

Increasing Employability of Graduates

TINA GRUBER-MUECKE, NORBERT KAILER,
BERNHARD GRABNER, and CORNELIA STOEGLMUELLER
University of Linz, Austria

THIS EMPIRICAL PAPER attempts to shed light on the following question: Does entrepreneurial experience during undergraduate studies influence employability of graduates? The aim of our study was to examine this question in the context of career pathways of graduates of Junior Enterprises (JE). Data were collected from 980 graduates, 587 currently Active JE Members and 393 Former JE Members. The study has shown that the learning experience gained through working in a Junior Enterprise has an impact on the career development of university graduates. The learning and development aspect is also an interesting feature of the assessment procedure. The results seem to provide a good way to confront entrepreneurs with their own qualities and with areas for improvement and discussion. The results also indicate that the positive impact of the system of teaching and learning strategies in a Junior Enterprise on the development of basic skills and personal quality was stronger in Entrepreneurs than in Alumni.

INTRODUCTION

Entrepreneurial experience during undergraduate studies should have a twofold impact on career development: either the graduate decides to become self employed or to find an employment where he or she can implement intrapreneurial skills (Harris and Gibson 2008; Neugebauer 1997). Entrepreneurial thinking is therefore not only a driving force for job creation, competitiveness and growth, but it also contributes to personal fulfilment and the achievement of social objectives. On the one hand, major characteristics like initiative, risk and leadership resemble common basics of the theory of entrepreneurship. As Schmoller (1901) said: 'The one who takes the initiative, bearing risk under private law, is the entrepreneur; he/she is the centre and the

head of the enterprise.’ (Page 413, translation by authors.) Intrapreneurs on the other hand can be described with the words of Pinchot (1985) as ‘[...] any of the “dreamers who do.” Those who take hands-on responsibility for creating innovation of any kind within an organization. [74] They may be the creators or inventors but are always the dreamers who figure out how to turn an idea into a profitable reality.’ (Page 59.)

Junior Entrepreneurs are students who are working for a special kind of training firm, that tries to foster entrepreneurial thinking and acting, called Junior Enterprise. Despite operating in the regular market, Junior Enterprises unlike normal companies are non-profit organisations that are not exposed to all risks of the market. Normally there are few or no fixed costs and the Junior Enterprise office is located at university. This office is free of charge and there is no need for the Junior Enterprise or the Junior Entrepreneurs to generate a certain amount of turnover or profit. The fostering of entrepreneurial mindsets is one of the main objectives of the Junior Enterprise concept. Thereby students found their own company, and direct it until they finish their studies. The basic principles of a Junior Enterprise – entirely student-managed, non-profit, conducting projects to bridge the gap between university and business – have not changed since the first Junior Enterprise was set up in France, in 1967. Since then the concept of Junior Enterprise has spread not only all over France, but as well to other countries and nowadays even worldwide. In this framework, the purpose of this article is twofold:

- 1 To develop an operational measure of competence development that taps as closely as possible this theoretical construct.
- 2 To examine the validity and reliability of this measure in two well-defined populations, students and graduates of business schools.

CONCEPTUAL BACKGROUND

According to Holland (1985) the decision for a certain career path is built on two different sources. One source states the personality traits the child is born with and the second source includes the close environmental, especially family influences comprising input to the individual.



Holland describes the second source with the personal history everybody in this world has. He says, we are born with a certain animus and are influenced on from the very beginning, especially from our close environment, our family. Parents reward certain things and dismiss others whereby the child is oriented by this 'ranking' set up by the parents. Based on the animus and the parent's influence, children start to figure out about their passions and their aversions towards activities. In the future this nature develops, and by following the interest, particular competences arise and other potential competences become neglected. The alteration of a vague interest into a certain trait comes along with the development of a repertoire of skills and coping mechanisms, which include values as well as self-concepts (Holland 1985).

[75]

His research supports the Social-Cognitive Theory of Career and Academic Interests, Choice, and Performance (Lent, Brown, and Hackett 1994). This means that the expectations about performance in a given field direct interests, induce expenditure and persistence although in the face of obstacles, and thus, lead to experience. Applying this perspective to Holland's E-type, high expectations about entrepreneurial competence, or entrepreneurial self-efficacy, may be a sign of strong entrepreneurial interests and thus, entrepreneurial career prospects.

In following Holland's perspective, our study's attention is addressed to the personality traits, competences and the family of origin of the sample. Questioning the influence of the other key factor in our study, the special context in which our studied sample develops, the Junior Enterprises.

The Concept of Competence

The concept was first mentioned in the Latin language as *competens*, which means capable or qualified (Mulder 2001). In the eighteenth century competences were already implicitly written down in master-assistent learning outcomes. The word competences itself was first described by McClelland (1973) as: 'Components of performance in coherence with clusters of life outcomes.' Since then a lot of definitions of competence have been written down, but still no consensus about the concept has been reached.

[76] Two perspectives are influencing the choice of a definition of competence: an organizational perspective and an educational perspective. In organizational research about competences, the focus is on competences as performance (Swanson and Holton 2001; Kessels and Poell 2001). An example of an organizational definition of competences is: 'a competency is a combination of observable performance dimensions; under which are included individual knowledge, capabilities, attitudes and behaviour, but also collective team, process and organisational abilities, that are attached to higher performances and are giving the organisation a competitive advantage' (Arthey and Orth 1999).

Competences are expressions of behaviour and can be learned, in contrast to personality and intelligence which can't be learned (Delamare Le Deist and Winterton 2005). In an educational context this approach can be very useful, when competences are written down in more detail. The parts that build up a competency can be described and can be helpful by learning a complex competence, step by step (Toolsema 2003).

Measuring Competence Profiles

Competence profiles were created from two different points of view:

- 1 Self-assessment in 15 categories concerning specific skills and competences.
- 2 Learning experience within the JE by self-assessed improvement of the same 15 skills and competences.

The actual evaluation was done by 15 statements that could be rated within a six-point scale ranging from 'totally agree' to 'totally disagree':

- 1 I am good at dealing with people
- 2 I am good at organizing and planning
- 3 I can coordinate tasks
- 4 I have good writing skills
- 5 I can handle technical devices
- 6 I have good communication skills
- 7 I can advance my opinion
- 8 I am good at working together with different people



- 9 I am good at figures
- 10 I can develop alternative plans/scenarios
- 11 I can enthuse people for my ideas
- 12 I have good presentation skills
- 13 I am good at negotiating
- 14 I can delegate tasks to others
- 15 I am good at selling

[77]

Two hypotheses were tested in this study:

- H 1 *There are no significant differences in employability skills level among Junior Enterprise students and Junior Enterprise alumni.*
- H 2 *There are no differences in employability skills level among students of Junior Enterprise alumni and Entrepreneurs.*

METHODOLOGY

This is a descriptive study using a survey method. The scope concentrates on a total of approximately 20,000 people who were interviewed by e-mail for this survey. This sum includes Junior Entrepreneurs and Alumni of Junior Enterprises (JEs). The large number of interviewees is a criterion for a quantitative analysis instead of a qualitative analysis (Ilieva, Baron, and Healey 2002). According to the literature, the methodology used has a deep impact on the response rates of the survey and on the results (Solomon 2001). So, our web-based survey is a multi-form online survey. The respondents receive a link via e-mail and connect directly to the web site, which displays the questionnaire. The URL of the survey form is placed in a covering letter, allowing the respondent to subsequently fill out the questionnaire (Solomon 2001). The e-mails were sent out over the internal databases of the national confederation of each participating country of the JADE network. We consider the web-based survey to be also the best tool to reach the Alumni of the JADE network. Each JE collects the contact information of their former members, so the chance for reaching as many Alumni as possible is therefore the highest using a web-based questionnaire. The study is based on 980 valid responses, 587 of currently Active JE Members and 393 of Former JE Members.

TABLE 1 Distribution of field of studies of the whole sample (%)

Field of studies	Active JE members	Alumni employed	Alumni self-empl.
Business	44	63	49
Economics	9	12	14
Law	4	3	2
Engineering	24	16	16
IT	12	10	12
Medicine	0	0	2
Social sciences	8	6	5

[78]

The field of studies as another qualitative characteristic of the sample is illustrated in table 1. Business and Economics disciplines of the study made up 53 percent of the active Junior Entrepreneur sample, and 59 percent of the Alumni sample, and other study disciplines accounted for the remaining 47 percent, respectively 41 percent. By putting active and former member responses together, the study fields of Business and Economics count for 55 percent.

Almost 50% of the Alumni who are self-employed had previously studied Business, 16% Engineering, 14% Economics and 12% IT. There is a small number of self-employed coming from Law, Medicine and Social Sciences studies. Looking at the Alumni employed we have a similar picture of the study fields. However, compared to the Active JE Members, both groups score higher in studying Business and Economics; 12% more of Alumni employed and 10% more of Alumni self-employed. On the other hand, the rate of Active JE Members studying Engineering is 5% higher than that of the Alumni employed and self-employed, and counts 21%.

RESULTS

Working in a Junior Enterprise gives students the opportunity to test their skills and knowledge under market conditions and encourages them to prevail in a team. These are unique conditions that can not be experienced during a regular academic education. Therefore members of Junior Enterprise should benefit from their experience and enhance competences related to general management and social interaction. Depending on the product portfolio of the Junior Enterprise



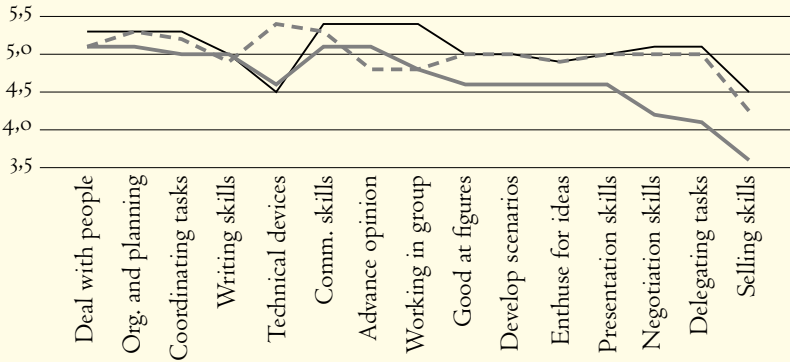


FIGURE 1 Competence profiles in comparison (self evaluated within a six-point Likert scale; black line – active JE, gray line – regular student, dashed gray line – student with entrepreneurial activity)

there could be additional benefits in special competences like figures or technical devices. However, most Junior Enterprise specialise rather in marketing than IT or engineering, so this is unlikely to be true for the whole sample. A first look at the data (figure 1) backs those assumptions, but we will analyse the results in more detail.

Hypothesis 1a

- H0 Junior Enterprise (JE) members do not have a higher competence profile than regular students.
- H1 Junior Enterprise (JE) members have a higher competence profile than regular students.

The results are highly significant and H0 can be rejected for all competences expect ‘Writing Skills’ and ‘Handling of Technical Devices’, where the skills of JE members actually are significantly lower than those of their fellow students. Especially selling skills, delegating tasks, presentation skills, advancing an opinion and group working skills are about ten percent above those of regular students.

Because of these big differences we will look at a second group of students that, like the junior entrepreneurs, has already shown entrepreneurial activities such as founding a company or being in the process of founding one. Basically those two groups are doing the same thing, but in a JE there is more support from the group and

TABLE 2 Competence profiles active JE Members and Regular Students (no entrepreneurial activity so far)

Competence	(1)	(2)	(3)	(4)	(5)	(6)
Dealing with people*	5.27	5.09	3.68%	0.59	0.60	0.000
Organizing and planning*	5.22	5.07	3.12%	0.66	0.86	0.000
Coordinating tasks*	5.18	4.98	4.13%	0.59	0.80	0.000
Writing skills†	4.83	4.98	-2.90%	1.07	0.95	0.000
Technical devices†	4.71	4.87	-3.04%	1.32	1.7	0.001
Communication skills*	5.27	4.87	8.09%	0.57	0.75	0.000
Advancing an opinion*	5.32	4.85	9.58%	0.52	0.82	0.000
Working in groups*	5.34	4.85	9.88%	0.52	0.98	0.000
Good at figures*	4.96	4.67	5.39%	1.03	1.47	0.000
Developing scenarios*	5.04	4.66	7.62%	0.65	0.85	0.000
Enthusiasm for ideas*	4.87	4.62	5.16%	0.84	0.93	0.000
Presentation skills*	5.10	4.58	10.60%	0.77	1.07	0.000
Negotiating skills*	4.58	4.26	6.57%	1.03	1.17	0.000
Delegating tasks*	4.65	4.14	10.18%	1.10	1.39	0.000
Selling skills*	4.48	3.83	13.19%	1.21	1.55	0.000

NOTES Column headings are as follows: (1) mean active JE members ($N = 587$), (2) mean regular students ($N = 8290$), (3) skill advantage, (4) variance active JE members, (5) variance regular students, (6) p -value. * JE member significantly higher, † JE member significantly lower.

the chance to learn from more experienced members. Therefore junior entrepreneurs should have at least some skill advantage compared to students regularly founding a company.

Hypothesis 1b

H0 *Junior Enterprise (JE) members do not have a higher competence profile than regular entrepreneurial students.*

H1 *Junior Enterprise (JE) members have a higher competence profile than regular entrepreneurial students.*

The results show that regular students who have already shown entrepreneurial activity are much closer to members of JES, but there are still highly significant differences. The entrepreneurial active students are able to close the gap at skills rather directly connected to

TABLE 3 Skill profiles of JE members and regular entrepreneurial students

Competence	(1)	(2)	(3)	(4)	(5)	(6)
Dealing with people*	5.27	5.07	3.99%	0.59	0.62	0.000
Organizing and planning	5.22	5.24	-0.36%	0.66	0.75	0.381
Coordinating tasks	5.18	5.17	0.25%	0.59	0.78	0.816
Writing skills†	4.83	4.99	-3.26%	1.07	1.01	0.003
Technical devices†	4.71	5.25	-10.70%	1.32	1.04	0.000
Communication skills*	5.27	5.07	4.02%	0.57	0.67	0.000
Advancing an opinion*	5.32	5.10	4.50%	0.52	0.64	0.000
Working in groups*	5.34	4.89	9.02%	0.52	1.07	0.000
Good at figures	4.96	5.00	-0.76%	1.03	1.18	0.583
Developing scenarios	5.04	5.05	-0.12%	0.65	0.86	0.976
Enthusiasm for ideas	4.87	4.91	-0.84%	0.84	0.83	0.462
Presentation skills*	5.10	4.96	2.78%	0.77	0.92	0.004
Negotiating skills	4.58	4.54	0.77%	1.03	1.23	0.263
Delegating tasks*	4.65	4.34	6.16%	1.10	1.40	0.000
Selling skills*	4.48	4.25	4.59%	1.21	1.67	0.001

NOTES Column headings are as follows: (1) mean active JE members ($N = 587$), (2) mean students entrep. activity ($N = 567$), (3) skill advantage, (4) variance active JE members, (5) variance students entrep. activity, (6) p -value. * JE member significantly higher, † JE member significantly lower.

[81]

activities needed in order to found and manage a company, such as organizing, coordinating, figures, developing scenarios, enthusing for ideas and negotiating. However at competences more related to social interaction, such as dealing with people, communication, advancing opinions, working in groups, JE members still have a significant advantage. Moreover there are significant advantages at delegating and selling.

Interesting is the fact that the skill advantage is especially significant where social interaction is relevant. Taking into account that JEs are focused on team work, and compared to typical start-ups are rather large organisations, this result is a logical consequence.

Nevertheless, we want to take a closer look at the reasons for the observed differences between junior entrepreneurs and regular students. Possible factors for the skill advantage could be the learning



FIGURE 2 Comparison of skill advantage of JE members against regular students to self-evaluated skill improvement because of JE membership (both measured with a six-point Likert scale; for skill improvement 3,5 is the zero point on the scale; gray line – skill advantage JE, dashed gray line – skill improvement)

experience in the JE or differences in the samples, such as the field of study, sex or country of origin.

Hypothesis 2

- H0 *High skill advantage of Junior Enterprise Members is not positively related to the corresponding learning experience in the Junior Enterprise.*
- H1 *High skill advantage of Junior Enterprise Members is positively related to the corresponding learning experience in the Junior Enterprise.*

A first look at the data shows that the lines for skill advantages and skill improvement are corresponding to a certain degree, but we have to analyse the data in more detail for verifiable statements.

DISCUSSION AND FURTHER RESEARCH

This article has demonstrated that the learning experience gained through working in a Junior Enterprise has an impact on the career development of university graduates. The learning and development part is also an interesting feature of the assessment procedure. The results seem to provide a good way to confront entrepreneurs with their own qualities and with areas for improvement and discussion. Since it is a learning and development tool, and not a ‘test,’ it should also be



communicated in that way, not in terms of deficits, but in terms of areas for further improvement. Therefore it is important to know which competences the entrepreneurs themselves consider important for entrepreneurship in their own context. The present study gives a picture that the system, along with the teaching and learning strategy implemented in a Junior Enterprise, indirectly equips students with basic skills, thinking skills and resource management competence. The results also indicate that the system and teaching and learning strategies in a Junior Enterprise had a positive impact on development of basic skills and personal quality more strongly in Entrepreneurs than in Alumni. Judging by the result, it can be concluded that a Junior Enterprise in Europe has succeeded in equipping its students with adequate employability skills to enter the world of work.

[83]

The results on the whole indicate that students in a Junior Enterprise have acquired a slightly higher degree of employability skills during their education and training program. The System and teaching and learning strategies in a Junior Enterprise have equipped their students with skills needed for the current workplace environment, especially industrial sectors that need both technical as well as employability skills.

Since the impact for entrepreneurial learning concepts is such that we cannot say if either this group or the other group has a more entrepreneurial personality profile, we will compare in future studies JE Entrepreneurs with the Regular Entrepreneurial Students. We are going to compare competence profiles and personality profiles. JE Entrepreneurs should be more advanced in competences than regular Entrepreneurial Students, since JE Entrepreneurs are Alumni of JES, who made themselves self-employed after their studies, respectively, after a couple of years working for a company. On top of that they have the additional years of experience gained during the time at the JE. So, basically both groups are doing the same, working self-employed, with the difference being that JE Entrepreneurs have a couple of more years of experience. Concerning the personality profiles, the differences should not be too great, since both analysed sample groups show highly entrepreneurial activity.

The most important conclusion is that the Entrepreneur competence profile is reliable and valid and has been of great value for the

(starting) entrepreneurs for whom these competences are crucial. The theoretical recommendation is to conduct further research to determine the predictive validity.

[84]

REFERENCES

- Arthey, T. R., and M. S. Orth. 1999. Emerging competency methods for the future. *Human Resource Management* 38 (3): 215–26.
- Delamare Le Deist, F., and J. Winterton 2005. What is competence? *Human Resource Development International* 8 (1): 27–46.
- Harris, M. L., and S. G. Gibson. 2008. Examining the entrepreneurial attitudes of US business students. *Education + Training* 50 (7): 568–81.
- Holland, J. L. 1985. *Vocational preference inventory manual*. Odessa, FL: Psychological Assessment Resources.
- Ilieva, J., S. Baron, and N. M. Healey. 2002. Online surveys in marketing research: Pros and cons. *International Journal of Market Research* 44 (3): 361–76.
- Kessels, J. W. M., and R. F. Poell 2001. Andragogy and social capital theory: The implications for human resource development. *Advances in Developing Human Resources* 10 (10): 1–12.
- Lent, W. L., S. D. Brown, and G. Hackett. 1994. Toward a unifying social cognitive theory of career and academic interest, choice, and performance. *Journal of Vocational Behavior* 45:79–122.
- McClelland, D. C. 1973. *The achieving society*. New York: Free Press.
- Mulder, M. 2001. Competence development: some background thoughts. *The Journal of Agricultural Education and Extension* 7 (4): 147–58.
- Neugebauer, L. 1997. *Unternehmertum in der Unternehmung*. Göttingen: Vandenhoeck & Ruprecht.
- Pinchot III, G. 1985. *Intrapreneuring: Why you don't have to leave the company to become an entrepreneur*. New York: Harper & Row.
- Schmoller, G. 1901. *Grundriss der Allgemeinen Volkswirtschaftslehre*. Leipzig: Duncker und Humblot.
- Solomon, D. J. 2001. Conducting web-based surveys. *Practical Assessment Research and Evaluation* 7 (19). [Http://PARonline.net/getvn.asp?v=7&n=19](http://PARonline.net/getvn.asp?v=7&n=19).
- Swanson, R. A., and E. F. Holton. 2001. *Foundations of human resource development*. San Francisco: Berrett-Koehler.
- Toolsema, B. 2003. *Werken met competenties: Naar een instrument voor de identificatie van competenties*. Enschede: Ipskamp.

