University of Amsterdam
Economics & Business
section Entrepreneurship & Innovation

Mapping the ***Noord-Holland Entrepreneurship Education Ecosystem***

Authors:
F. (Erik) Boer
Dr. L.M.C. (Lien) De Cuyper
A.H. (Ana) Dorscheidt
Prof. dr. M. (Martin) Obschonka
Dr J.M.C. (Jonathan) Situk

Client:
Rijksdienst voor Ondernemend Nederland (RVO) /O2Lab

June 2023

1 Introduction

In view of the importance of entrepreneurial thinking and acting in society, the development of entrepreneurial skills and competences is widely regarded a global priority (European Commission, 2015; World Economic Forum, 2009). Labor markets, organisations, and knowledge-based economies rely on 21st century skills such as entrepreneurship – mandating higher education institutions to equip students not only with domain-specific knowledge and skills taught in "traditional" study subjects and teaching formats (e.g., lectures), but also with entrepreneurial skills (Obschonka et al., 2017). It is therefore widely acknowledged today that entrepreneurship education is a critical component of post-secondary education and non-cognitive skill development (Block et al., 2023; Fayolle, 2018; Kassenboehmer et al., 2018). Education systems around the globe have developed several strategic approaches to fostering entrepreneurial learning in various settings and contexts, including formal and informal entrepreneurship education (QAA, 2018). In addition, education institutions generate considerable impact through entrepreneurship education.

From a human capital point of view stimulating and improving entrepreneurial skills and competences are considered of key importance by national policy makers. For the connection of education to the labor market as well as to increase innovation from research. From this perspective it is important to gain additional insight in the current state of entrepreneurship education with regard to the long-term development of transferring knowledge to impact (Kamerbrief Innovatie en impact, November 2022).

In this report we aim to contribute to understanding entrepreneurship education in Noord-Holland by taking stock of the current state of the entrepreneurial education ecosystem. By creating an overview of the range of entrepreneurship education offered by the education institutions and also of the external network that has arisen around this education, actions can be taken to make a leap in scale in quality and positioning of stimulating entrepreneurship and entrepreneurial behavior among students. Based on this, we create an overview for teachers (and students) and from there develop joint activities in the field of knowledge exchange among teachers and improve communication to students. This can also involve strategic approaches to collaboration, networks, and curricula development. This study can guide such new efforts in the ecosystem to foster and expand collaboration, competitiveness, and key knowledge spill overs.

The results of this inventory are available for the O2LAB network of the Rijksdienst voor Ondernemend Nederland (RVO)

2 Theory

2.1 *Conceptualising entrepreneurship education*

There is no general consensus in entrepreneurship research how to best define entrepreneurship. Many scholars in the field would agree however that entrepreneurship in its narrow economic definition can be defined as the process comprised of the recognition, evaluation and exploitation of entrepreneurial opportunities (Shane & Venkataraman, 2000), as new-to-the-market economic activity (for example in the form of a new startup and thus new venture creation, Davidsson, 2004). In its broader definition, "entrepreneurship applies to both individuals and groups (teams or organizations), and it refers to value creation in the private, public and third sectors, and in any hybrid combination of the three" (QQA, 2018).

Definitions of entrepreneurship education (EE) focus on fostering an entrepreneurial mindset and developing personal competences among students; co-creation; experiential pedagogy or learning by doing; the creation of value; and engagement (QQA, 2018). Maritz et al. (2022) conceptualise EE as "[c]ontextualised content, experiential methods and initiatives supporting the creation of knowledge, competencies and experiences within entrepreneurial spaces that enable diverse participants to initiate and participate in entrepreneurial value creating processes such as transformation, disruption and startups". EE thus constitutes the transfer of knowledge about "how, by whom, and with what effects opportunities to create future goods, services and value are discovered, evaluated and exploited" (Maritz and Brown 2013).

EE can be part of the curriculum in the form of accredited courses, or it can be manifested in non-accredited, extra-curricular initiatives such as university accelerators, incubators, and student initiatives. EE thus goes beyond formal education.

2.2

Entrepreneurship education: expectations, goals, outcomes

Educational institutions display different levels of commitment to entrepreneurship in the information they provide online, reflecting the importance they attach to being an entrepreneurial institution when it comes to both their overall strategy or vision and the way they organise their curricula. Maritz et al. (2019) differentiate between substantive and symbolic approaches to EE. Their research shows that educational institutions which took substantive approaches fostered an integrated strategy toward becoming an overall entrepreneurial institution, in contrast to those who took symbolic approaches, which are more easily adopted and can contribute to becoming an entrepreneurial institution but occur in isolation from an overall strategy.

Existing studies have mainly analysed the impact of EE by focusing on the number of EE programmes and the number of students participating in such programmes (Looi and Maritz 2021). Another way of measuring impact would be a more qualitative investigation of the effects of EE on individual students, on the wider entrepreneurial ecosystem or on the educational institution itself.

"Since 2007, the HvA has promoted entrepreneurship education through 5 minors, several majors and honors tracks in entrepreneurship. These have allowed to foster entrepreneurial skills and helped launch many successful startups in diverse fields like fashion and communication."

Ingrid Wakkee | Scientific director of the HvA's Venture Center

3 Methodology

3.1 Data collection

Using a list of 21 public institutions offering post-secondary education in the Noord-Holland province, we searched for all accredited courses and programs about, or related to, entrepreneurship. The educational institutions that are represented in our data include universities (WO), universities of applied sciences (HBO) and technical and vocational training institutions (MBO).

We scanned the course catalogues of the 21 institutions and used an extended list of search terms, drawn from Davidsson and Gruenhagen (2021), including the following search terms: “[“venture” or “business” or “firm” or “organization”] creation”; “start-up[s]”; “startup[s]”; “new firm[s]”; “new organization[s]; “new venture[s]; “new business[es]”; [“venture” or “business” or “firm” or “organization/al/”] founding[s]”; “opportunity [‘identification or ‘creation’ or ‘discovery’ or ‘development’]”; “entrepreneur[s]”; “entrepreneurial”; “entrepreneurship”; [“firm” or “venture” or “business”] gestation”; [“firm” or “venture” or “business” or “organizational’]

emergence; [“firm” or “venture” or “business” or “opportunity”] formation. The term “scale-up”/”scaleup” was also used as a search term, but did not yield any results. This search yielded a total list of 165 courses and programs.

In a next step, we qualitatively went through each of these search results. This entailed reading every course description, in order to categorise the programs and courses into type of entrepreneurship education (described below). Next to the type of EE, courses and programs were also coded for the level at which they are taught (BSc, MSc, Minor, MBO 3, MBO 4); the amount of ECTS they award (for the courses at university and HBO institutions); and the faculty or department at which they are taught. Both the search and coding of the courses and programs were iterative processes to ensure as much completeness and accuracy as possible.

A reflection on the data’s representativeness is required. For some educational institutions, we found that either they do not offer any courses or programs about entrepreneurship, or that such information on specific courses was not available on public webpages without a student login. Yet some of these institutions, particularly MBOs, emphasise entrepreneurial skills as an integral part of all the education they offer. Some creative programs, such as those in art schools, also emphasise entrepreneurship even if they do not offer concrete courses, reflecting an assumption that many of their graduates will become self-employed. However, these realities might not be reflected as accurately in our data.

Another concern is collecting data for non-accredited initiatives related to or about entrepreneurship. Since the focus of this report was accredited programs and courses, the non-accredited initiatives were beyond the scope of this study. In addition, since these initiatives are scattered and manifold, systematic data collection was more difficult. Nonetheless, we also include an overview of these non-accredited initiatives in chapter 5.

4 Results

In the following, we first provide a brief overview of the relevant institutions and their involvement in entrepreneurship education (focusing on accredited EE). We then proceed by highlighting quantitative and qualitative key insights that emerged from our analysis. We then conclude the results section by providing a preliminary overview over non-accredited entrepreneurship education.

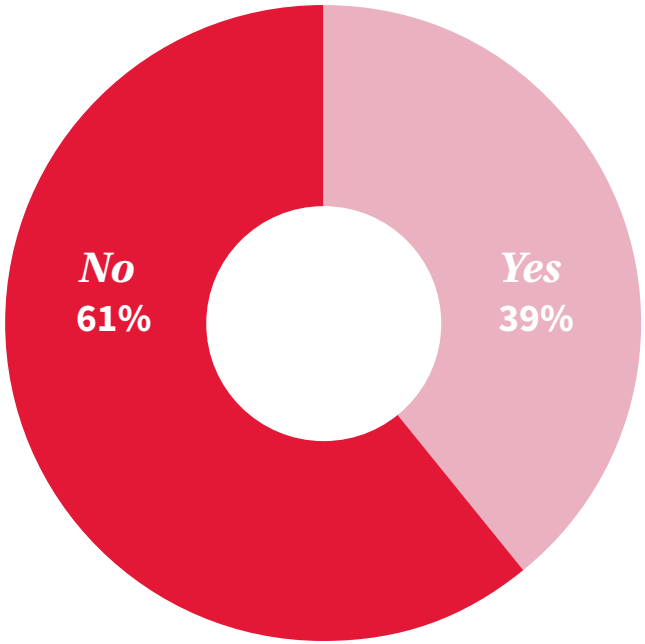
4.1 Importance of entrepreneurship for institutions

We identified 165 accredited entrepreneurship courses or programs in 18 public institutions (out of 21) offering post-secondary education in the Noord-Holland province (institution logos presented below). From our list of 21 institutions, we did not identify any specific entrepreneurship courses/programs for three institutions (Media Academie, Nederlandse Defensie Academie and Gerrit Rietveld Academie). This first analysis documents that accredited entrepreneurship education is widespread across the post-secondary education sector in the Noord-Holland province – involving almost all of the respective institutions.

Public institutions offering entrepreneurship courses or programs in the Noord-Holland province

We analysed whether the educational institutions mention entrepreneurship on their "about" page or their vision/mission statements as part of their corporate communication, and we used this as a first indication of the importance they attach to incorporating entrepreneurship into their education (and research). A minority of the institutions in our sample, namely seven (39 percent), explicitly mentioned entrepreneurship on their "about" page and/or their vision/mission statements. It is important to note that the absence of entrepreneurship on the web pages does not mean an institution does not offer courses related to or about entrepreneurship.

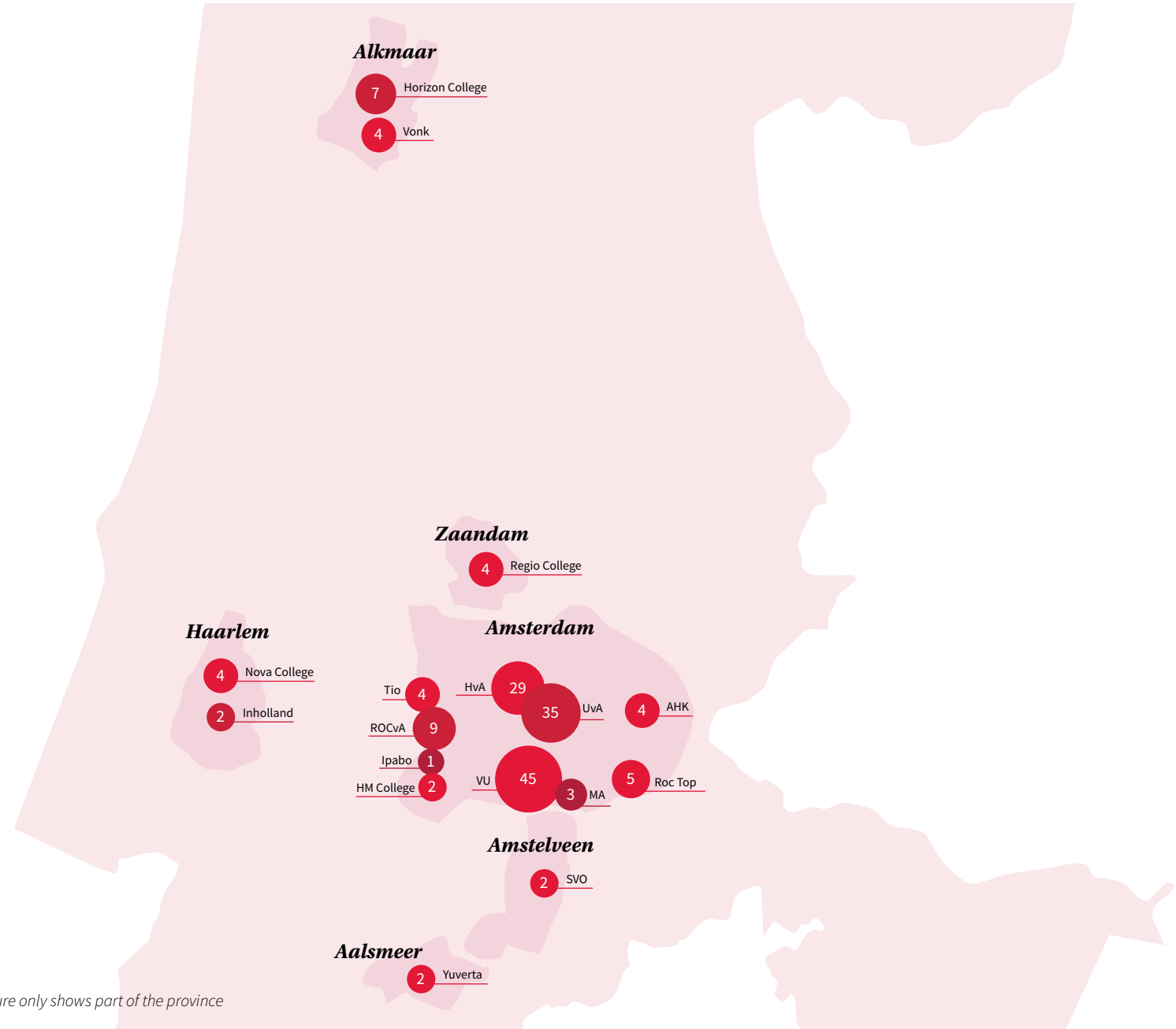
Entrepreneurship on the "About" page



Among the 18 institutions that offer entrepreneurship education, the two major universities - UvA and VU – stand out with together 80 entrepreneurship courses/programs (48% of the identified entrepreneurship courses/programs in the province). Another major player in this space is the HvA with 29 courses/programs. The table below provides the overview over the institutions.

Institution	***# Courses / Programs***
VU	45
UvA	35
HvA	29
ROCvA	9
Horizon College	7
Roc Top	5
AHK	4
Tio	4
Regio College	4
Nova College	4
Vonk	4
Fontys	3
MA	3
Inholland	2
HM College	2
SVO	2
Yuverta	2
Ipabo	1

*Distribution of courses/programs in the Noord-Holland province **



* *figure only shows part of the province*

4.2 Entrepreneurship education

4.2.1 Types of entrepreneurship education

As preparation for the analysis, we categorised entrepreneurship courses and programmes into four types of education:

- Narrow Entrepreneurial Education: This includes entrepreneurship education aimed at starting your own business (including registration at the KvK, creating an MVP, pitching, generating first sales, etc.). This is comparable to the definition of entrepreneurial education in the QQA framework (2018).
- Broad Entrepreneurial Education: This includes entrepreneurship education aimed at developing entrepreneurial competencies (identifying opportunities, creativity, developing business models, etc.). This is comparable to enterprise education in the QQA framework (2018).
- Theory Competencies: This includes entrepreneurship education aimed at developing a theoretical understanding of entrepreneurship, and thus treats entrepreneurship and startups as an object of academic study.

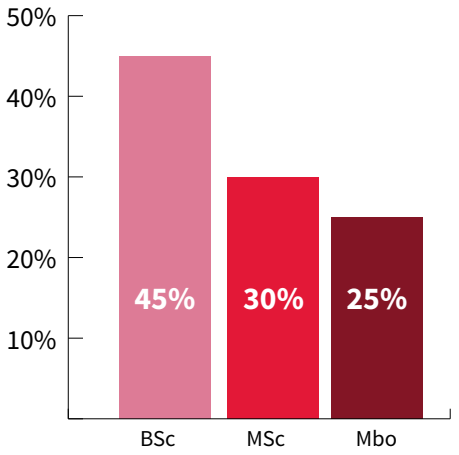
"It is important to have a mix of theoretical entrepreneurship courses that analyze how entrepreneurial ventures "come into existence, contribute to the labour market dynamic, technological innovation, and their societal impact. But [...] at least equally as important is the hands-on 'how do you become an entrepreneur' [courses] because we have students who have very interesting [business] ideas."

Roel Beetsma | Dean of the Faculty of Economics and Business of the UvA

- Other - Related to entrepreneurship: This includes courses and programs that do not explicitly mention entrepreneurship but touch upon related concepts such as innovation.

With respect to the degree-level, most identified courses/programs belong to the BSc, MSc or MBO level. Almost three quarters of all the courses and programmes offered by educational institutions in Noord-Holland are taught at the Bachelor or Master levels, meaning that they are concentrated at the universities and universities of applied sciences. Although there might not be as many entrepreneurship courses taught at the MBO level, institutions for technical and vocational training often emphasise entrepreneurship as being integrated into all the education they offer rather than being taught in specific courses. This explains partly why we do not see as big a representation of MBO as that of BSc and MSc combined in the distribution across education levels.

Distribution across education level



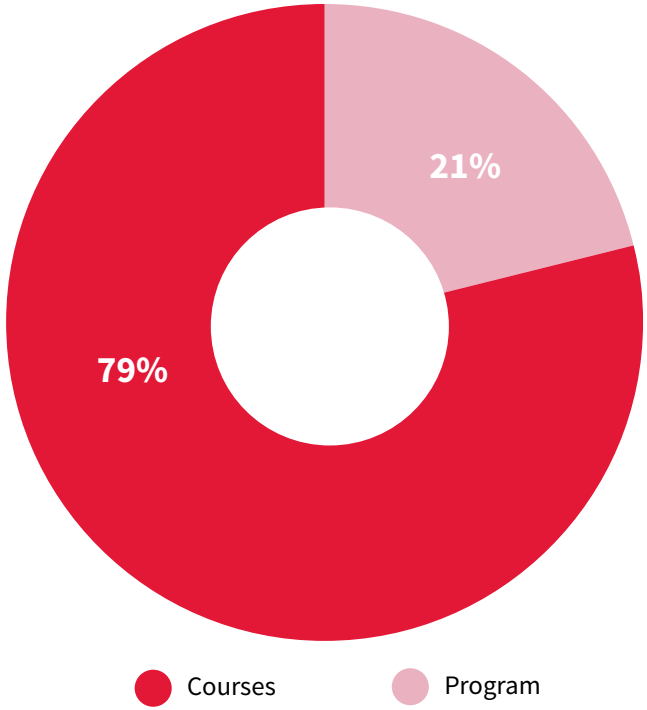
4.2.2 Entrepreneurship education: not only at business schools

Unsurprisingly, most courses and programs about entrepreneurship are part of the institutions' business schools or economics faculties. However, we notice that a significant part of entrepreneurship education also takes place in non-business departments, where 56 courses were found (comprising 34 percent of the total number of courses and programs). Of these, 44 percent are highly specific to the sector or faculty in which the course is taught. Especially in natural science faculties, there is more and more attention to entrepreneurship and innovation. Examples of domain-specific courses are 'Entrepreneurship in Healthcare' (taught at the UvA), 'Entrepreneurial Furniture Manufacturer/Ship Interior Builder' (taught at Hout- en Meubileringscollege), 'Hotel Management' (taught at the ROC van Amsterdam), and 'Pressure cookers for nursing students' (taught at HvA).

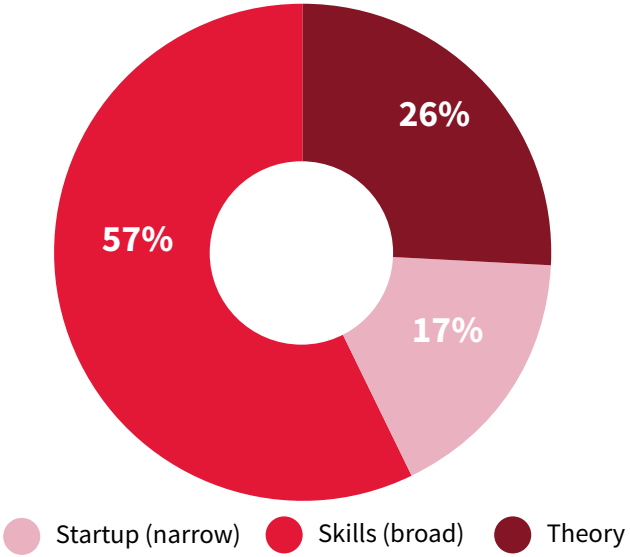
4.2.3 Courses versus programs: short- or long-term engagement

Entrepreneurship education can be categorised as a single course or as a full program. The courses in our database counted for 1 up until 15 ECTS, while the programs typically count for 30 (minor) up to 240 ECTS (full BSc and MSc programs). Courses typically last one or two 'blocks', while programs can last from one semester (six months) up until multiple academic years. This distinction is relevant because, as a result of the higher number of ECTS and time allocated to programs versus courses, these require higher levels of investment and deeper engagement from students and educators alike. Programs comprise only a quarter of formal entrepreneurship education in the Noord-Holland educational ecosystem. Courses are thus the prevalent mode of entrepreneurship education, making up 79 percent of the total amount of education initiatives offered. The implications of this need to be explored: what can be accomplished in less than a semester in terms of teaching entrepreneurship?

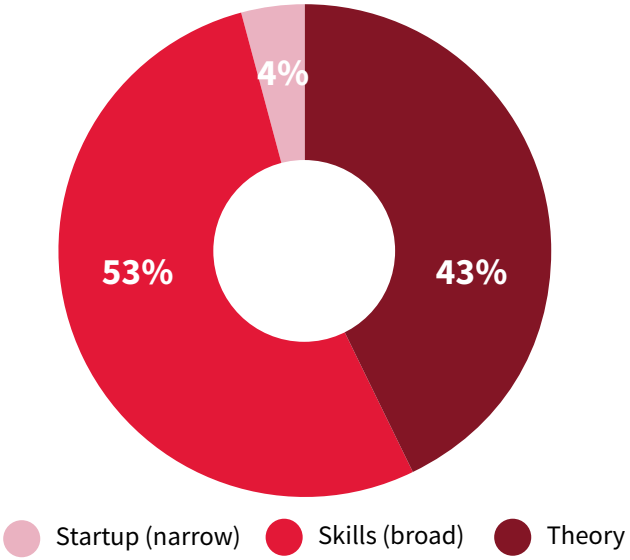
Distribution across Course / Program



Type of Entrepreneurship Education (Program-Level)



Types of Entrepreneurship Education (Course-Level)



4.2.3 Types of entrepreneurship education

As described in point 4.2.1, we identified four types of entrepreneurship education. This classification was based on the literature as well as our own insights from our data collection. As an important note, these types of education are not mutually exclusive and there are courses which fall into multiple categories.

The first type of entrepreneurship education, which we call “narrow entrepreneurship education”, refers to courses and programs whereby students create their own startup, and this includes – among others - registering at the chamber of commerce (KvK), selling their product and pitching at events. When distinguishing between courses versus programs offering the different types of entrepreneurship education, we see that this type of education takes place mostly as programs rather than courses. This makes sense, as the process of creating a business takes time. Of the 27 entrepreneurship programs in our database, eight can be classified as narrow entrepreneurship education, whereas only four courses can be classified as such. It is also interesting to note that there are entire entrepreneurship programs (minors, BSc, MSc, mbo 3 and 4) that do not explicitly encourage students to create a business, but rather focus on entrepreneurship or theoretical competencies.

For both programs and courses, more than half teach broad entrepreneurship education, which aims to develop entrepreneurial competencies, skills and attitudes among students. This second type of education typically includes live cases, assignments by companies and challenge-based education. Another significant proportion of courses and programs teaches entrepreneurial theories. This third type of entrepreneurship education typically involves paper-based education and is more prevalent in courses than in programs.

4.2.4 Other findings: sustainability and impact?

Considering many educational institutions' focus on *social impact* and *sustainability*, there is a surprisingly small number of courses and programs about entrepreneurship that explicitly focus on these themes. Out of 108 courses and programs, only ten (approximately 9 percent) explicitly mention concepts related to (social) impact and sustainability in their title, such as 'Post-Growth Entrepreneurship' (taught at the UvA) and 'Entrepreneurship for Society' (taught at the HvA). The proportion of courses and programs focusing on issues of sustainability and impact increases slightly when including courses found by using the search term 'innovation' (11 percent, or 16 out of 149 courses/programs). Although sustainability and impact are important and 'hot' topics, and often mentioned together with entrepreneurship, there seems to be a lack of translation into educational practice (the HvA Venture Centre being a positive exception here, offering plug in modules for sustainability oriented programs). This apparent gap between on the one hand the language used by educational institutions and on the other the education they offer present an area for further development.

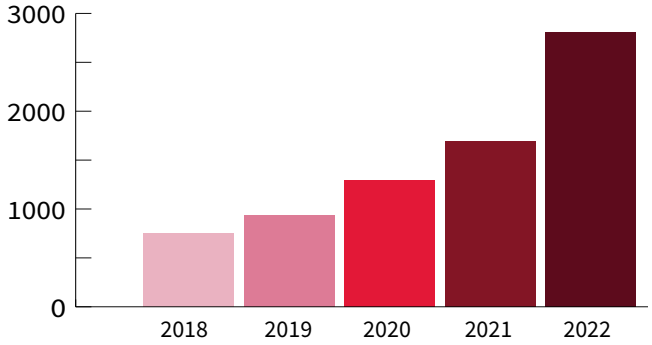
4.2.5 Trends in student numbers

Besides the number of entrepreneurship courses and programs and the distribution of entrepreneurship education over different levels of education an important measure for the impact of EE is the number of students that take these courses and programs. To collect data on these student numbers is not an easy task. Are we looking for students that register for courses and programs, students that follow or only students that pass the courses and programs in EE? For the collection of the data itself support at institutional level is required. This is an additional work to be carried out as the student number in EE are not part of the regular reporting on student data. Within the scope of this report, we decided to present the data on student numbers using the case of Vrije Universiteit Amsterdam.[1] The reason for this is that data for VU were collected by the data steward at institutional level as the data for other educational institutions were either not (yet) available or incomplete. We looked for numbers of students registered in courses, minors, and programs for the years 2019 – 2023.

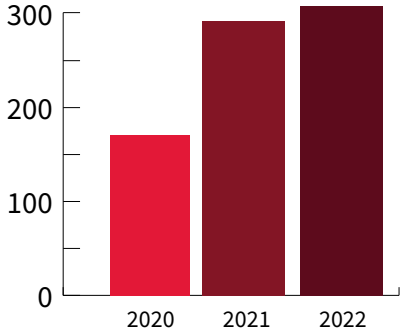
[1] *A special thanks to Drs. J.L. Geldof (Procesregisseur student- en onderwijsdata, Planning, Procesregie en Projecten, Student- & Onderwijszaken Vrije Universiteit) for collecting the data.*

Number of students EE Vrije Universiteit Amsterdam

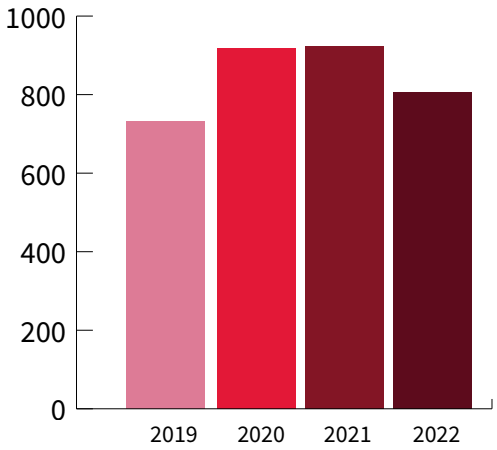
(a) EE courses



(b) EE minors



(c) EE Bachelor and master programs



We see a considerable increase at VU in number of students registered in courses; this is mainly due to new course initiatives in the field of digital innovation. An additional explanation for the changes in number of students registered for courses is administrative (registration at course level VU-UvA MSc Entrepreneurship). The growth of student numbers in EE minors is the effect of growing numbers in the minors Entrepreneurship (+100) and Digital Innovation (+40).

4.3 Non-accredited initiatives and supporting organisations from the ecosystem

In addition to formal accredited entrepreneurship education as described above, the knowledge institutions offer a wide range of non-accredited initiatives to support entrepreneurship. These initiatives are run at faculty level, university level or regional level. They are funded by the knowledge institutions but in many cases also as public-private partnerships.

The initiatives can be classified in different types of support as well as targeting different phases in the lifecycle of a company. Some programs focus on the "software": education of and support for entrepreneurs in the making (explore, demonstrate) and entrepreneurs who are building their startup (incubation, venture building). Other focus on the "hardware", such as the physical maker spaces and offices located at the individual campuses. In addition to this software and hardware, (seed) capital is also required for startups. To this end, the higher education institutions (UvA, VU, HvA), together with their holdings, have already created an almost complete pallet of angel, pre-seed and seed financing: Proof of Concept funds, Amsterdam Academic Angel Fund and Amsterdam Student Investment Fund, the Innovation Fund Noord-Holland and the investment opportunities of the holdings themselves.

Next to startup support (knowledge push inside out) we found several initiatives that support entrepreneurs (SME) in the region (knowledge pull outside in). There is a wide range of support programs and arrangements for SMEs, such as MKB Digital Workspace. Although there are some challenges regarding embedding such collaboration in education. Interviews en conversations with representatives from municipality Haarlem, MKB Amsterdam, Rabobank, Cupula, ROC Amsterdam, ROM in Noord-Holland, and projectleaders from INNNER, MKB Digital Workspace, MKB Innovatietraineeship suggest a two-sided perspective. On the one hand that it is not always clear for SME's which type of issue or which target group (sector, size, development phase) such supporting programs are intended. On the other hand an observation and question mark concerns that it is currently still somewhat challenging to get teachers and educators to participate in collaborative arrangement with SME's, although it is not yet completely clear why that is.

The overview on the following page shows the initiatives for non-accredited startup and SME support that are offered at the higher education knowledge institutions.

"We like to work with students to investigate a business opportunity that can be of added value to Findest, which is a great way to gain knowledge. At the same time, it is a great way for students to gain experience and develop entrepreneurial competences."

Roel Boekel | Co-founder at Findest

	Idea generation	***Validation***	***Early phase startup***	***Later phase startup***
	Revenue: **0** Product: **Idea** Focus: **Exploration** People: **1 person**	Revenue: **0** Product: **MVP** Focus: **Problem-Solution fit** People: **2 persons**	Revenue: **0-200k** Product: **Pilots** Focus: **Product-market fit** People: **3-5 persons**	Revenue: **200k-1M** Product: **Customers** Focus: **Business model fit** People: **5-20 persons**
Access to ***education and business support***	VU Startup launch INNOVATION EXCHANGE AMSTERDAM IXA 10K INCUBATOR ACE D-LAB AMSTERDAM			
Access to ***location and network***	BYB BUSINESS XXXL amsterdam science innovation awards 2021 by IXA Hogeschool van Amsterdam VENTURE CENTRE AMSTERDAM LAW HUB HUMANITIES LAB		STARTUP VILLAGE OPEN KITCHEN LABS VU | StartHUb	LAB42 Amsterdam health & technology center MATRIX innovationcenter
Access to ***capital***	AMSTERDAM ACADEMIC ANGEL FUND INNOVATION EXCHANGE AMSTERDAM IXA	asif ventures	INNOVATIEFONDS NOORD-HOLLAND Holdings VU, UvA, HvA, UMC	
Access to ***talent***	Amsterdam Living Case Lab MASTER CHALLENGE	MKB Digital Workspace		

Initiatives for non-accredited startup and SME support offered at the higher education knowledge institutions

5

Conclusion and recommendations

As our analysis shows, almost all (18 out of 21) of the education institutions we examined offer some kind of accredited entrepreneurship education course/program. Hence, entrepreneurship education is well represented in the institutions and ecosystem, the first key message of our report.

What is less clear, however, is the collaboration and exchange between institutions – our second key message. We see indication that coordination and synergy between institutions, but also between formal and non-formal entrepreneurship education within institutions, is lacking. Potential for economies of scale is visible. These institutions all belong to the same ecosystem, hence collaboration and exchange can also affect the functions and elements of the entrepreneurial ecosystem as a whole (Audretsch & Link, 2017; Stam & Van de Ven, 2021).

Entrepreneurship education in the Noord-Holland province has experienced significant growth over the past decade. Initially concentrated within business schools or business domains, it has gradually expanded to encompass various faculties and disciplines. Entrepreneurship education is very diverse – it is not only about starting a

business based on one's own idea, but also about learning entrepreneurial skills and developing entrepreneurial behaviour. Although this broad attention does not guarantee that students of every educational program are being made aware of the available entrepreneurship or of the possibility of having an entrepreneurial career in the future.

"The Amsterdam knowledge institutions already work closely with each other and with the local and regional government when it comes to knowledge valorisation. We do this under the flag of Impact & Entrepreneurship. There is certainly room for entrepreneurship education to join this partnership."

Mirjam van Praag | president Vrije Universiteit Amsterdam

Today, entrepreneurship education is 'formal education' at almost all education institutions. Moreover, the institutions typically follow traditional accreditation, funding, and workload models, focused on traditional teaching formats and tasks such as lectures. This makes it difficult to fit in experience-based, practice-oriented entrepreneurship education, as a more non-traditional and often more intensive form of education, because it might require for example more intense coaching and mentoring (Kuratko et al., 2021), incubation of student projects (Block et al., 2023), and exchange with the local entrepreneurial ecosystem and its stakeholders (Audretsch & Link, 2017; Miller & Acs, 2017). Hence, our key message is that more efforts might be needed to integrate entrepreneurship education more fully into the education strategies and plans of the local institutions. This should also involve ongoing empirical evaluation of the effects of entrepreneurship education, for example to determine how it can increase entrepreneurial activity and "help students better identify their potential as entrepreneurs and improve the quality of entrepreneurship" (Eesley & Lee, 2021, p. 834).

Within entrepreneurship education there exist different connections and collaborations between the education institutions (e.g., entrepreneurship educators) and organizations and individuals (e.g., entrepreneurs, mentors) who contribute to education. The external network that this has created is significant but also fragmented.

Following our main conclusions from this study we recommend:

The results show that within the entrepreneurial education ecosystem there exist a fragmented network with different connections and collaborations between the educational institutions and external organizations who contribute to education. Moreover, entrepreneurship education is often not explicitly mentioned as part of the respective educational strategy. To integrate entrepreneurship education more fully at the ecosystem and institutional level, education institutions should explore more proactively, together with other local institutions, what elements and interventions might be shared or developed further. This could also involve local capacity building around educational standards and quality criteria for entrepreneurship research, including new development and updates in the field.

The results also show that educational institutions often provide entrepreneurship education in different knowl-

edge domains. This implies that there is a significant group of teachers involved. Instead of experimenting anew, explore whether how teachers might potentially be supported in their educational activities, for example through a teaching network or a training program.

More broadly, we see an important trend towards entrepreneurship and major social transitions. Both in the strategy of the educational institutions and among students. However, we do not yet see this trend fully reflected in the educational offer. This is a clear opportunity for entrepreneurship education to take center stage in the educational strategies, offers, and value propositions.

Moreover, entrepreneurship is not part of every educational program, implying that a selection of students might not be aware of, and exposed to, a possible entrepreneurial career track, therefore one might explore the potential of “learning cases” and other free formats to stimulate and raise awareness among students.

This could also involve joint campaigns to raise general awareness and provide background information about entrepreneurship and entrepreneurial careers.

We came across several initiatives that support entrepreneurs (SME) in the region. We see that there are challenges to get teachers and educators to participate in collaborative arrangement with SME’s regarding embedding this in education. We recommend to investigate if a case can be made for more and better collaboration between education institutes and SME’s in the province.

Finally, the results show that there is a range of non-accredited initiatives and supporting organisations in the ecosystem. A more intense knowledge exchange between the formal and informal entrepreneurship education might improve the quality of the entrepreneurial education ecosystem altogether, thereby unlocking the real potential of existing and future offers.

6 Bibliography

Audretsch, D. B., & Link, A. N. (Eds.). (2017). *Universities and the entrepreneurial ecosystem*. Edward Elgar Publishing.

Block, J. H., Halberstadt, J., Högsdal, N., Kuckertz, A., & Neergaard, H. (Eds.). (2023). *Progress in Entrepreneurship Education and Training: New Methods, Tools, and Lessons Learned from Practice*. Springer Nature.

Davidsson, P. (2004). *Researching entrepreneurship* (Vol. 5). New York: Springer.

Davidsson, P. and Gruenhagen, J. (2021). "Fulfilling the process promise: A review and agenda for new venture creation process research. Entrepreneurship", T*heory and Practice*, 45(5): 1083-1118.

Eesley, C. E., & Lee, Y. S. (2021). Do university entrepreneurship programs promote entrepreneurship?. *Strategic Management Journal*, *42*(4), 833-861.

European Commission. (2015). Entrepreneurship Education: A road to success. A compilation of evidence on the impact of entrepreneurship education strategies and measures. Retrieved from this source.

Fayolle, A. (2018). Personal views on the future of entrepreneurship education. In *A research agenda for entrepreneurship education* (pp. 127-138). Edward Elgar Publishing.

Kassenboehmer, S. C., Leung, F., & Schurer, S. (2018). University education and non-cognitive skill development. *Oxford Economic Papers*, *70*(2), 538-562.

Kuratko, D. F., Neubert, E., & Marvel, M. R. (2021). Insights on the mentorship and coachability of entrepreneurs. *Business Horizons*, *64*(2), 199-209.

Looi, K. and Maritz, A. (2020). "Government institutions, entrepreneurship education and entrepreneurship education programmes in Malaysia", *Education and Training.*

Maritz, A., Nguyen, Q. and Bliemel, M. (2019). "Boom or bust? Embedding entrepreneurship in education in Australia", *Education and Training.*

Maritz, A. Nguyen, Q., Shrivastava, A. and Ivanov, S. (2022). "University accelerators and entrepreneurship education in Australia: substantive and symbolic motives", *Education and Training*.

Miller, D. J., & Acs, Z. J. (2017). The campus as entrepreneurial ecosystem: the University of Chicago. *Small Business Economics*, *49*, 75-95.

Obschonka, M., Hakkarainen, K., Lonka, K., & Salmela-Aro, K. (2017). Entrepreneurship as a twenty-first century skill: entrepreneurial alertness and intention in the transition to adulthood. *Small Business Economics*, *48*, 487-501.

Shane, S., & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of Management Review, 25*(1), 217-226

Quality Assurance Agency (QAA) (2018). Enterprise and Entrepreneurship Education: Guidance for UK Higher Education Providers. Retrieved from this source.

Stam, E., & Van de Ven, A. (2021). Entrepreneurial ecosystem elements. *Small Business Economics*, *56*, 809-832.

World Economic Forum. (2009). E*ducating the next wave of entrepreneurs: Unlocking entrepreneurial capabilities to meet the global challenges of the 21st century*. Geneva, Switzerland: World Economic Forum.

Kamerbrief Innovatie en Impact. (November 2022).

Een nieuw samenspel van innoveren, werken en leren? (April 2023). NWO, SIA, Topsectoren.