



SCALES-paper N200215

# Learning in the business start-up process

Niels Bosma

Joris Meijaard

Gijs van Popta

Zoetermeer, October 2002

The SCALES-paper series is an electronic working paper series of EIM Business and Policy Research. The SCALES-initiative (Scientific Analysis of Entrepreneurship and SMEs) is part of the 'SMEs and Entrepreneurship' programme, financed by the Netherlands' Ministry of Economic Affairs. Complete information on this programme can be found at [www.eim.nl/smes-and-entrepreneurship](http://www.eim.nl/smes-and-entrepreneurship)

The papers in the SCALES-series report on ongoing research at EIM. The information in the papers may be (1) background material to regular EIM Research Reports, (2) papers presented at international academic conferences, (3) submissions under review at academic journals. The papers are directed at a research-oriented audience and intended to share knowledge and promote discussion on topics in the academic fields of small business economics and entrepreneurship research.

address: Italiëlaan 33  
mail address: P.O. Box 7001  
2701 AA Zoetermeer  
telephone: + 31 79 341 36 34  
telefax: + 31 79 341 50 24  
website: [www.eim.nl](http://www.eim.nl)

*The responsibility for the contents of this report lies with EIM. Quoting numbers or text in papers, essays and books is permitted only when the source is clearly mentioned. No part of this publication may be copied and/or published in any form or by any means, or stored in a retrieval system, without the prior written permission of EIM.*

*EIM does not accept responsibility for printing errors and/or other imperfections.*

## **ABSTRACT**

The start-up process is an important source for learning opportunities. The present study investigates different types of entrepreneurial learning in the start-up process. Combining contributions from psychology, sociology, organization and entrepreneurship literature, an appropriate conceptual framework emerges in which different types of entrepreneurial learning are distinguished. Based on this framework, and using panel data on start-up entrepreneurs, we rediscover this typology of entrepreneurial learning empirically for the Netherlands. In addition, the identified types are further analyzed to explore additional characteristics.

## INTRODUCTION

In the past decades it has become increasingly evident that entrepreneurship has major influence on the growth of employment, productivity and the level of innovation in an economy (e.g. Audretsch and Thurik, 1998). Throughout those years governments also formulated special policy focus on entrepreneurship, either through the removal of obstacles or by providing incentives to stimulate new business formation. This policy undoubtedly has had effects. In the Netherlands, for example, the annual number of start-ups increased from around 25,000 firms in 1987 to 60,000 in 2001<sup>1</sup>.

Today, entrepreneurs in the start-up phase (i.e. *nascent* entrepreneurs preparing a start-up, as well as entrepreneurs who recently started a business) form an important sector of our national economy. They create employment and personal and commercial flexibility. Many studies have been conducted on the different aspects of entrepreneurship<sup>2</sup>. Research has focused on various levels of entrepreneurship, reaching from micro to macro.

This study presents new information on entrepreneurial learning activity, analyzing, in sum, data on over 3,000 Dutch start-up and nascent entrepreneurs. We adopt a multidisciplinary viewpoint towards entrepreneurship. Psychology has contributed by studying personality and character traits of entrepreneurs. Sociology has contributed by studying societal and contextual influences on entrepreneurial behavior. Historical as well as anthropologic studies were conducted into entrepreneurial behavior. Economists mainly contributed by investigating the role of entrepreneurship in the economic system. Economic growth and technological development gain special attention in these studies.

Within economic theory, different approaches to studying entrepreneurship are possible. Classical economic theory presupposes perfect information and rational decision-making. Therefore, entrepreneurial functions like coordination, arbitrage, innovation and risk taking receive insufficient attention (Bhidé, 2000).

Microeconomics, agency theory, behavioral economics and other intermediate

---

<sup>1</sup> EZ/EIM, Ondernemerschapsmonitor, Winter 2001 (Entrepreneurship Monitor for the Netherlands, published quarterly)

<sup>2</sup> For the Netherlands, the annual publication "Entrepreneurship in the Netherlands" may serve as a good example (EIM/EZ, 1998, 1999, 2000, 2001), [www.eim.nl/smes-and-entrepreneurship](http://www.eim.nl/smes-and-entrepreneurship).

economic perspectives leave out important variables, but do provide additional, useful insights and tools for entrepreneurship research.

When studying entrepreneurial activity, a multidisciplinary, managerial approach could render a more encompassing theoretical framework. Management scholars are often focused on innovative activities and entrepreneurial functions. Entrepreneurial qualities like changing existing equilibria and creating new, disruptive activities are better assessed in these strands of research. Management scholars have paid much attention to the routines of large enterprises. This knowledge cannot be translated easily into understanding of new ventures. Nevertheless, of course, these theories provide an invaluable reference point for the empirical study of new businesses (Bhidé, 2000). Similar to Bhidé (2000), this study uses the multidisciplinary theories of business as its basis for studying entrepreneurship.

## **OBJECTIVE AND METHODOLOGY**

The objective of this study is to present new insights on entrepreneurial learning.

We start from the review of several key contributions to the learning and entrepreneurship literatures. The review of literature results in the presentation of a conceptual framework of the learning activities of business founders.

Subsequently, the framework and corresponding hypotheses are tested in two separate samples of Dutch business start-ups. The first sample contains data on about 2,000 business founders in 1994, the second sample contains data on over 1,000 business founders in 1998/1999. By examining these samples of questionnaire data, at two different moments, in different economic circumstances, we expect to be able to make a statement on the development of the distinguished learning typologies. In any case, the analysis leads to conclusions on the hypotheses as presented within the framework.

## **LEVEL OF ANALYSIS**

In this study we define *entrepreneurs* in line with Bhidé (2000) as “individuals who start their own business”. Through the years theorists have attributed various

functions to the entrepreneur. Thurik and van Dijk (1998) summed up the most important of these, as presented in Table 1. The overview shows the various dimensions in the economic perspective. It presents functions in the behavior of entrepreneurs, according to the most prominent economic contributions. Multiplisciplinary business theories distinguish additional functions. Psychology theory deals with character traits of entrepreneurs. Sociology theory analyzes external factors influencing the processes the entrepreneur experiences.

It should be acknowledged that studying entrepreneurial learning is essentially a multi-level topic. It involves both people and organizations. Entrepreneurs learn and contribute to organizational structures, meanings, and contexts. That contribution constitutes organizational learning, once the venture includes more than one individual. Organizations provide structures and shared meanings, and contexts for action and communication in which, in turn, entrepreneurs and employees learn (Nooteboom, 2000: 121). Therefore, to understand learning at these different levels, it is necessary to choose the appropriate theories for the research at the levels.

**Table 1: Functions of Entrepreneurship (Based on: Thurik, and van Dijk, 1998)**

	Risk taker	Opportunity seeker	Source of capital	Starter of new ventures	Person ality	Profit making	Producti on factor	Mana -ger	Inno- vator
Cantillon	+++	++	+	o	-	++	+	o	o
Say	++	o	-	+	o	o	++	+++	++
Bentham	+	o	o	o	o	+++	o	++	+++
Thünen	+++	o	-	+	o	++	o	-	+++
Marshall	+	++	+++	o	o	++	o	+++	o
Menger	-	+	-	o	++	++	o	++	o
Knight	+++	o	-	o	o	+++	o	-	+
Schumpeter	-	+	-	o	++	+	o	-	+++
	-	:	Aspect explicitly excluded						
	o	:	Aspect not included						
	+	:	Aspect implicitly included						
	++	:	Aspect explicitly included						
	+++	:	Aspect is essential to the theory						

Learning of individuals and organizations represent complex and sometimes substantially different learning processes. Nonetheless, they are closely related and intertwined. The entrepreneur and the organization go through varying stages of

development with varying characteristics. The role relative to each other is important. Individual and organizational learning processes develop and change through time, but not independently. Focusing on start-up activities, one might argue that in most cases the entrepreneur is a one-man organization. All activities, which he or she is involved in, can in this case be judged as individual processes. As soon as the entrepreneur involves other people in the start-up process, the learning activities become multileveled. Nonetheless, in many cases individual entrepreneurial learning is critically important in order to understand the dynamics of a business start-up.

In order to analyze the level of the entrepreneur, it is necessary to select the appropriate theories. Therefore, individual learning processes are selected. The theories of individual learning are rooted in the psychological theories on knowledge, intelligence and the development of the psyche. Obviously these considerations make the empirical researcher feel rather uneasy. If the interrelations between individual learning, social processes and the environment are indeed as blurred as this, one must make many considerable concessions in doing research. As a matter of fact we do. We take the (limited) perspective of the owner-founders as the relevant learning processes.

## **LEARNING: CONCEPTS, GENERIC MODES AND STYLES**

As point of departure, the present study takes on the so-called “situated action” perspective, originating from Swiss psychologist Jean Piaget (1896-1980). Situated action centers on the systematic development of knowledge also known as ‘experiential learning’. Early psychological discussions about intelligence and cognitive development were rooted in the “nature” viewpoint of the biological-maturation school and the “nurture” viewpoint of the environmental-learning school. Piaget points out that individuals constantly try to form equilibrium between themselves and their environment. If that equilibrium is disturbed, the individual will adapt and re-adapt to the environment. According to Piaget, there are two essential and closely interdependent sides to this, the affective and the cognitive, contrasting ‘feelings’ and ‘intelligence’. Regarding both, Piaget explains that they are not static, nor sharply differentiated. Intelligence represents the (structural) equilibrium of behavior. This is based on assimilation (adaptation) and accommodation. Assimilation concerns individual action in response to surrounding objects, in so far

as this action depends on previous behavior involving the same or similar objects. Accommodation, on the other hand, is the environment that acts on the individual. In this case, the individual never actually 'feels' or 'notices' the impact of surrounding stimuli as such. The stimuli modify the assimilatory cycle by accommodating the changes. Pressure of circumstances always leads, not to a passive submission to them, but to a (simple) modification of the action affecting them (Piaget, 1950: 9).

The individual is an active part of his/her environment, a participator. Learning consists of having information, skills and understanding, and an ability to determine what information, skills and understanding is relevant in a particular context. In a theory of situated action, learning is viewed as a situated activity that has a process called legitimate peripheral participation as its central characteristic (Lave & Wenger, 1991). Newcomers participate and learn in a community of practitioners. A required mastery of knowledge and skill induces newcomers to move from peripheral toward full participation in the socio-cultural practices of the community (Lave and Wenger, 1991: 29). This perspective takes into account the context in which learning takes place. The basic unit of analysis for situated action is therefore the activity of persons acting in setting. Agent, activity, and the world mutually constitute each other (Lave & Wenger, 1991: 33). Learning and developing thus is to be understood as a result of actively participating in a context.

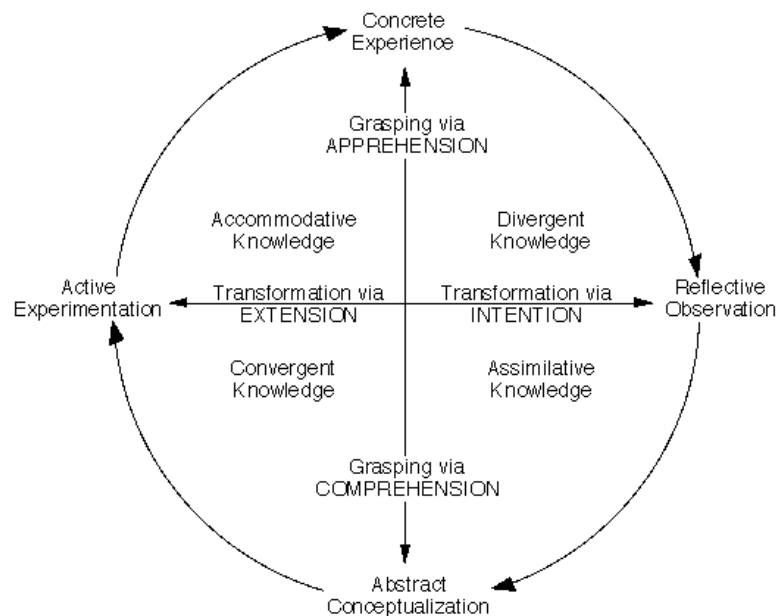
The active participation of individuals in a certain context will provide them with experience. The situated action perspective suggests that this experience is the basis for 'cognitive structure'. David Kolb (1984) developed an influential model, presenting four distinct learning styles. He argues that learning is the process of creating knowledge, involving transactions between the individual and the environment. Kolb further hypothesizes that individuals perceive and learn in different ways. As a rule, when persons are testing intellectual insights in day-to-day situations, which yields experience. Combining experience with the strengths and weaknesses of personal learning as a distinct style results in continued 'learning'. Learning becomes an integral and explicit part of work (or entrepreneurship) itself.



### *The learning cycle*

To understand the different personal qualities and to accurately assess them in their environment, Kolb distinguishes typical characteristics of learning and problem solving. 'Learning' is traditionally associated with teachers and textbooks. It is a process away from reality in 'cut off from life'-places like classrooms. Once a person is finally done 'learning', real life starts. Problem solving, in contrast, is an active process. By experiment and by risk taking, problems can be solved. It is concrete rather than abstract, usually specific rather than general. In order to come to a better understanding of the way people form concepts and principles from experience, Kolb presents his so-called learning cycle.

The process is both abstract and concrete, active and passive. The obtained 'learning cycle' has four stages. The first stage is *problem finding* to gain concrete experience. The second stage concerns *question asking* for reflective observation. Then comes *answer seeking* which will lead to abstract conceptualization and the last stage is the portrayal of knowledge that leads to active experimentation (*trying*), which in turn will lead to new experience.



**Figure 2 Experiential learning cycle (Source: Kolb, 1984)**

### *Learning dimensions*

Kolb deals with four different learning modes to describe effective learning. These modes are designed to measure the strengths and weaknesses of learners in all four stages of learning. This model was named the Learning Style Inventory (LSI) and was used as a simple self-description test (Kolb, 1976). It opposes concrete experience and abstract conceptualization on the first dimension. The second dimension opposes active experimentation and reflective observation. The two dimensions represent differences in information processing. Firstly, the collection of experience is done by *apprehension*, which is the reliance on conceptual and symbolic representation, or, conversely, by *comprehension*, which is the reliance on tangible, felt qualities of immediate experience. Secondly, the other dimension is about the transformation of experience by way of *intention*, which is internal reflection, or by *extension*, which is the active, external (re-)action towards the environment or context.

### *Learning styles*

By putting the two dimensions of experience collection and transformation together a grid will become visible with four different forms of knowledge. These forms of knowledge represent the center of four basic learning styles.

#### 1. The Converger

A *converger* collects experience by comprehension and transforms it by extension. The dominant learning abilities of this learning style are abstract conceptualization and active experimentation. The strength of a converger lies in problem solving, decision-making and the practical application of ideas. This learning style is often found with people who prefer dealing with technical tasks and problems rather than with social and interpersonal issues ('engineers' and 'technical specialists').

#### 2. The Diverger

A *diverger* collects experience by apprehension and transforms it by intention. A diverger emphasizes concrete experience and reflective observation. Strength lies in imaginative ability and awareness of meanings and values, viewing concrete situations from varying perspectives and organizing complex relationships into meaningful interpretations. Divergers are more observation- than action-oriented, they

are interested in people and tend to be feeling oriented ('designers' and 'personnel managers').

### 3. The Assimilator

*An assimilator* collects experience by comprehension and transforms it by intention. The dominant learning abilities are abstract conceptualization and reflective observation. Strength lies in inductive reasoning, the ability to create theoretical models, and in assimilating disparate observations into integrated explanations. Assimilators are less focused on people and more on ideas, concepts, logical soundness and precision of reasoning ('R&D managers', 'planning experts' and 'professors').

### 4. The Accommodator

*An accommodator* collects experience by apprehension and transforms it by extension. Accommodators emphasize concrete experience and active experimentation. Strength lies in doing things, in carrying out plans and tasks, and in getting involved in new experiences. Accommodators are likely to be opportunity seeking, risk taking, and action oriented. People with this learning style tend to solve problems in an intuitive trial and error manner ('marketeters', 'sales people', and other 'action-oriented' jobs).

We are interested in whether the individual learning styles as described by Kolb (1984) can be used as a theoretical tool to analyze entrepreneurs. If the differences do exist, the entrepreneurs can be divided into accommodator-entrepreneurs, diverger-entrepreneurs and so on. Firstly, we go back to start-up entrepreneurs as such.

## **THE START-UP ENTREPRENEUR**

Motivations for people to start their own business are various. One important motive is the search for freedom. The prospect of being able to work with own ideas, being financially independent or being more flexible is something many nascent entrepreneurs indicate as motivation (Stigter, 2001). Also, many nascent entrepreneurs indicate that their start-up attempts arise from hobbies gotten out of

hand. These slip into entrepreneurship more or less automatically. Other nascent entrepreneurs indicate that their motivation is negative, discontent with their current working situation.

Successful nascent entrepreneurs are often entrepreneurs that already have experience with entrepreneurship. Nascent entrepreneurs and entrepreneurs that terminate their attempt to start a business are mostly employees before their preparation period. Many nascent entrepreneurs have experience in the line of business they want to start in. Research has shown that experience can be an important factor for successfully starting a new firm (Bosma et al., 2001). The ambitions of nascent entrepreneurs vary from staying independent to hiring many employees and becoming famous.

*S1*: The diverger-entrepreneur works with people, is social and personal, and is inventive and innovative and able to develop new ideas.

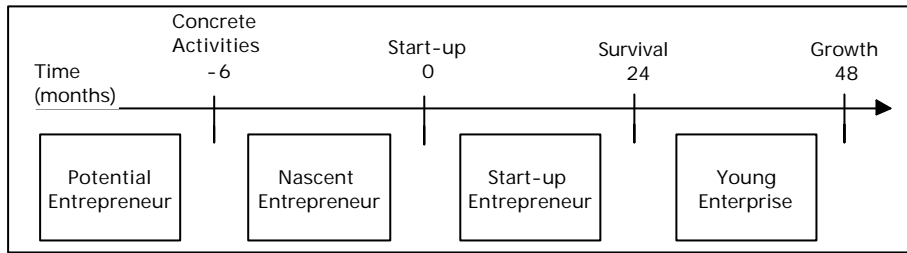
*S2*: The converger-entrepreneurs is practical and works on technical tasks and problems, and is pragmatic and experiments on practical applications

*S3*: The accommodator-entrepreneur is a risk taker, sees chances, wants new things, is flexible, and, is focused on the ideas of other people.

*S4*: The assimilator-entrepreneur is a planner, needs to think and develop concepts, is an information collector, and, is critical.

## **DATA**

The data sources used in the empirical part of this study are gathered and maintained by EIM Business and Policy Research and financed by the Dutch Ministry of Economic Affairs. The present study focuses on start-up entrepreneurs. The start-up entrepreneurs find themselves in varying phases of the start-up process. In figure 1, the start-up process is depicted.



**Figure 1 Start-up process: Nascent-, Start-up Entrepreneurs and Young Enterprises (Based on Van Gelderen, 1999)**

Ideally, one would analyze all phases in the start-up process to explore learning typologies among entrepreneurs. Data limitations force us to focus on the start-up entrepreneur, perhaps the most important phase as it runs from actual start-up to survival in the first 24 months. Besides, this phase fits the definition of the entrepreneur we have chosen. Nonetheless, it would be highly relevant to also study the nascent entrepreneurs (how can learning typologies be related to a successful transition of the nascent entrepreneur to a start-up entrepreneur) and the young enterprises (for which organizational learning will become more important than individual learning).

#### *EIM's firm founder panels*

The first EIM firm founder panel was started in the summer of 1994. Almost 2,000 entrepreneurs who started a new business in the course of that year returned a questionnaire dealing with among others their backgrounds, motivations, strategies and ambitions. With this panel, EIM has gain insight in the development of businesses since their start-up and in possible hampering or stimulating factors by following and gathering data on business start-ups for several years after their start-up. Today, as the people involved are beyond their start-up phase, the panel has been renamed to EIM's young enterprise panel.

EIM's second firm founder panel contains data on business start-ups in the year 1998 and 1999. It consists of over 1,100 start-up entrepreneurs. Most of the questions are the same as the ones in the original firm founder panel. However, some are slightly different, as new developments emerged in the time between (especially more favorable economic circumstances and explicit entrepreneurship policy conduct).

Using the two separate datasets enable us to (i) validate our results from one sample

with the results from the other and (ii) compare the start-up entrepreneurs in 1994 with the ones in 1998 and 1999.

## RESULTS

In the empirical analysis, the following hypothesis is assessed:

*Hypothesis 1: The entrepreneurial learning styles are present among start-up entrepreneurs*

To explore this, both data panels of Dutch firm founders are used. In case we are - indeed - able to identify start-up entrepreneurs according to the learning typologies set out above, we analyze the next hypothesis:

*Hypothesis 2: There are characteristics to these learning styles, other than the ones emerging from learning theory.*

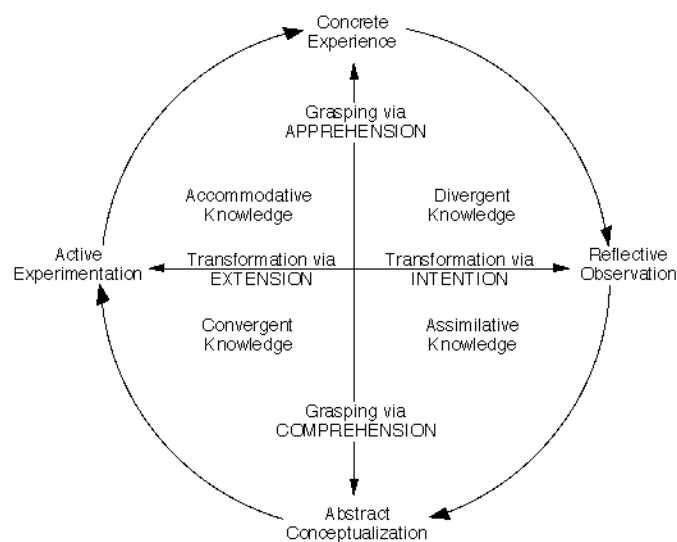
In order to test the first hypotheses, factor analyses are performed. A total of 10 variables are included that – together – should characterize the four learning types described earlier. The selection of variables is based on theoretical grounds. The included variables are listed in table 2, according to the learning typology they are associated with (a priori). The factor analysis attempts to identify underlying summarizing variables, or factors, that explain the pattern of correlations within the set of observed variables. The variables enter the analysis without imposing a relationship between the variables. Testing the hypotheses thus means: investigating whether the summarizing factors reflect the learning types.

**Table 2 Proxies to entrepreneurial learning types; variables included in factor analysis**

Accommodator	Diverger	Assimilator	Converger
Willingness to take risk	Education: personal and social care	Preparation length between decision and start-up	Keep up to date with technological developments
Open minded for new developments	Motivation ‘market opportunity’	Number of sources used to retrieve information	Education: technical
Participation in networks		Number of times business plan consulted	

## Identifying entrepreneurial learning styles

Using the second panel of 1998 and 1999, three summarizing factors were found to the set of variables in table 2. Two of those factors can, by investigating the variables that are of significant loading to each factor, be characterized as factors reflecting a measure of the accommodator type and as a measure of the assimilator type. The third factor is a scale with on the one extreme the diverger properties and on the other extreme the converger properties. The factor scores are set out in table 3. The finding that diverger and converger can be considered as opposites is in accordance with Kolb's theory, reflected in figure 2 where diverger and converger are opposite in the learning circle. However, from our findings we do not find evidence of a negative correlation between assimilator and accommodator entrepreneurs.



**Figure 2 Experiential learning cycle (Source: Kolb, 1984)**

The analysis set out above was replicated for the young enterprises data panel of 1994. The same variables that are characteristic towards the four learning types (table 2) were selected. The factor analysis showed very similar results. Again, three summarizing factors were found to the set of variables. And again, two of those factors could be characterized as the accommodator type and as the assimilator type. The third group can again be characterized as a scale-group containing both the diverger as well as the converger. By observing the signs of the variables' factor scores it can be concluded that the types are opposite to each other. The rotated components for both samples are presented in table 3.

**Table 3 Rotated Component Matrices of both samples**

	Sample 1994			Sample 1998/1999		
	factor			factor		
	1	2	3	1	2	3
Willingness to take risks	.628			.649		
Open minded for new developments	.799			.807		
Participation in networks	.612			.636		
Education: personal and social care			.614			.665
Motivation: 'Market opportunity'			.535	.305		.437
Keep up to date with technological developments	.562		-.309	.637		-.342
Education: technical			-.693			-.741
Preparation length between decision and startup					.656	
Number of sources used to retrieve information		.845			.680	
Number of times business plan consulted		.821			.689	

**Differences in learning styles**

The entrepreneurs that are placed in the upper quartile of the score on the assimilator factor were marked as assimilators, where all other entrepreneurs were marked as non-assimilators. The similar exercise was done with accommodators. For the convergers and divergers, the lower, respectively upper, quartile on the third factor were selected. Consequently, an entrepreneur can be associated to more than one learning style (as well as to none of the leaning styles). However, from this approach it follows that an entrepreneur cannot belong to the divergers and the convergers at the same time. In table 4 it is shown how the classification is structured for both samples of Dutch entrepreneurs. The classification enables us to analyze differences in characteristics of the distinguished entrepreneurial learning types.

**Table 4 Structure of classification in different types of entrepreneurial learning**

Classification structure 1998 / 1999 sample

	accommodator	assimilator	converger	diverger
accommodator	<b>245</b>			
assimilator	83	<b>280</b>		
converger	167	98	<b>300</b>	
diverger	6	37	x	<b>200</b>

Classification structure 1994 sample

	accommodator	assimilator	converger	diverger
accommodator	<b>437</b>			
assimilator	137	<b>467</b>		
converger	144	105	<b>378</b>	
diverger	59	92	x	<b>403</b>



Classification structure of the 1994 sample in still active and responding in 1998

	accommodator	assimilator	converger	diverger
accommodator	<b>125</b>			
assimilator	44	<b>163</b>		
converger	40	37	<b>124</b>	
diverger	18	32	x	<b>126</b>

Further analysis shows that the distribution of male and female entrepreneurs across learning styles appears not to be in balance. The groups that can be characterized as accommodators and convergers show a significantly larger proportion of male entrepreneurs, while divergers are (relatively) more often female entrepreneurs. The share of female entrepreneurs among assimilators is similar to male.

Accommodators also typically indicated that they have problems with shortage of personnel, as well as problems with suppliers. They further indicated that the timely payment by clients cause trouble. They appear not to have a shortage of their own knowledge and experience.

Divergers seem to experience fewer hindrances. The main problems they face have to do with return on investment and competition. In 1994, the divergers indicated to experience problems with the Establishment Act requirements. This Act was simplified to a large extent in the period after 1994, many requirements were abolished.

Assimilators indicate regulations on labor, hiring of qualified personnel and problems of suppliers as the main causes of problems. The assimilators already in business for four years also indicated problems with return on investment, the attitude of banks and regulation on the environment.

Convergers appear to experience considerably more problems than divergers, who can be seen as their counterparts. Problems especially relate to difficulties hiring qualified personnel. Convergers who are four years in business also mention timely payment by clients as an experienced problem.

## CONCLUSIONS

The results of the empirical analyses indicate that the theoretical assumptions regarding learning entrepreneurs and the typology of Kolb (1984) are quite correct.

The four types of learning were found in the Dutch entrepreneurial context. Two types were found in a single factor. These were the diverger type on the one end, and the converger type on the other end. These findings are in accordance with the theory of Kolb. Regarding the assimilator and the accommodator no evidence was found for a negative correlation between these types. These findings endorse the use of Kolb's typology in studies on learning entrepreneurs. The results make clear that this typology is a useful for tool entrepreneurial learning research.

The results on the analysis of the differences of the entrepreneurial learning styles show that gender differences are present in the Dutch entrepreneurial landscape within the different learning style groups. Entrepreneurs characterized as divergers are more likely to be female. Entrepreneurs who are not characterized as accommodators also show a relatively large percentage of females. The problems accommodators experience are related to personnel matters. They have difficulties finding qualified personnel and experience personnel shortages. Divergers mainly have problems with competition throughout the years. Assimilators mainly have problems with their liquidity throughout the years. The converger group indicated that the main problems were subject to hiring qualified personnel.

From our empirical results it appears that further studying the learning activities of entrepreneurs along this framework will be beneficiary. By distinguishing these different typologies it will be possible to get a better insight and gain more knowledge on how this special species of the human kind operate.

## REFERENCES

- Audretsch, David B. and Thurik, R., (1998), The Knowledge Society, Entrepreneurship and Unemployment, *EIM Research Report*, EIM: Zoetermeer
- Bhidé, A., (2000), *The origin and evolution of new businesses*, Oxford University press: New York
- Bosma, N.S., Van Gelderen, M.W., and Thurik, A.R., (2001), Setting up a business in the Netherlands, *EIM Research Report*, EIM: Zoetermeer
- EIM/EZ, (1998, 1999, 2000, 2001), *Entrepreneurship in the Netherlands*, annual series, EIM: Zoetermeer.
- EZ/EIM (2001), *Ondernemerschapsmonitor, Winter 2001* (Entrepreneurship Monitor for the Netherlands, published quarterly), Ministry of Economic Affairs: The Hague.
- Kolb, D. A., (1976), Management and the learning process, *California Management Review*, 18, 3, 21-31
- Kolb, D.A., (1976), *The Learning Style Inventory: Technical Manual*, McBer and Co.:Boston
- Kolb, D. A., (1984), *Experiential learning – Experience as the source of learning and development*, London: Prentice-Hall.
- Lave, J & Wenger, E., (1991), *Situated Learning: Legitimate Peripheral Participation*, New York: Cambridge University press
- Nooteboom, B., (2000), *Learning and innovation in organizations and economies*, Oxford: Oxford University Press
- Piaget, J., (1950), *The psychology of intelligence*, London: Routledge & Kegan Paul
- Stigter, H., (2001), *Het voorbereidingsproces: van start tot finish*, Zoetermeer: EIM Business and Policy Research
- Storey, D., (1994), *Understanding the small business sector*, London, New York: Routledge
- Thurik, R, and Dijk, B van, (1998), Entrepreneurship: visies en benaderingen – *Handboek: Ondernemers en adviseurs in het MKB*, (ed.) Scherjon, D.P., Thurik, A.R., Kluwer BedrijfsInformatie, Deventer
- Van Gelderen, M.W. (1999), Ontluikend ondernemerschap (Nascent entrepreneurship), *EIM Research Report*, EIM: Zoetermeer

## ACKNOWLEDGMENTS

The authors would like to thank EIM's SCALES Research Programme for financial support ('Onderzoeksprogramma MKB en Ondernemerschap'). They also would like to thank Wim Hulsink and Roy Thurik for valuable comments on previous drafts of the paper.