initially referred to as the General Assembly and later renamed the Advisory Assembly. In this role, representatives from the centre have participated as part of NTNU's delegation, contributing input and perspectives informed by their expertise in entrepreneurship education.

For SFU Engage, participation in Enhance has been important as a platform for international collaboration, exchange of practices, and continuous development of its educational approaches. These contributions have supported cross-institutional learning and exchange of practices in sustainable entrepreneurship within the alliance.

[20] https://enhanceuniversity.eu/

Appendix A - List of publications

1

Alsos, G. A., & Ljunggren, E. C. (2018). Betydningen av innovasjon og entreprenørskap i norsk arbeidsliv: Kunnskapsstatus og veien videre. Søkelys på arbeidslivet, 35(3), 138–153. https://doi.org/10.18261/issn.1504-7989-2018-03-01

2

Alsos, G. A., Hägg, G., Lundqvist, M., Politis, D., Stockhaus, M., Williams Middleton, K., & Djupdal, K. (2023). Graduates of venture creation programs: Where do they apply their entrepreneurial competencies? Small Business Economics, 60(1), 133–155. https://doi.org/10.1007/s11187-022-00641-6

3

Bastian, B., Hjelle, M., & Shepherd, D. (2025). Systemizing entrepreneurial metacognition: Thinking about the past and future. Entrepreneurship: Theory and Practice. https://doi.org/10.1177/10422587251315664

4

Bjørgum, Ø., Aaboen, L., & Fredriksson, A. (2021). Low power, high ambitions: New ventures developing their first supply chains. Journal of Purchasing and Supply Management, 27(1), 100670. https://doi.org/10.1016/j.pursup.2020.100670

5

Bolstad, T., Verhulst, E., & Henriksen, R. B. (2025). Educators' perspective on integrating sustainability in higher engineering education: A case study within an electronic engineering study programme. European Journal of Engineering Education, 1–20. https://doi.org/10.1080/03043797.2025.2486192

6

Bolzani, D., Munari, F., Rasmussen, E., & Toschi, L. (2021). Technology transfer offices as providers of science and technology entrepreneurship education. The Journal of Technology Transfer, 46(2), 335–365. https://doi.org/10.1007/s10961-020-09788-4

7

Brandshaug, S. W. (2024). Transformation in the liminal space "in between" student and entrepreneur. The International Journal of Management Education, 22(2), 100962. https://doi.org/10.1016/j.ijme.2024.100962

8

Brandshaug, S. W., & Sjølie, E. (2021). In liminality: Interdisciplinary teams learning through challenges. Higher Education, Skills and Work-Based Learning, 11(2), 406–419. https://doi.org/10.1108/HESWBL-10-2019-0137

9

Brentnall, C., Diego-Rodriguez, I., Thomassen, M. L., Fauchald, R. N., & Ramsgaard, M. B. (2025). Provocation: what is the world asking of entrepreneurship education? International Journal of Entrepreneurial Behavior & Research, 31(8), 2190–2204.

10

Brentnall, C., Diego-Rodriguez, I., Thomassen, M. L., Fauchald, R. N., & Ramsgaard, M. B. (2025). Provocation: What is the world asking of entrepreneurship education? International Journal of Entrepreneurial Behaviour & Research. https://doi.org/10.1108/IJEBR-08-2024-0910

11

Clausen, T. H., Alsos, G. A., & Meyer, M. B. (2017). De gode hjelperne. En studie av inkubatorbedrifters økosystem. Magma - Tidsskrift for økonomi og ledelse, Volume 20 (8).

12

Corbett, A. C., Marino, L., & Alsos, G. A. (2023). The Age of Entrepreneurship Education Research: Evolution and Future Introduction: The Age of Entrepreneurship Education Research. Emerald Publishing Limited.

13

Do, T. T. T., Haneberg, D. H., Aadland, T., & Widding, Ø. (2023). Progression by imitation: Empirical evidence from the NTNU–CERN Screening Week. European Society for Engineering Education. https://doi.org/10.21427/WESJ-NK61

14

Fauchald, R. N. (2024). Extracurricular Entrepreneurship and Enterprise Education: What, How, Why, for Whom, and When? Entrepreneurship Education and Pedagogy, 8(1), 11-39.

15

Fauchald, R. N. (2024). Extracurricular Entrepreneurship and Enterprise Education: What, How, Why, for Whom, and When?. Entrepreneurship Education and Pedagogy (EE&P).

16.

Fauchald, R. N., Veisdal, J., Aaboen, L., & Kaspersen, K. (2024). The dynamics of alumni-student interactions via digital community mechanisms in entrepreneurship education. In W. Lamine, S. Jack, A. Fayolle, & D. Audretsch (Eds.), De Gruyter handbook of digital entrepreneurship (pp. 371–394). De Gruyter. https://doi.org/10.1515/9783110764222-018

17

Fauchald, R. N., Aaboen, L., & Haneberg, D. H. (2022). Utilisation of entrepreneurial experiences in student-driven mentoring processes. The International Journal of Management Education, 20(2), 100651. https://doi.org/10.1016/j.ijme.2022.100651

18

Fauchald, R. N., Aaboen, L., & Haneberg, D. H. (2023). Pre-seed grant as an enabler of learning. International Journal of Entrepreneurial Behaviour & Research, 29(7), 1698–1719. https://doi.org/10.1108/IJEBR-01-2022-0070

19

Fauske, I. M., Verhulst, E., Wigger, K. A., Solvoll, S., & Jakobsen, S. (2024). Teaching entrepreneurship for sustainability: A review of educational tools. Management Revue, 35(1), 113–143. https://doi.org/10.5771/0935-9915-2024-1-113

20

Francisco, S., & Sjølie, E. (2024). Learning through change: What the pandemic has taught us about living well in a world worth living in. In K. Reimer, M. Kaukko, S. Windsor, S. Kemmis, & K. Mahon (Eds.), Living well in a world worth living in for all: Volume 2: Enacting praxis for a just and sustainable future (pp. 225–240). Springer. https://doi.org/10.1007/978-981-97-1848-1_15

21

Fufen Jin & Gunhild Marie Roald (2025) Training university educators to foster embedded entrepreneurship education: an evaluation, Cogent Education, 12:1, 2564255, DOI: 10.1080/2331186X.2025.2564255

22

Gabrielsson, J., Landström, H., Politis, D., & Sørheim, R. (2023). Historical evolution of entrepreneurial education as a scholarly field. In A. C. Corbett, L. D. Marino, & G. A. Alsos (Eds.), The age of entrepreneurship education research: Evolution and future (Vol. 23, pp. 9–32). Emerald Publishing. https://doi.org/10.1108/S1074-754020230000023002

23

Gabrielsson, J., Landström, H., Politis, D., & Sørheim, R. (2025). Entrepreneurship education scholarship in the 1990s and early 2000s: a historical analysis of the internationalizing entrepreneurship education and training - conference. Management & Organizational History, 20(2), 228–249.

24

Georgiadou, E., Steinmo, M. T., & Lauvås, T. (2024). Development of transactive memory systems in new venture teams. International Small Business Journal: Researching Entrepreneurship, 42(1), 124–154. https://doi.org/10.1177/02662426231175877

25

Goldshaft, B., & Sjølie, E. (2024). Creating communicative learning spaces in initial teacher education (ITE) with observation-grounded co-mentoring practices. Professional Development in Education, 50(3), 533–550. https://doi.org/10.1080/19415257.2024.2337772

26

Haneberg, D. H. (2019). Entrepreneurial learning as an effectual process. The Learning Organization, 26(6), 631–647. https://doi.org/10.1108/TLO-04-2018-0064

27

Haneberg, D. H. (2021). SME managers' learning from crisis and effectual behaviour. Journal of Small Business and Enterprise Development, 28(6), 873–887. https://doi.org/10.1108/JSBED-01-2021-0009

28

Haneberg, D. H., & Aaboen, L. (2020). Incubation of technology-based student ventures: The importance of networking and team recruitment. Technology in Society, 63, 101402. https://doi.org/10.1016/j.techsoc.2020.101402

29

Haneberg, D. H., & Aaboen, L. (2022). Entrepreneurial learning behaviour of community insiders. International Journal of Entrepreneurial Behaviour & Research, 28(2), 306–324. https://doi.org/10.1108/IJEBR-04-2020-0255

30

Haneberg, D. H., & Aadland, T. (2020). Learning from venture creation in higher education. Industry and Higher Education, 34(3), 121–137. https://doi.org/10.1177/0950422219884020

31

Haneberg, D. H., Brandshaug, S. W., & Aadland, T. (2018). Eierskap og teamprosess i aksjonsbasert entreprenørskapsutdanning. Uniped, 41(1), 42–53. https://doi.org/10.18261/issn.1893-8981-2018-01-04

32

Haneberg, D. H., Aaboen, L., & Williams Middleton, K. (2022). Teaching and facilitating action-based entrepreneurship education: Addressing challenges towards a research agenda. The International Journal of Management Education, 20(3), 100711. https://doi.org/10.1016/j.ijme.2022.100711

33

Heggernes, T. A., Torvatn, T. K. A., Belsom, E., Sørheim, R., & Rolfsen, M. (2017). Teknologiledelse - for ingeniørstudier, arbeidsbok og casesamling. Fagbokforlaget Bergen.

34

Hunt, S., Haneberg, D. H., & de Boer, L. (2024). Conceptualising a chameleon: Social enterprise as a public provider. Journal of Public Procurement, 24(1), 42–69. https://doi.org/10.1108/JOPP-08-2023-0056

35

Hägg, G., Politis, D., & Alsos, G. A. (2023). Does gender balance in entrepreneurship education make a difference to prospective start-up behaviour? Education + Training, 65(4), 630–653. https://doi.org/10.1108/ET-06-2021-0204

36

Jensen, M. B., Utriainen, T. M., & Steinert, M. (2018). Mapping remote and multidisciplinary learning barriers: Lessons from challenge-based innovation at CERN. European Journal of Engineering Education, 43(1), 40–54. https://doi.org/10.1080/03043797.2017.1278745

37.

Jin, F., & Roald, G. M. (2025). From outsiders to insiders: Empowering university teachers to foster the next generation of entrepreneurial graduates. Education Sciences, 15(12), 1643. https://doi.org/10.3390/educsci15121643

38

Johnsen, M. M. W., Sjølie, E., & Johansen, V. (2024). Learning to collaborate in a project-based graduate course: A multilevel study of student outcomes. Research in Higher Education, 65(3), 439–462. https://doi.org/10.1007/s11162-023-09754-7

39

Kaspersen, K., & Aaboen, L. (2021). Innovation in Global Entrepreneurship Education: Teaching Entrepreneurship in Practice Feasibility studies at CERN: CERN as a technology provider for startups. Edward Elgar Publishing.

40

Killingberg, N. M. (2024). Entrepreneurial identity as a career compass: An exploration of the career narratives of entrepreneurial education graduates. Education + Training, 66(7), 801–815. https://doi.org/10.1108/ET-09-2023-0364

41

Kolvereid, L., & Isaksen, E. J. (2017). Expectations and achievements in new firms. Journal of Small Business and Enterprise Development, Volume 24 (3).

42

Lambrechts, W., Verhulst, E., & Rymenams, S. (2017). Professional development of sustainability competences in higher education: the role of empowerment. International Journal of Sustainability in Higher Education, Volume 18 (5).

43

Landström, H., Gabrielsson, J., Politis, D., & Sørheim, R. (2022). What's interesting in entrepreneurial education research? Identifying conversants sharing common interests in the field. International Journal of Entrepreneurial Behaviour & Research, 28(9), 104–131. https://doi.org/10.1108/IJEBR-07-2021-0599

44

Landström, H., Gabrielsson, J., Politis, D., Sørheim, R., & Djupdal, K. (2021). The Social Structure of Entrepreneurial Education as a Scientific Field. Academy of Management Learning & Education.

45

Larsen, E. H. (2021). Norsk arbeidsliv mot 2050. Muligheter og trusler. Hva er entreprenøriell kompetanse, og hvordan tilegne seg denne kompetansen?. Fagbokforlaget.

46

Larsen, E. S. H., Haneberg, D. H. A. Å., & Lakså, S. H. (2024). Revealing three anomalies: Extending Kolb educator roles profile in experiential entrepreneurship education. The International Journal of Management Education.

47

Lesniak, K., & Sørheim, R. (2020). The key drivers for emergence of an entrepreneurial ecosystem: The role of brokerage, role models and inspiration. In A. Novotny, E. Rasmussen, T. H. Clausen, & J. Wiklund (Eds.), Research handbook on start-up incubation ecosystems (pp. 319–334). Edward Elgar Publishing. https://doi.org/10.4337/9781788973533.00026

48

Liebech-Lien, B., & Sjølie, E. (2021). Teachers' conceptions and uses of student collaboration in the classroom. Educational Research, 63(2), 212–228. https://doi.org/10.1080/00131881.2020.1839354

49

Lindelid, L. (2023). Systematic Literature Review: Calculative Mechanism Behind Individuals' Entry to Hybrid Entrepreneurship and Self-Employment. International Reveiw of Entrepreneurship.

50

Lindvert, M. (2023). Addressing global challenges with compassion: The role of entrepreneurship education. The Southern African Journal of Entrepreneurship and Small Business Management.

51

Lynch, M. P. J., Kamovich, U., Longva, K. K., & Steinert, M. (2019). Combining technology and entrepreneurial education through design thinking: Students' reflections on the learning process. Technology Forecasting and Social Change.

52

Lynch, M. P., & Corbett, A. C. (2021). Entrepreneurial mindset shift and the role of cycles of learning. Journal of Small Business Management.

53

Mahon, K., Heikkinen, H. L. T., Huttunen, R., Boyle, T., & Sjølie, E. (2020). What is educational praxis? In K. Mahon, C. Edwards-Groves, S. Francisco, M. Kaukko, S. Kemmis, & K. Petrie (Eds.), Pedagogy, education, and praxis in critical times (pp. 15–38). Springer. https://doi.org/10.1007/978-981-15-6926-5_2

54

Maryami, S., Loi, M., Martinez, M., & Di Guardo, M. C. (2023). On the role of team passion in inventing, founding and developing: what happens in the early stages of entrepreneurship?. Journal of Small Business and Enterprise Development.

55

Mathisen, M. T., & Rasmussen, E. (2019). The development, growth, and performance of university spin-offs: a critical review. Journal of Technology Transfer, Volume 44.

56

Mauseth, I. K., & Alsos, G. A. (2017). Er coworking space et godt tilbud for gründere?. Magma - Tidsskrift for økonomi og ledelse, Volume 20 (8).

57

Mukesh, H. V., Shetty, J., Kenny, B., & McGuirk, H. (2024). Value for value: Social entrepreneurship education through value creation extracurricular activity. Journal of Social Entrepreneurship. Advance online publication. https://doi.org/10.1080/19420676.2024.2413071

58

Neergård, G.-B. (2021). Entrepreneurial nurses in the literature: A systematic literature review. Journal of Nursing Management, 29(5), 905–915. https://doi.org/10.1111/jonm.13210

59

Neergård, G.-B. (2022). Nurse entrepreneurs' ethical concerns: A qualitative inquiry of the pursuit of opportunity. Journal of Nursing Management, 30(7), 2346–2356. https://doi.org/10.1111/jonm.13850

60

Neergård, G.-B., & Roald, G. M. (2025). Competent to teach? Educators' perceptions of entrepreneurship. International Journal of Entrepreneurial Behaviour & Research. https://doi.org/10.1108/IJEBR-07-2023-0712

61

Neergård, G.-B., & Aadland, T. (2025). Embracing an entrepreneurial identity through entrepreneurial learning. In Handbook of research on entrepreneurial learning (pp. 122–135). Edward Elgar Publishing. https://doi.org/10.4337/9781803922218.00017

62

Neergård, G.-B., Aaboen, L., & Politis, D. (2022). Enabling entrepreneurial empowerment through a three-day entrepreneurship camp. Entrepreneurship Education and Pedagogy, 5(4), 658–685. https://doi.org/10.1177/25151274211070457

63

Neergård, G.-B., Aaboen, L., & Widding, Ø. (2022). Entrepreneurial passion in entrepreneurship education. In Strategies for the creation and maintenance of entrepreneurial universities. IGI Global. https://doi.org/10.4018/978-1-7998-7456-0.ch005

64

Pattnaik, S., Mmbaga, N., White, T. D., & Reger, R. K. (2024). To entrepreneur or not to entrepreneur? How identity discrepancies influence enthusiasm for academic entrepreneurship. The Journal of Technology Transfer, 49(4), 1444–1470. https://doi.org/10.1007/s10961-023-09994-w

65

Politis, D., Gabrielsson, J., Aaboen, L., & Haneberg, D. H. A. Å. (2025). From loops to leaps: Accelerating experiential learning in venture creation programs. Entrepreneurship Education and Pedagogy (EE&P). https://doi.org/10.1177/25151274251337751

66

Politis, D., Aaboen, L., Eide, A. E., & Haneberg, D. H. (2024). Re-viewing entrepreneurial universities through alumni engagement. Small Business Economics, 63(2), 655–671. https://doi.org/10.1007/s11187-023-00863-2

67

Rasmussen, E. (2019). The regional impacts of university spin-offs : in what ways do spin-offs contribute to the region? . Handbook of Universities and Regional Development. Edward Elgar Publishing.

68

Rasmussen, E. (2025). From Purpose to Impact The University and Business Partnership Commercialization of Research Managing the Transition from Academia to Business. Routledge.

69

Rasmussen, E., Andries, P., & Knockaert, M. (2024). Student ventures: A new organizational form in the university entrepreneurial ecosystem. Academy of Management Perspectives, 38(4), 473–491. https://doi.org/10.5465/amp.2023.0052

70

Rasmussen, E., Benneworth, P., & Gulbrandsen, M. (2020). Motivating universities to support spin-off firms: Stakeholders and start-up incubation ecosystems Research handbook on start-up incubation ecosystems, (ISBN 9781788973526), s. 418-434.

71

Rennemo, Ø., Widding, L. Ø., & Bogren, M. (2017). Business growth through intentional and non-intentional network processes. Journal of Small Business and Enterprise Development, Volume 24 (2).

72

Roald, G. M., Krogstie, C. H., Landrø, K., & Wallin, P. (2024). Relasjonsbygging i nettbasert veilederutdanning: En kvalitativ studie av veilederes opplevelser. Nordisk tidsskrift i veiledningspedagogikk, 9(2). https://doi.org/10.15845/ntvp.v9i2.4101

73

Roald, G. M., Schruijer, S., & Neergård, G. B. (2025). The researcher's facilitating role in stimulating a constructive group climate in online focus-group interviews. Qualitative Inquiry, 31(6), 531–541.

74

Rødsjø, E., Sjølie, E., & Van Petegem, P. (2024). Psychological safety in interdisciplinary virtual student project teams: A validation study. Computers in Human Behavior Reports, 14, 100413. https://doi.org/10.1016/j.chbr.2024.100413

75

Sinha, V., Ausrød, V. L., & Widding, Ø. (2020). Gearing up for growth: The growth process of new ventures at the base of the pyramid. International Journal of Entrepreneurial Venturing, 12(1), 85–108. https://doi.org/10.1504/IJEV.2020.105137

76

Sivertsen, I. B. (2025). The impact of participation in technical student-run organisations on loneliness among engineering students. European Journal of Engineering Education, 1–20. https://doi.org/10.1080/03043797.2025.2517624

77

Sivertsen, I. B., Haneberg, D. H., & Solvoll, S. (2023). Fremtidens innovatører gjennom studentfrivillighet? Magma, 26(3). https://doi.org/10.23865/magma.v26.1318

78

Sivertsen, I. B., Wilhelmsen, Å., & Alsos, O. A. (2025). Co-designing an innovative assessment tool for higher education: Methods, challenges, and insights from participatory design. Lecture Notes in Networks and Systems, 993, 412–424.

79

Sjølie, E. (2017). Learning educational theory in teacher education. Exploring education and professional practice - Through the lens of practice architectures. Springer.

80

Sjølie, E., & Van Petegem, P. (2024). Measuring the sociability of virtual learning environments for interdisciplinary student teams: A validation study. Scandinavian Journal of Educational Research, 68(3), 461–472. https://doi.org/10.1080/00313831.2022.2148279

81

Sjølie, E., & Østern, A. L. (2021). Student teachers' criticism of teacher education: Through the lens of practice architectures. Pedagogy, Culture & Society, 29(2), 263–280. https://doi.org/10.1080/14681366.2020.1729842

82

Sjølie, E., Espenes, T. C., & Buø, R. (2022). Social interaction and agency in self-organizing student teams during their transition from face-to-face to online learning. Computers & Education, 189, 104580. https://doi.org/10.1016/j.compedu.2022.104580

83

Sjølie, E., Francisco, S., & Langelotz, L. (2019). Communicative learning spaces and learning to become a teacher. Pedagogy, Culture & Society, 27(3), 365–382. https://doi.org/10.1080/14681366.2018.1500392

84

Sjølie, E., Johnsen, M. M. W., & Van Petegem, P. (2024). Profiling feedback antecedents in higher education students: A person-oriented perspective. Frontiers in Education, 9, 1475944. https://doi.org/10.3389/feduc.2024.1475944

85

Sjølie, E., Strømme, A., & Boks-Vlemmix, J. E. P. (2021). Team-skills training and real-time facilitation as a means for developing student teachers' learning of collaboration. Teaching and Teacher Education : An International Journal of Research and Studies.

86

Solvoll, S. and Haneberg, D.H. (2025) Entrepreneurial learning among novice entrepreneurs in the tourism industry. In D. Politis, L. Aaboen, & J. Gabrielsson (Eds.), Handbook of Research on Entrepreneurial Learning . Edward Elgar Publishing.

87

Steira, I. K. M., & Lindvert, M. (2025). Annals of Entrepreneurship Education and Pedagogy - 2025 Entrepreneurship education at Nord University Business School. Edward Elgar Publishing.

88

Steira, I. K. M., & Steinmo, M. T. (2021). The development of effective new venture teams in venture creation programmes. International Journal of Entrepreneurial Behaviour & Research.

89.

Steira, I. K. M., Wigger, K. A., & Rasmussen, E. (2024). Variety of entrepreneurial skills measured in the entrepreneurship education literature. Education + Training.

90

Steira, I. K. M., Aaboen, L., Wigger, K. A., & Solvoll, S. (2025). Process studies in entrepreneurship education. Entrepreneurship Education and Pedagogy, xx(x), xx–xx. https://doi.org/10.1177/25151274251329332

91

Sørheim, R., Aadland, T., & Haneberg, D. H. (2021). Innovation in Global Entrepreneurship Education: Teaching Entrepreneurship in Practice Venture creation programs: what kinds of ventures do students create?. Edward Elgar Publishing.

92

Thomas, E., & Asheim, B. T. (2021). Universities entrepreneurial ecosystems and sustainability Entrepreneurial ecosystems learning regions and the role of universities. Walter de Gruyter (De Gruyter).

93

Torgeir Aadland & Lise Aaboen (2020) An entrepreneurship education taxonomy based on authenticity, European Journal of Engineering Education, 45:5, 711-728, DOI: 10.1080/03043797.2020.1732305

94

Toscher, B. (2021). Higher Education as Context for Music Pedagogy Research Music Teachers' and Administrators' Perspectives on Entrepreneurship in Norwegian Higher Music Education: An Exploratory Pilot Study. Cappelen Damm Akademisk.

95

Toscher, B. D. (2021). Resource Integration, Value Co-Creation, and Service-dominant Logic in Music Marketing: The Case of the TikTok Platform. International Journal of Music Business Research.

96

Toscher, B., & Bjørnø, A. M. (2019). Music Students' Definitions, Evaluations, and Rationalizations of Entrepreneurship. The Journal of Arts Management, Law, and Society, Volume 49 (6).

97

Toscher, B., Dahle, Y., & Steinert, M. (2020). Get give make live: An empirical comparative study of motivations for technology, youth and arts entrepreneurship. Social Enterprise Journal, 16(2), 179–202. https://doi.org/10.1108/SEJ-03-2019-0016

98

Toscher, Benjamin. (2019) Entrepreneurial Learning in Arts Entrepreneurship Education: A Conceptual Framework. Artivate: A Journal of Entrepreneurship in the Arts. vol. 8 (1).

99

Toscher, Benjamin. (2020) Blank Canvas: Explorative Behavior and Personal Agency in Arts Entrepreneurship Education. Artivate: A Journal of Entrepreneurship in the Arts. vol. 9 (2).

100

Toscher, Benjamin. (2020) The Skills and Knowledge Gap in Higher Music Education: An Exploratory Empirical Study. International Journal of Education and the Arts. vol. 21 (10).

101

Venkatesh, M. H., & Bailey, A. (2023). Bringing context to the foreground: Explaining the early-stage career development of next-generation family business members. The Journal of Family Business Strategy.

102

Verhulst, E., Johnsen, M. M. W., Brandshaug, S. W., & Andersen, N. H. (2025). Creating value for others. I Developing entrepreneurial mindsets, ideas, and opportunities: A guide for educators (s. 380–387). Edward Elgar Publishing. https://doi.org/10.4337/9781035314119.00046

103

Verhulst, E., Nilsen, H. R., & Sortland, B. O. (2023). Sustainable Practices in Higher Education. Finance, Strategy, and Engagement. Engaging and Empowering Students to Contribute to Sustainable Development Through Developing Interdisciplinary Teamwork Skills. Palgrave Macmillan.

104

Verhulst, E., Aaboen, L., & Jebsen, S. (2024). Editorial: Sustainability in Entrepreneurship and Small-and Medium-Sized Enterprises. management revue - Socio-Economic Studies.

105

Wiklund, J., Rasmussen, E., Fini, R., & Aaboen, L. (2025). Connecting entrepreneurship research and practice in entrepreneurship education. Entrepreneurship Education and Pedagogy, 8(3). https://doi.org/10.1177/25151274251328510

106

Wilhelmsen, Å., Haneberg, D. H. A. Å., Sivertsen, I. B., Alsos, O. A., & Solvoll, S. (2025). Rise of the Machines: Design Education in the Generative AI Era. Proceedings of the 26th International Conference on Engineering and Product Design Education (E&PDE 2024) GENERATIVE AI IN DESIGN EDUCATION: BUSINESS AS USUAL, A TROUBLEMAKER, OR A GAME CHANGER?. The Design Society.

107

Yeratziotis, A., Aadland, T., Brandshaug, S. W., Mettouris, C., Vanezi, E., & Papadopoulos, G. A. (2021). Social Innovation in Higher Education: Landscape, Practices, and Opportunities Design of a Social Innovation Competence Framework to Educate Entrepreneurs in Developing on the International Stage. Springer.

108

Aaboen, L., Djupdal, K., Haneberg, D. H., Øien, V. S., Aadland, T., & Sørheim, R. (2021). The importance of time in a university student venture incubator. In Handbook of Research on Business and Technology Incubation and Acceleration. Edward Elgar Publishing.

109

Aaboen, L., Dubois, A., & Aarikka-Stenroos, L. (2021). Relationship development patterns of university-based start-ups. In A Research Agenda for the Entrepreneurial University. Edward Elgar Publishing.

110

Aaboen, L., Gabrielsson, J., & Politis, D. (2025). Introduction to the Handbook of Research on Entrepreneurial Learning: Reviewing the past and guiding the way forward. In D. Politis, L. Aaboen, & J. Gabrielsson (Eds.), Handbook of Research on Entrepreneurial Learning (pp. 1–23). Edward Elgar Publishing.

111

Aaboen, L., Landström, H., & Sørheim, R. (2020). How do you become entrepreneurial in one week? In L. Aaboen, H. Landström, & R. Sørheim (Eds.), How to become an entrepreneur in a week: The value of 7-day entrepreneurship courses (pp. 1–13). Edward Elgar Publishing. https://doi.org/10.4337/9781788979283.00007

112

Aaboen, L., Pettersen, S., & Fredriksson, A. (2025). Student entrepreneurs building a business in the Norwegian construction industry. In Cases on startups and enterprise (pp. 212–219). Edward Elgar Publishing.

113

Aaboen, L., Sørheim, R., Haneberg, D. H., & Aadland, T. (2021). Context, content and commitment in student venture processes. International Journal of Entrepreneurial Behaviour & Research, 27(5), 1105–1115. https://doi.org/10.4337/9781788979283.00007

114

Aadland, T. (2025). Advancing methods in entrepreneurship education impact research: the benefits and limitations of register data. Entrepreneurship Education and Pedagogy, 8(3), 402-423.

115

Aadland, T., & Aaboen, L. (2018). Systematising higher education: A typology of entrepreneurship education. In U. Hytti, R. Blackburn, & E. Laveren (Eds.), Entrepreneurship, innovation and education: Frontiers in European entrepreneurship research (pp. 103–122). Edward Elgar Publishing. https://doi.org/10.4337/9781788972307.00014

116

Aadland, T., Hägg, G., Lundqvist, M. A., Stockhaus, M., & Williams Middleton, K. (2024). Mitigating the lack of prior entrepreneurial experience and exposure through entrepreneurship education programs. International Journal of Entrepreneurial Behaviour & Research, 30(11), 19–44. https://doi.org/10.1108/IJEBR-07-2022-0607

Appendix B - Media Coverage

Sykepleierstudenter lærer seg å se etter feil i helsevesenet (2017)
https://www.adressa.no/nyheter/i/8BMaeA/na-laerer-sykepleierstudentene-nyskaping

NTNUs verksted for fremragende utdanning (2017)
https://www.adressa.no/nyheter/i/36O2bv/vi-vil-lage-ting-som-kan-brukes-ikke-sitte-og-lytte

NTNU fikk ros for satsingen på utdanning og innovasjon (2017)
https://www.universitetsavisa.no/campus/ntnu-fikk-ros-for-satsingen-pa-utdanning-og-innovasjon/154395

Andrea vil hindre lekkasje av flinke studenter fra Trondheim (2018)
https://www.tu.no/artikler/andrea-vil-hindre-lekkasje-av-flinke-studenter-fra-trondheim/441167

Vil finne nye løsninger for fornybar energi (2018)
https://www.samferdselinfra.no/vil-finne-nye-losninger-for-fornybar-energi/

Anvendbart på hele infrastrukturen vår (2018)
https://www.samferdselinfra.no/anvendbart-pa-hele-infrastrukturen-var/

Studerer bærekraftige løsninger for Rana-industrien (2019)
https://www.ranano.no/studerer-barekraftige-losninger-for-rana-industrien/s/25-158-6140

Havbruks-konferanse om framtidens oppdrett (2019)
https://www.avisafroya.no/nyheter/n/OQvg6A/havbrukskonferanse-om-framtidens-oppdrett

Fremragende utdanning er grønn utdanning (2019)

Håper vi kan gjenta dette flere ganger (2019)
https://www.an.no/suksess-med-nytt-konsept-i-bodo-haper-vi-kan-gjenta-dette-flere-ganger/s/5-4-950275

«Klart for fem nye år» – Steinkjer-Avisa (2020)

«Gladmelding til Nord universitet: Får penger til to sentre» – Avisa Nordland (2020)

«Nord er sikret videreføring av to Senter for fremragende utdanning» – nord.no (2020)

«Fem nye år for Engage og Excited» – ntnu.no (2020)

Nord universitet er sikret videreføring av to senter for fremragende utdanning (2020)
https://www.an.no/nord-universitet-er-sikret-videreforing-av-to-senter-for-fremragende-utdanning/s/5-4-1337986

Aktiv deltakelse fra Nord universitet til TV-aksjonen – nord.no (2020)

Entreprenørskap som tenkemåte (2020)
https://www.tronderdebatt.no/entreprenorskap-som-tenkemate/o/5-122-5890
https://www.an.no/entreprenorskap-som-tenkemate/o/5-4-1276731

Planlegg for ein heildigital haust! (2020)

Line (30) skal hjelpe unge gründere under krisen (2020)
https://www.an.no/line-30-skal-hjelpe-unge-gr-ndere-under-krisen-dette-er-superaktuelt/s/5-4-1187136

Studentworkshop innovasjon ved NTNU, Konnekt – nasjonalt kompetansesenter for samferdsel (2021)
https://doffin.no/notices/2021-346666

16 studentprosjekter ved NTNU får hver én million kroner (2021)
https://www.mn24.no/nyheter/n/23KRgv/16-studentprosjekter-ved-ntnu-far-hver-en-million-kroner

Persons with ADHD can become best founders (2021)
https://www.nrk.no/nordland/forskning-viser-at-personer-med-adhd-kan-bli-de-beste-i-entreprenorskap-_-de-kan-selge-sand-i-sahara-1.15444546

Studerer seg frem til bærekraftige løsninger i samspill med lokalt næringsliv (2021)
https://www.ranano.no/studerer-seg-frem-til-barekraftige-losninger-i-samspill-med-lokalt-naringsliv/s/25-158-19424

Millionpris til NTN (2021)
https://hkdir.no/aktuelt/millionpris-til-ntnu2

Let students learn entrepreneurship through local success stories (2021)

Kronikk i tidsskriftet Sykepleien (2021)
https://sykepleien.no/meninger/2021/04/jeg-kunne-ikke-fordra-sykepleieteoretikerne-og-sa-ble-jeg-teoretiker-selv

Blogg-tekst til Cingulum (2021)
https://www.cingulum.no/fagblogg/faglig/fra-bekymring-til-business-kan-du-endre-helsevesenet/

Ny master i entreprenørskap ved OsloMet (2021)
https://www.shifter.no/notis/ny-master-i-entreprenorskap-ved-oslomet/229878
https://kommunikasjon.ntb.no/pressemelding/17922179/ny-master-i-entreprenorskap-ved-oslomet?publisherId=15678779
https://www.nyteknikk.no/Ny-master-i-entreprenorskap-ved-OsloMet
https://film.oslomet.no/ny-master-i-entreprenorskap-pa

Vil lære studentene å løse umedgjørlige problem (2021)

Sammen for å få flere studenter til å fullføre (2021)

Ingen gründerideer er for høytflyvende – Dagens Næringsliv (2022)

How come the great performance at StageTwo for NTNU start-ups? (2022)
https://engage-centre.no/how-come-the-great-performance-at-stagetwo-for-ntnu-start-ups/

Friskmeld gründermiljøet fra long covid (2022)

Nå kan du ta master i innovasjon og entreprenørskap (2022)

Kartlegging av innovasjon og entreprenørskap ved NTNU (2023)
https://www.universitetsavisa.no/grndere-innovasjon-monica-rolfsen/alle-studenter-med-en-grnder-i-magen-skal-komme-til-oss/377212

Godt studentinnovasjonsmiljø skal bli enda bedre (2023)
https://nyheter.ntnu.no/godt-studentinnovasjonsmiljo-skal-bli-enda-bedre/

Alle studenter med en gründer i magen skal komme til oss (2023)
https://www.universitetsavisa.no/grndere-innovasjon-monica-rolfsen/alle-studenter-med-en-grnder-i-magen-skal-komme-til-oss/377212

Det er en myte at folk må velge mellom lønnet arbeid og å bli entreprenør (2023)
https://www.shifter.no/kommentar/det-er-en-myte-at-folk-ma-velge-mellom-lonnet-arbeid-og-a-bli-entreprenor/278714

Kronikk: Nye gründere vokser fram på Nord universitet (2023)
https://www.an.no/nye-gr-ndere-vokser-fram-pa-nord-universitet/o/5-4-1794387

Nyhetssak om EVU Kirkenes (2023)
https://www.sva.no/studerer-innovasjon-og-utvikling-i-kirkenes/s/5-145-68334

Nyhetssak Bærekraft i praksis – nord.no (2023)
https://www.nord.no/aktuelt/studenter-fra-hele-verden-er-med-pa-a-utvikle-lovold-havpark

Hvordan lykkes med å utdanne entreprenører? (2023)
https://www.khrono.no/hvordan-lykkes-med-a-utdanne-entreprenorer/814285

Fremtidens høyere utdanning trenger en oppgradering – ikke budsjettkutt (2024)
https://www.khrono.no/fremtidens-hoyere-utdanning-trenger-en-oppgradering-ikke-budsjettkutt/816292

Vi trenger Sentrene for fremragende utdanning (2024)
https://www.khrono.no/vi-trenger-sentrene-for-fremragende-utdanning/810750

Skal konkurrere for første gang – en av disse kan bli norgesmester (2024)
https://www.bodonu.no/skal-kon-kur-re-re-for-for-s-te-gang-en-av-dis-se-kan-bli-nor-ges-mes-ter/s/5-159-92961

Nord-studenter får millionstøtte fra Innovasjon Norge – nord.no (2024)
https://www.nord.no/aktuelt/nord-studenter-far-millionstotte-fra-innovasjon-norge
https://www.an.no/samson-24-og-jakob-24-far-millioner-helt-fantastisk/s/5-4-1960458

Marthe vil bli forsker – nord.no (2024)
https://www.nord.no/aktuelt/marthe-vil-bli-forsker

Veien videre for entreprenørskap i høyere utdanning (2025)
https://www.khrono.no/veien-videre-for-entreprenorskap-i-hoyere-utdanning/990510

En innovasjonsarena på tvers av regioner – nord.no (2025)
https://www.nord.no/aktuelt/nord-universitet-en-innovasjonsarena-pa-tvers-av-regioner

Endeleg ein stad å la idéane spire (2025)
https://www.nord.no/aktuelt/endeleg-ein-stad-a-la-ideane-spire

engage