



GAP ANALYSIS



Developing Entrepreneurship and Innovation Minor Programmes in European Research Area

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ENOVA Gap Analysis

Introduction / Background

The main aim of the ENOVA project is to develop a minor course module on entrepreneurship and innovation management which targets higher education students particularly who have backgrounds from diverse departments, faculties and departments such as engineering, business, economics, fine arts, architecture, etc. who have career-plans as entrepreneurs. The program will be designed as a one semester course; in other words, it will have a course-load of 42 hours over 14 weeks. Departing from the question how an effective entrepreneurship and innovation management course for a multi-disciplinary study target group could be developed without falling into clichés and educational inertia, a needs analysis has been conducted and the present gap analysis report was produced in cooperation with universities and practitioners from the business world from each project partners' countries of Turkey, Germany, Slovenia, and Austria.

ENOVA falls into line with the EU Education and Training 2020 Strategy that aims to achieve "creativity and innovation, including entrepreneurship, at all levels of education and training". In particular, the "Agenda for the Modernization of Europe's Higher Education Systems" from 2011 also encourages the development of new curriculums and courses for current and emerging labor market needs which foster employability and entrepreneurship. If the main outcomes of entrepreneurship courses are to produce entrepreneurial and innovative ideas that allow to generate real enterprise growth and wealth, the challenge for educators is to craft courses and programs that meet the requirements of academia for rigor while at the same time keeping a reality-based focus and entrepreneurial climate in the learning experience environment. In many universities, especially in business schools, standardized educational materials, static teaching techniques, creativity killing classroom settings contravene the crucial need for well-designed entrepreneurship education for diverse expectations. In addition to this, the existing courses are designed without explicitly taking into consideration the needs of the business world and expected qualifications of university graduates. Consequently, the existing courses do not provide graduates with relevant entrepreneurial skills and competences with successful innovative results.

Therefore, education of entrepreneurship and innovation needs to be harmonized with markets' and businessmen's expectations; it should not be just a trend or a bait to attract students to a specific program or university. This reality indicates that universities bear a tremendous responsibility to design purposeful and effective entrepreneurship education in order to meet market and society's problems, realities and expectations. However, it is observed that the needs and expected qualified outcomes of the business world do not necessarily match with the gained qualifications of university graduates for effective entrepreneurship and innovation. If universities are considered as one of the leading institutions which help creating value both to individual and to social units by providing knowledge, ability and capability to the students, then entrepreneurship and innovation education should be designed in line with the proper needs of the market within a multi-disciplinary focus by taking into consideration the perspective of practitioners from different economic, social, and cultural contexts.

Consequently, to identify the needs and expectations of industry and current academics expectations with regard to a curriculum in entrepreneurship and innovation, two surveys have been designed. In the subsequent paragraphs, we will illustrate the process of data collection and report our results with respect to three important subareas of a general curriculum in entrepreneurship and innovation, i.e. a) individual entrepreneurship and startups, b) intrapreneurship and corporate entrepreneurship, and c) innovation and new product development. We will conclude this report with some concise remarks on how our results should be taken into account when developing a curriculum on entrepreneurship and innovation.

Data Collection

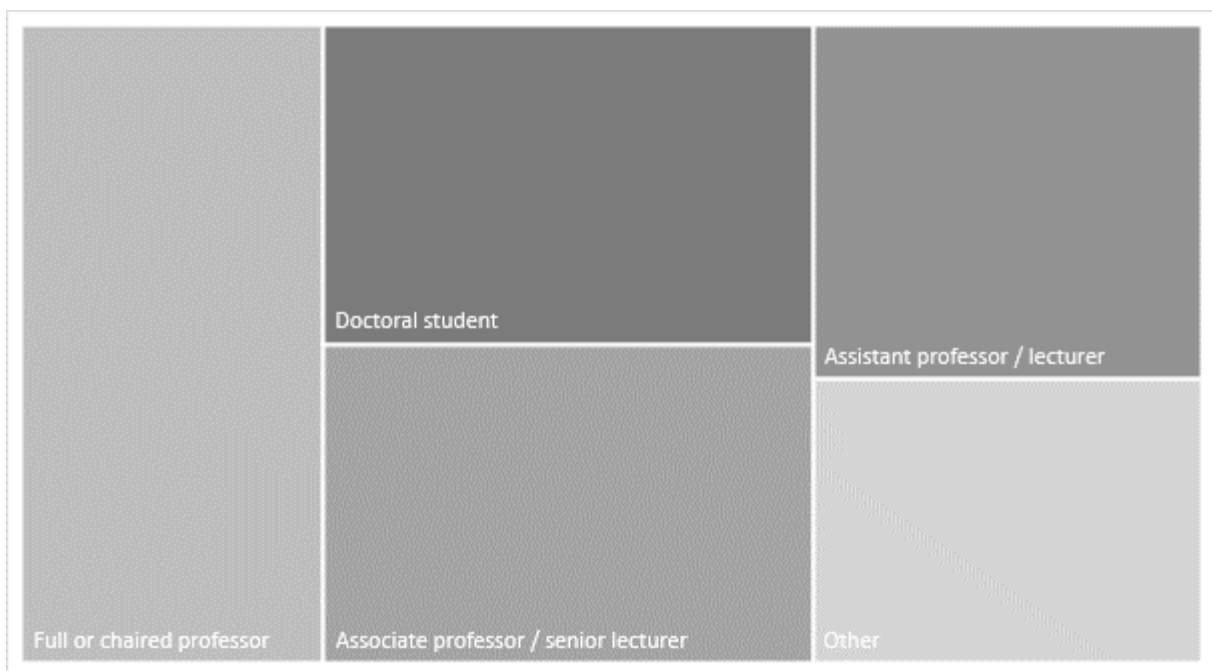
In order to identify important topics in entrepreneurship and innovation that should be included in a curriculum, a number of parallel online surveys with entrepreneurs and academics were developed. By surveying these two different groups, we are able to determine a) the most important topics with high practical relevance while at the same time we can be sure to include b) theoretically justified and accepted information in the curriculum. Moreover, comparing academics' and practitioners' perceptions allows to uncover gaps and different levels of importance that go along with the different topics. All respondents were confronted with a list of initial topics

whose suitability for inclusion in the curriculum they had to rate. Moreover, there was the opportunity as well to suggest additional topics.

Academic respondents were identified via a database compiled by one of the researchers that includes approximately 3.000 researchers worldwide who have a proven track record in publishing on entrepreneurship and innovation. A fraction of this database was invited to participate in the survey and we closed data collection at the point when we had secured 82 complete academic cases.

Participating academics have sufficient experience to provide valuable answers – on average, they have been working on entrepreneurship and/or innovation for 10.96 years (SD=8.14). The majority of the respondents is primarily familiar with entrepreneurship (72.0 percent) whereas the remaining 28 percent of respondents has their primary area of interest in innovation and/or small business. Considering the academic rank of the respondents (Figure 1), it becomes clear that the sample is dominated by researchers at the professorial level, indicating once again sufficient experience to provide valuable information.

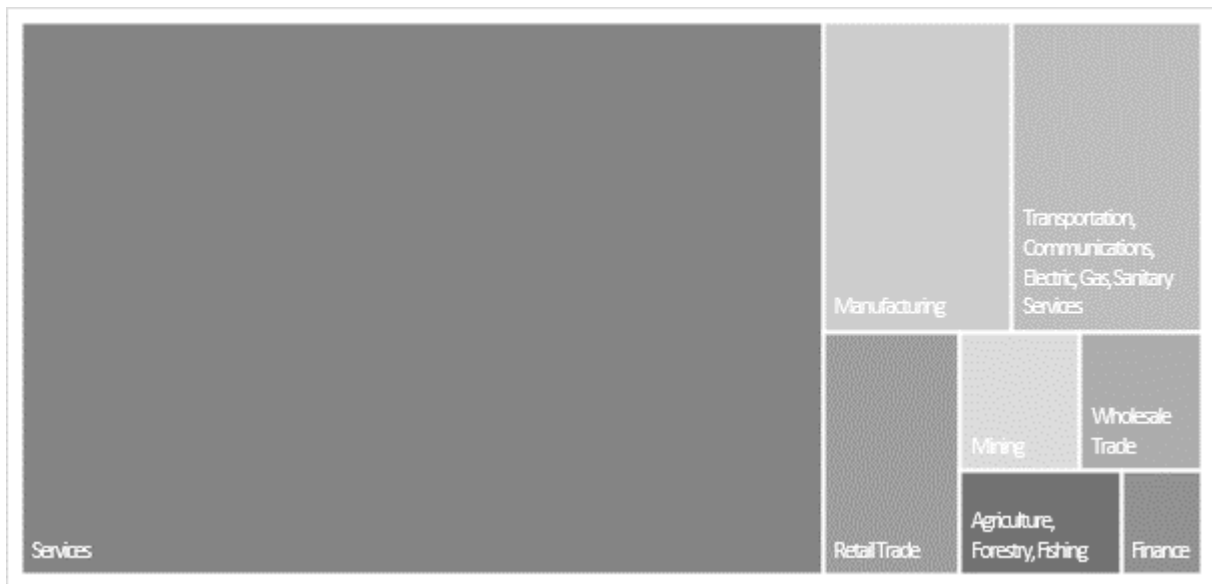
Figure 1. Academic Ranks of the Participating Researchers



All in all, 78 entrepreneurs from four different countries provided complete answers to the questionnaire. Participating entrepreneurs originate from Germany (n=19; 24.4 percent of the combined sample), Turkey (n=17; 21.9 percent of the combined sample), Slovenia (n=15; 19.2 percent of the combined sample) and Austria (n=27; 34.6 percent of the combined sample). These entrepreneurs are sufficiently experienced in operating their firms; on average, they have been self-employed for 8.03 years (SD=7.39) and are responsible for 50.05 employees (SD=132.9). They are thus able to provide valuable information from an applied perspective.

Figure 2 reveals that the sample is dominated by entrepreneurs being active in service industries. According to the Standard Industrial Classification, 67.9 percent are service firms, 9 percent are active in manufacturing or communications, electric, gas and sanitary services, respectively, 5.1 percent in retail trade, whereas the remaining 9.1 percent are firms in mining, wholesale trade, finance and insurance, and agriculture.

Figure 2. Industries of Entrepreneurs Participating in the Survey - Standard Industrial Classification



Topics in Individual Entrepreneurship and Startups

Step 1: Ranking Topics and Comparing Academics' and Practitioners' Perspectives

Industry respondents and academic respondents ranked 20 suggested topics in "Individual Entrepreneurship and Startups" in terms of their perceived importance. Table 1 summarizes the main results.

Table 1. Importance of Topics and Gaps between Academic and Industry Perception of Importance for the Topical Areas of "Individual Entrepreneurship and Startups".

	Topic	Academics (n=82)		Industry (n=78)		Academics vs. Industry
		Mean	SD	Mean	SD	
1.	The entrepreneurial personality	4.34	1.80	5.35	1.72	-1.01***
2.	Entrepreneurial teams	5.44	1.50	5.35	1.45	.09
3.	Entrepreneurial opportunities	5.63	1.54	5.56	1.30	.07
4.	Business ideas	5.87	1.37	5.79	1.51	.08
5.	The entrepreneurial process	5.70	1.62	5.10	1.47	.60*
6.	Business planning	5.48	1.60	5.27	1.70	.21
7.	Crowdfunding for start-ups	4.09	1.54	4.10	1.70	-.01
8.	Business angels	4.46	1.43	4.38	1.61	.08
9.	Venture Capital	4.87	1.68	4.38	1.51	.49†
10.	Financing strategies	5.88	1.14	5.21	1.46	.67***
11.	Acquiring human resources	5.12	1.37	4.79	1.73	.33
12.	Entrepreneurial marketing	5.30	1.46	5.36	1.43	-.06
13.	Social capital and networks	5.62	1.52	5.13	1.62	.49*
14.	Market research for startups	5.46	1.51	5.58	1.68	-.12
15.	Startup branding	4.66	1.47	4.74	1.55	-.08
16.	Pricing strategies for startups	4.88	1.44	5.09	1.35	-.21
17.	Entrepreneurial sales	5.11	1.53	5.31	1.49	-.20
18.	Public relations for startups	4.13	1.57	5.03	1.49	-.90***
19.	Investor marketing	4.16	1.56	4.44	1.64	-.28
20.	Entrepreneurial marketing controlling	4.13	1.52	4.53	1.53	-.40

† p < 0.1; * p < 0.05; *** p < 0.001.

The most important topics (Table 1) for a curriculum in "Individual Entrepreneurship and Startups" from an academic perspective are

1. financing strategies,
2. business ideas,
3. the entrepreneurial process,
4. entrepreneurial opportunities, and
5. social capital and networks for entrepreneurs.

On the other hand, the five most important topics for a curriculum in “Individual Entrepreneurship and Startups” from an entrepreneur’s perspective are

1. business ideas,
2. market research for startups,
3. entrepreneurial opportunities,
4. entrepreneurial marketing, and
5. entrepreneurial teams.

Significant gaps between academics and entrepreneurs exist as well. Entrepreneurs deem especially two topics significantly more important than academics, which are

1. public relations for startups, and
2. the entrepreneurial personality.

On the other hand, three topics are considered significantly more important from an academic perspective. These topics are

1. the entrepreneurial process,
2. financing strategies, and
3. social capital and networks.

Step 2: Additional Topics that were suggested

Respondents had the opportunity to name topics that they felt were missing in Step 1 of the exercise and which they considered important information in the ENOVA-curriculum. Figure 3 visualizes topics that were suggested by both academics and practitioners. The larger the topic in the tag cloud, the more often it was mentioned by respondents.

Figure 3. Tag cloud of Additional Topics Suggested for Individual Entrepreneurship and Startups (Academics and Practitioners Combined)



Step 3: Recommended Literature

In the academic survey we included an open question as well that gave respondents the chance to suggested appropriate literature that might be useful to develop the part on individual entrepreneurship and startups of the ENOVA-Curriculum. All in all, we received 33 suggestions for basic course literature:

- 1) Aulet, B. (2013). *Disciplined entrepreneurship: 24 steps to a successful startup*. John Wiley & Sons.
- 2) Baker, T., & Nelson, R. E. (2005). Creating something from nothing: Resource construction through entrepreneurial bricolage. *Administrative Science Quarterly*, 50(3), 329-366.

- 3) Baker, T., Miner, A. S., & Eesley, D. T. (2003). Improvising firms: Bricolage, account giving and improvisational competencies in the founding process. *Research Policy*, 32(2), 255-276.
- 4) Baron, R., & Shane, S. (2007). *Entrepreneurship: A process perspective*. Cengage Learning.
- 5) Bessant, J., & Tidd, J. (2007). *Innovation and entrepreneurship*. John Wiley & Sons.
- 6) Brandstätter, H. (1997). Becoming an entrepreneur - a question of personality structure? *Journal of Economic Psychology*, 18(2), 157-177.
- 7) Carland, H., Carland, J. W., & Hoy, F. (1988). Who is an entrepreneur? Is a question worth asking. *American Journal of Small Business*, 12(4), 33-39.
- 8) Cope, J. (2011). Entrepreneurial learning from failure: An interpretative phenomenological analysis. *Journal of Business Venturing*, 26(6), 604-623.
- 9) DeTienne, D. R. (2010). Entrepreneurial exit as a critical component of the entrepreneurial process: Theoretical development. *Journal of Business Venturing*, 25(2), 203-215.
- 10) Fisher, G. (2012). Effectuation, causation, and bricolage: a behavioral comparison of emerging theories in entrepreneurship research. *Entrepreneurship Theory and Practice*, 36(5), 1019-1051.
- 11) Fonseca, R., Lopez-Garcia, P., & Pissarides, C. A. (2001). Entrepreneurship, start-up costs and employment. *European Economic Review*, 45(4), 692-705.
- 12) Grace, R. K., & Brown, D. (1996). *Life values inventory*. Aviat Publishing.
- 13) Hite, J. M., & Hesterly, W. S. (2001). The evolution of firm networks: From emergence to early growth of the firm. *Strategic Management Journal*, 22(3), 275-286.
- 14) Jack, S. L., & Anderson, A. R. (2002). The effects of embeddedness on the entrepreneurial process. *Journal of Business Venturing*, 17(5), 467-487.
- 15) Kim, W. C., & Mauborgne, R. (2005). Blue ocean strategy: From Theory to Practice. *California Management Review*, 47(3), 105-122.
- 16) Klyver, K., & Ewald, M. R. (2012). *Entrepreneurship in theory and practice: Paradoxes in Play*. Edward Elgar Publishing.
- 17) Kuratko, D. F., & Hornsby, J. S. (2009). *New Venture Management: The Entrepreneur's Roadmap*. Pearson Prentice Hall.
- 18) Lumpkin, G. T., & Dess, G. G. (1996). Clarifying the entrepreneurial orientation construct and linking it to performance. *Academy of Management Review*, 21(1), 135-172.
- 19) MacMillan, I. C., Siegel, R., & Narasimha, P. S. (1985). Criteria used by venture capitalists to evaluate new venture proposals. *Journal of Business Venturing*, 1(1), 119-128.
- 20) Mazzucato, M. (2013). *The entrepreneurial state: Debunking public vs. private sector myths*. Anthem Press.
- 21) Morris, M. H., Webb, J. W., Fu, J., & Singhal, S. (2013). A Competency-Based Perspective on Entrepreneurship Education: Conceptual and Empirical Insights. *Journal of Small Business Management*, 51(3), 352-369.
- 22) Neck, H. M., Greene, P. G., & Brush, C. G. (Eds.). (2014). *Teaching entrepreneurship: A practice-based approach*. Edward Elgar Publishing.
- 23) Osterwalder, A., & Pigneur, Y. (2010). *Business model generation: a handbook for visionaries, game changers, and challengers*. John Wiley & Sons.
- 24) Osterwalder, A., Pigneur, Y., & Tucci, C. L. (2005). Clarifying business models: Origins, present, and future of the concept. *Communications of the association for Information Systems*, 16(1), 1-38.
- 25) Randolph-Seng, B., Mitchell, R. K., Vahidnia, H., Mitchell, J. R., Chen, S., & Statzer, J. (2015). The Microfoundations of Entrepreneurial Cognition Research: Toward an Integrative Approach. *Foundations and Trends (R) in Entrepreneurship*, 11(4), 207-335.
- 26) Ries, E. (2011). *The lean startup: How today's entrepreneurs use continuous innovation to create radically successful businesses*. Random House.
- 27) Ruef, M., Aldrich, H. E., & Carter, N. M. (2003). The structure of founding teams: Homophily, strong ties, and isolation among US entrepreneurs. *American Sociological Review*, 68(2), 195-222.
- 28) Shane, S. A. (2008). *The illusions of entrepreneurship: The costly myths that entrepreneurs, investors, and policy makers live by*. Yale University Press.
- 29) Shepherd, D. A. (2003). Learning from business failure: Propositions of grief recovery for the self-employed. *Academy of Management Review*, 28(2), 318-328.
- 30) Sørensen, H. E. (2012). *Business Development: a market-oriented perspective*. John Wiley & Sons.

- 31) Welsh, D. H. (2014). *Creative cross-disciplinary entrepreneurship: A practical guide for a Campus-wide program*. Palgrave Macmillan.
- 32) Wood, J. (2006). *Leaving Microsoft to change the world*. Harper Collins.
- 33) Zhao, Y. L., Libaers, D., & Song, M. (2015). First Product Success: A Mediated Moderating Model of Resources, Founding Team Startup Experience, and Product-Positioning Strategy. *Journal of Product Innovation Management*, 32(3), 441-458.

Topics in Intrapreneurship and Corporate Entrepreneurship

Step 1: Ranking Topics and Comparing Academics' and Practitioners' Perspectives

Industry respondents and academic respondents ranked 11 suggested topics in "Intrapreneurship and Corporate Entrepreneurship" in terms of their perceived importance. Table 2 summarizes the main results.

Table 2. Importance of Topics and Gaps between Academic and Industry Perception of Importance for the Topical Area of "Intrapreneurship and Corporate Entrepreneurship".

Topic	Academics (n=82)		Industry (n=78)		Academics vs. Industry
	Mean	SD	Mean	SD	
1. Managing growth	5.10	1.62	4.90	1.56	.20
2. Open innovation	5.18	1.63	5.47	1.37	-.29
3. Intrapreneurs and champions of innovation	5.12	1.77	4.90	1.54	.23
4. Entrepreneurship in established corporations	5.26	1.54	5.05	1.51	.21
5. Strategies for entrepreneurship in established corporations	5.40	1.60	5.01	1.55	.39
6. Organizational structures for entrepreneurship in established corporations	5.10	1.58	5.13	1.55	-.03
7. The entrepreneurial organizational culture	5.41	1.52	5.47	1.32	-.06
8. Corporate Venture Capital	4.49	1.64	4.45	1.44	.04
9. Performance measurement of entrepreneurship in established corporations	4.74	1.52	4.68	1.54	.06
10. Entrepreneurial marketing in established corporations	4.32	1.56	4.49	1.51	-.17
11. Competitive analysis	5.30	1.62	4.92	1.51	.38

The most important topics (Table 2) for a curriculum in "Intrapreneurship and Corporate Entrepreneurship" from an academic perspective are

1. the entrepreneurial organizational culture,
2. strategies for entrepreneurship in established corporations,
3. competitive analysis,
4. entrepreneurship in established organizations, and
5. open innovation.

On the other hand, the five most important topics for a curriculum in "Intrapreneurship and Corporate Entrepreneurship" from an entrepreneur's perspective are

1. the entrepreneurial organizational culture,
2. open innovation,
3. organizational structures for entrepreneurship in established organizations,
4. entrepreneurship in established organizations, and
5. strategies for entrepreneurship in established corporations.

Comparing the ratings from industry and academia returned no statistically significant gaps.

Step 2: Additional Topics that were suggested

Again, respondents were provided with the opportunity to indicate which topics they felt were missing, now with respect to the “Intrapreneurship and Corporate Entrepreneurship” part of the ENOVA-curriculum. The tag cloud in Figure 4 illustrates those topics that were mentioned by both academics and practitioners. The larger the topic in the tag cloud, the more often it was mentioned by respondents.

Figure 4. Tag cloud of Additional Topics Suggested for Intrapreneurship and Corporate Entrepreneurship (Academics and Practitioners Combined)



Step 3: Recommended Literature

Again, in the academic survey we included an open question as well that gave respondents the chance to suggest appropriate literature that might be useful to develop the part on intrapreneurship and corporate entrepreneurship of the ENOVA-Curriculum. For this topical area, we received a total of 23 suggestions for basic course literature:

- 1) Antoncic, B., & Hisrich, R. D. (2003). Clarifying the intrapreneurship concept. *Journal of small Business and Enterprise Development*, 10(1), 7-24.
- 2) Block, Z. (1995). *Corporate venturing: Creating new businesses within the firm*. Harvard Business Press.
- 3) Burgelman, R. A. (1983). A process model of internal corporate venturing in the diversified major firm. *Administrative Science Quarterly*, 28(2), 223-244.
- 4) Burns, T. E., & Stalker, G. M. (1961). *The management of innovation*. University of Illinois at Urbana-Champaign's Academy for Entrepreneurial Leadership Historical Research Reference in Entrepreneurship.
- 5) Christensen, C. (2013). *The innovator's dilemma: when new technologies cause great firms to fail*. Harvard Business Review Press.
- 6) Covin, J. G., & Lumpkin, G. T. (2011). Entrepreneurial orientation theory and research: Reflections on a needed construct. *Entrepreneurship Theory and Practice*, 35(5), 855-872.
- 7) Covin, J. G., & Slevin, D. P. (1989). Strategic management of small firms in hostile and benign environments. *Strategic Management Journal*, 10(1), 75-87.
- 8) Covin, J. G., & Wales, W. J. (2012). The measurement of entrepreneurial orientation. *Entrepreneurship Theory and Practice*, 36(4), 677-702.
- 9) Desouza, K. C. (2011). *Intrapreneurship: managing ideas within your organization*. University of Toronto Press.
- 10) Dushnitsky, G., & Lenox, M. J. (2005). When do incumbents learn from entrepreneurial ventures? Corporate venture capital and investing firm innovation rates. *Research Policy*, 34(5), 615-639.
- 11) Dushnitsky, G., & Lenox, M. J. (2006). When does corporate venture capital investment create firm value? *Journal of Business Venturing*, 21(6), 753-772.
- 12) Dushnitsky, G., & Shaver, J. M. (2009). Limitations to interorganizational knowledge acquisition: the paradox of corporate venture capital. *Strategic Management Journal*, 30(10), 1045-1064.
- 13) Gailly, B. (2010). *Developing innovative organizations: a roadmap to boost your innovation potential*. Palgrave Macmillan.
- 14) Hamel, G. (1996). Strategy as revolution. *Harvard Business Review*, 74(4), 69-71.
- 15) Harrison-Walker, L. J., & Neeley, S. E. (2004). Customer relationship building on the internet in B2B marketing: a proposed typology. *Journal of Marketing Theory and Practice*, 12(1), 19-35.

- 16) Hisrich, R. & Kearney, C. (2011). Corporate Entrepreneurship: How to create an entrepreneurial spirit throughout your company. McGraw Hill.
- 17) Hisrich, R. D. (1990). Entrepreneurship/intrapreneurship. *American Psychologist*, 45(2), 209-222.
- 18) Isaacson, W. (2011). *Steve Jobs*. JC Lattès.
- 19) Kamuriwo, D. S., & Baden-Fuller, C. (2014). Sparrow Therapeutics Exit Strategy. *Entrepreneurship Theory and Practice*, 38(3), 691-708.
- 20) Knight, G. A. (2001). Entrepreneurship and strategy in the international SME. *Journal of International Management*, 7(3), 155-171.
- 21) Morris, M., Kuratko, D., & Covin, J. (2010). *Corporate entrepreneurship & innovation*. Cengage Learning.
- 22) Schilling, M. A. (2005). *Strategic management of technological innovation*. McGraw-Hill.
- 23) Tidd, J., Pavitt, K., & Bessant, J. (2001). *Managing innovation*. John Wiley & Sons.

Topics in Innovation and New Product Development

Step 1: Ranking Topics and Comparing Academics' and Practitioners' Perspectives

Industry respondents and academic respondents ranked 14 suggested topics in "Innovation and New Product Development" in terms of their perceived importance. Table 3 summarizes the main results.

Table 3. Importance of Topics and Gaps between Academic and Industry Perception of Importance for the Topical Area of "Innovation and New Product Development".

	Topic	Academics (n=82)		Industry (n=78)		Academics vs. Industry
		Mean	SD	Mean	SD	
1.	Business model innovation	5.62	1.41	5.71	1.23	-.08
2.	Business model canvas	5.06	1.79	5.31	1.45	-.28
3.	Creating new markets	5.46	1.43	5.86	.92	-.40*
4.	Innovative approaches to marketing	4.89	1.48	5.17	1.40	-.28
5.	Lean startup approach	5.11	1.76	5.13	1.56	-.02
6.	Characteristics and types of innovation	5.01	1.61	4.81	1.74	.21
7.	Project cycle: value proposition, resource planning & time management	4.91	1.68	5.42	1.39	-.51*
8.	New product development and marketing	5.46	1.53	5.77	1.16	-.31
9.	Types of innovation networks	4.91	1.53	5.00	1.50	-.09
10.	Financing innovation	5.24	1.52	5.10	1.47	.14
11.	Marketing of innovation	5.01	1.60	5.17	1.43	-.15
12.	Human resource management policies to support innovation	4.79	1.51	4.91	1.56	-.12
13.	Protection of innovation and intellectual property rights	5.52	1.54	4.97	1.64	.55*
14.	Innovation audit	3.88	1.67	4.49	1.58	-.61*

* p < 0.05.

The most important topics (Table 3) for a curriculum in "Innovation and New Product Development" from an academic perspective are

1. business model innovation,
2. protection of innovation and intellectual property rights,
3. new product development and marketing,
4. creating new markets, and
5. financing innovation.

On the other hand, the five most important topics for a curriculum in "Innovation and New Product Development" from an entrepreneur's perspective are

1. creating new markets,

2. new product development and marketing,
3. business model innovation,
4. project cycle: value proposition, resource planning & time management, and
5. business model canvas.

Significant gaps between academics and entrepreneurs exist as well. Entrepreneurs deem especially three topics significantly more important than academics, which are

1. creating new markets,
2. project cycle: value proposition, resource planning & time management, and
3. innovation audit.

On the other hand, one topic is considered significantly more important from an academic perspective. This topic is

1. protection of innovation and intellectual property rights.

Step 2: Additional Topics that were suggested

As with the other topic areas, respondents had the opportunity to suggest potentially missing topics for “Innovation and New Product Development” as well. Figure 5 depicts the respective tag cloud combining the answers provided by academics and practitioners. Just as in the preceding figures, the larger the topic in the tag cloud, the more often it was mentioned by respondents.

Figure 5. Tag cloud of Additional Topics Suggested for Innovation and New Product Development (Academics and Practitioners Combined)



Step 3: Recommended Literature

Finally, academic respondents had the chance to suggest appropriate literature for the topical area of innovation and new product development. Here, we received 18 suggestions for basic course literature to be included in the ENOVA-curriculum:

- 1) Ahlstrom, D. (2010). Innovation and growth: How business contributes to society. *Academy of Management Perspectives*, 24(3), 11-24.
- 2) Berkun, S. (2010). *The Myths of Innovation*. O'Reilly.
- 3) Bloch, C. (2007). Assessing recent developments in innovation measurement: the third edition of the Oslo Manual. *Science and Public Policy*, 34(1), 23-34.
- 4) Bouncken, R. B., Pesch, R., & Kraus, S. (2015). SME innovativeness in buyer–seller alliances: effects of entry timing strategies and inter-organizational learning. *Review of Managerial Science*, 9(2), 361-384.
- 5) Carlile, P. R. (2002). A pragmatic view of knowledge and boundaries: Boundary objects in new product development. *Organization Science*, 13(4), 442-455.
- 6) Deeds, D. L., & Hill, C. W. (1996). Strategic alliances and the rate of new product development: an empirical study of entrepreneurial biotechnology firms. *Journal of Business Venturing*, 11(1), 41-55.

- 7) Füller, J., Bartl, M., Ernst, H., & Mühlbacher, H. (2006). Community based innovation: How to integrate members of virtual communities into new product development. *Electronic Commerce Research*, 6(1), 57-73.
- 8) Gailly, B. (2010). *Developing innovative organizations: a roadmap to boost your innovation potential*. Palgrave Macmillan.
- 9) Hisrich, R. D., & Kearney, C. (2013). *Managing innovation and entrepreneurship*. Sage Publications.
- 10) Nakata, C., & Sivakumar, K. (1996). National culture and new product development: An integrative review. *The Journal of Marketing*, 60(1), 61-72.
- 11) Nonaka, I., & Takeuchi, H. (1995). *The knowledge-creating company: How Japanese companies create the dynamics of innovation*. Oxford university press.
- 12) Osterwalder, A., & Pigneur, Y. (2010). *Business model generation: a handbook for visionaries, game changers, and challengers*. John Wiley & Sons.
- 13) Ries, E. (2011). *The lean startup: How today's entrepreneurs use continuous innovation to create radically successful businesses*. Random House.
- 14) Rogers, E. M. (2010). *Diffusion of innovations*. Simon and Schuster.
- 15) Schilling, M. A. (2005). *Strategic management of technological innovation*. McGraw-Hill.
- 16) Smith, D. (2010). *Exploring innovation*. McGraw-Hill Higher Education.
- 17) Takeuchi, H., & Nonaka, I. (1986). The new new product development game. *Harvard business review*, 64(1), 137-146.
- 18) Tidd, J., Pavitt, K., & Bessant, J. (2001). *Managing innovation*. John Wiley & Sons.

Conclusion

The results of this gap analysis can serve as a basis for the more fine-grained development of a curriculum in entrepreneurship and innovation. The gap analysis as such has turned out to be a valuable and informative exercise. While there seems to be consensus between academia and industry regarding the topical area of “intrapreneurship and corporate entrepreneurship”, marked differences in perceptions occurred in “individual entrepreneurship and startups” and “innovation and new product development”. Obviously, an academic curriculum cannot be dominated by practitioners’ recommendations alone. However, a future curriculum in entrepreneurship and innovation should acknowledge both perspectives, the academic and the industry perspective. In doing so, the curriculum will go beyond what is usually taught at institutions of higher education, while at the same time including the necessary and accepted approaches as well.