

The Pros and Cons of Learning and Teaching in a Practice Firm

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Introduction

In Austria we find a huge number - compared to the size of the country - of a specific "complex learning environment" that has the functionality to fulfil all four assumptions Frank Achtenhagen has made; it is the so-called Practice Firm (in the following abbreviated as PF). Achtenhagen has pointed out in his chapter why it has become necessary to find different or additional learning methods and places (see "Reality and Complex Teaching-Learning Environments" in the first part) and what assumptions the group in Göttingen started with.

In this contribution you will find a short description of practice firms, followed by how this learning environment has been implemented in the curricula of Austrian commercial schools, and the way it has developed in the last years. The results of a number of quantitative and qualitative research work and the personnel involvement in working with students at the university in a PF lead the author to a list of pros and cons of the Practice Firm. We are dealing with a place where students can learn, where teachers should not teach but guide the students to a learning outcome, and where both groups are working together in "their" enterprise.

What is a Practice Firm?

A very simple answer to this question would be: a fictitious enterprise with no real goods or money. As a pedagogical explanation we could use: a complex learning environment where the students can not only train their economic, business, technical and EDP knowledge and skills but where their social and organisational abilities and skills, their attitude towards work and much more can be developed.

The Austrian Ministry of Education started its work on the curriculum with a pragmatic definition: "A training firm is a place of learning, whereby the business processes are implemented with market economic points of view on national economic training. And among other things, inquiries, subscriptions, orders for services and goods are dealt with, which each training firm offers. It has not really been the goods that have moved, but rather only those for the business education went ahead with necessary activities." (ACT, 1992, p. 4)

To avoid some confusion: both in the German and in the English language various names are used for the same existing reality: practice firm, practice enterprise, and training firm could be used as word-to-word translations of the German word "Übungs-firma". But we also find the terms "simulated or fictitious firm/enterprise," and the

Americans mostly use the expression Virtual Enterprise (an excellent creation - and they immediately put a trade mark on it; see <http://www.nycenet.edu/ve/>).

As you can see, a lot of definitions and explanations of PFs can be found - however, mainly in the German speaking literature (e.g., Tramm, 1996, 1992; Reetz, 1977, 1986; Kaiser, 1987; Benteler 1988; Achtenhagen/ Tramm, 1993; see also Gramlinger, 2000). Here we will use the term Practice Firm and **define** it as

- a learning place in which
- a real enterprise is simulated
- with emphasis on the commercial activities and procedures;
- this firm (usually) acts in an existing national and international market, which has become a real network
- with an increasing number of other different PFs and national centres that provide additional services like trade register, tax office or national health insurance;
- its employees are students who work and learn in an office environment;
- they deal with fictitious goods and services, there are fictitious flows of money –
- but this all happens with real counterparts (people in other PFs) by using modern communication technologies.

So far, these are the things in common; furthermore, we find a number of varieties and differences:

- PFs that work from 3 hours a week to full-time (40 hours a week);
- they can be installed in commercial or technical schools, in general education, in colleges and universities or in private or national institutions of adult education;
- the students' ages vary from 14 up to adults shortly before retirement;
- there are individual teachers, teams of two or more, and sometimes there are no teachers but "facilitators" or "consultants";
- and finally, they can be found almost all over the world: originally coming from Europe with an estimated number of 2500 to 3000, and actually networking in Australia, Brazil, Canada, and the USA.

All these varieties are possible because we are dealing with an environment that can and must be modelled. Maybe the most important difference is one not mentioned before: the specific learning goals and objectives. Depending on the learning purposes of the institution, the model - and therefore the Practice Firm - will be different.

The long European **history** of business simulations goes back to the 17th century. At that time merchants were looking for a better commercial education for their apprentices with more realistic exercises and simulations in the so-called "Musterkontor". Already by the second half of the 18th century, there were first office practices in the German commercial colleges of Hamburg, Nürnberg and Erlangen. These "Übungs-

kontore" (an old German word for training office that is no longer used) are the first forerunners of the Practice Firm known today (Korbmacher,1989; Gramlinger, 2000). Only in the 1970ies the idea of the PFs found a revival in Germany as the Dual System was lacking places for apprenticeships. Combined with the growing importance of further education and retraining in adult education the number of the German PFs rose up steadily.

There are also similar learning environments that have been developed using the basic idea of a business simulation. However, just the two most important ones seen in figure 1 will be described as followed: The main difference of the *Learning Office* lies in the absence of real contacts outside the learning place. Therefore, even the dealing with the market is simulated. There is no buying and selling with other firms, persons or simulated constructs, and the teachers can take control of almost everything. On the contrary, in a *Junior Firm* not only real contacts to others are an element, but there are also real goods or services sold to real people who have to pay (with real money) for them. The Junior Firm belongs to the group of complex learning environments. However, it is less a simulation than a real enterprise for learning purposes. Mostly these firms can be found in the educational process of big production companies where the apprentices learn the economic basics of trading the goods they have produced.

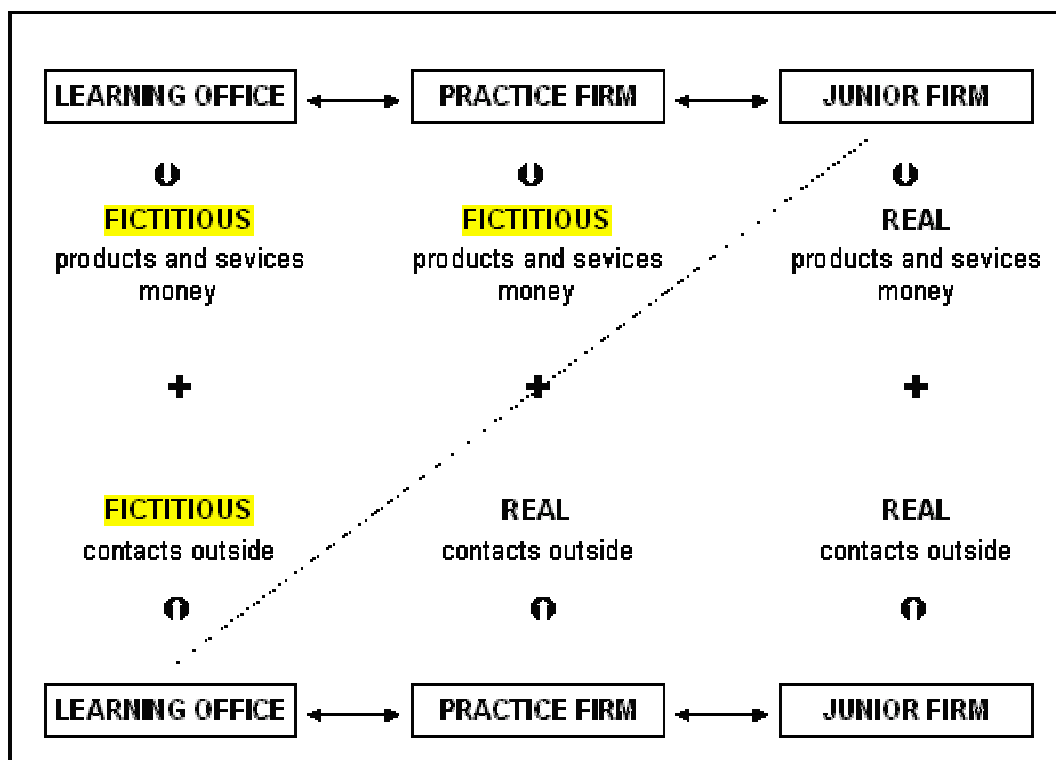


Figure 1: Comparison of the PF with the Learning Office and the Junior Firm

The development of PFs in Austria

Austria has a long history of fulltime vocational schools with a steadily growing number of students and very good reputation in business and industry. These are secondary higher schools (students' age 14 to 19) that can be finished with the university entrance exam, the Matura¹. The two most important branches are the technical and the commercial schools, often also named as colleges. This chapter focuses on the commercial schools - the 3-year **Handelsschule** and the 5-year **Handelsakademie**.

There are 114 locations all over Austria with a Handelsakademie and a Handelsschule with about 50,000 students all together (numbers from BMUKA 1998). In 1994 they got new curricula which included for the first time obligatory participation in a Practice Firm (3 – 5 hours in their third or fourth year with a preparatory subject taught in the years before). Having this complex learning environment in a national curriculum was not the only innovation: emphasis was put on strengthening social competence and practical skills, foreign languages became more important as well as the use of EDP and new technologies. Moreover the schools were given more flexibility in their decisions about subjects and contents within a given frame.

Naturally it is not only the contents in the one specific subject that shall enable the students to run their own PF (they are taught working techniques, the use of business and office environment, communication skills etc.) but almost all subjects are important for doing so. What the students will need most are the learned contents of Business Administration, Accounting, EDP, Business Informatics and Word Processing - and both their natural and the foreign languages for all the necessary communication.

The numbers for PFs at Austrian schools, given by ACT (<http://www.act.at/english>), show the following development:

1992/93:	50
1996/97:	300
1997/98:	780
2000/01:	1.000

The outcome of quantitative research done by the author in 1995, 1997 and 1999 (Gramlinger, Kühböck & Leithner, 2000; Gramlinger, 2000) shows that a lot of the facts about our national PF market and of the opinions and attitudes of our teachers seem to be very stable.

¹ The "Matura" in Austria is the synonym for the German "Abitur". It does not only finish the education in the secondary higher schools but it is a prerequisite for being allowed to study at a university.

The special quality of learning in and on a model

"The basic idea in the context of a Practice Firm is reflecting acting. Theory should not be absent, but in order to allow an integrated curriculum practical and theoretical learning should take place" (Tramm, 1996b, p. 66). This basic idea deals with the understanding of a model and to have this model as the centre of all the learning efforts and of the curriculum.

Following Tramm (1992, 1996a) there are **different concepts** of using the PF as a place where learning should take place:

- 1) The concept of *concentration and practicing use*: This comes from the original idea of the "Übungskontor": to combine the 3 important skills of a merchant - bookkeeping, calculation and correspondence - in one place and strengthen these already learned tasks by practicing them.
- 2) The concept of *training for practice* (skill training, practice, and drill): Specific skills and competence are taught by practice and drill to make people job-ready. This is a way of training on the job that is often used in retraining.
- 3) The concept of the *PF as a genuine learning place*: This term has been used first by Reetz (1977) and still is a vision for most of the PFs we find². This vision means also to speak not of a Practice Firm but of a *learning firm*. To bring this vision closer to reality it is important to understand the PF as a *model*.

We define a **model** as the smaller copy of an original; a *simulation* is "the modelled copy of a system by another system and the experimenting with this model" (DUDEN) – in short: it is a dynamic model.

In our work with students and teachers we emphasise three important aspects of the model.

- 1) In the model we can **simplify, reduce**, even minimise (a model cannot be 1:1 to reality): e.g. otherwise it would not be possible that a PF works only 3 or 5 hours a week - no real enterprise could afford doing this.
- 2) In the model we can **emphasise** certain aspects of the original: for learning purposes it makes sense that bookkeeping is done both manually and by use of EDP.
- 3) In the model we can **complement** and **add** things and situations that do not exist in reality or that are not part of the original: many PFs have at least a job-rotation in the middle of the year; no existing firm could change the staff of all departments at the same time!

However, it is impossible not to model. Therefore it is important to be aware of all the possibilities and necessities of modelling; these decisions should be formed into

² Empirical data shows that at the moment we find a mixture of all three concepts in the Austrian PFs (GRAMLINGER 2000).

learning objectives. Furthermore, modelling decisions have to be made not only once but, as we speak of a dynamic model which is changing permanently, they also have to be controlled and corrected permanently. But not only is the model dynamic; the economic reality – the firms and enterprises as the originals of the PFs – is dynamic too and in a permanent change. These changes again have to influence the “reality of the PF”, the model.

Discussing the PF as a model, learning should happen in two ways: **in the model** and **on the model**.

Learning **in** the model takes place almost automatically: the students act and work as employees of "their" enterprise, and by building a cognitive map of this system they are learning. However, there has to be a learning **on** the model as well: the first is necessary for the second and the second should again have an effect on the first. Learning **on the model** means

- getting into distance of acting (working and learning) within the model
- to step out of the model after having dived into it
- to say "stop!", look at the process and the outcomes, reflect the problems and their solutions or discuss the reasons for not finding a solution or having difficulties.
- In addition, it always means to make the model topic of the discussion.

Only in the phase of learning on the model the teacher can offer the students the opportunity to model their PF on their own. This modelling by students *and* teachers should be the result of

- acting in the PF and making experiences
- collecting, systematising and then generalising this experience and the learning outcomes
- a critical reflection of this all.

These two steps – the learning in and on the model – are necessary and important for

- the learning outcome (which are hard facts, learning to learn, knowing about organisations and organisational behaviour, social skills and so on)
- the flexibility of the students
- the transfer of the learned knowledge and skills to different situations and environments.

A last aspect of the advantages of using a model for learning purposes:

Our studies from 1995 to 1999 showed that there is *no typical* PF – there were 800 different PFs and 800 different social and organisational constructs; this reflects reality as there is no typical enterprise but rather hundreds and thousand different individual organisations. Nevertheless many of the PFs have a partner firm as an “original”. At the moment the flows of information and of help mainly go from the real enterprise to the PF. However, as the simulation is *ex definitionem* “the modelled copy of a system (...)”

and the experimenting with this model” there is also the possibility of trying new things, to use the intelligence of 15 to 25 people to invent new strategies, marketing campaigns, forms of organisation, ways of working etc.

The model is a “secure” place – on the one hand it can prevent loss or ruin in doing business and on the other hand it can allow experiments, to invent and try different ways. To model a simulated enterprise offers an endless number of varying parameters. I dare to say that *almost everything* in this fictitious setting can be modelled.

Therefore it will be necessary to start a discussion with the teachers in Austrian schools on how they are modelling. They are the ones who can offer the opportunity to their students to vary and change the model after having learned in and on it.

The advantages and disadvantages of learning and teaching in the PF

The following list of aspects pro and contra the PF will never be finished. It is the result of the author's studying the literature, quantitative and qualitative research, and some years of personal experiences as manager of a Practice Firm at the University of Linz.

The Pros

The advantages resulting of the **model aspect** (which sometimes are disadvantages at the same time):

- + In comparison to "real life", there is no financial, personal, or other entrepreneurial risk.
- + It is allowed to make mistakes - in the model they are seen as a source of learning.
- + Almost everything can be modelled (the almost infinite opportunity to model can be a threat or a disadvantage for many teachers, too!).
- + As already mentioned, the possibilities to add, to omit, and to simplify are especially valuable: specific situations or the way of solving a problem can be repeated or varied (several times).
- + A process or decision making can be stopped, discussed, and analysed (learning on the model) and afterwards, it can be continued, changed or started from the beginning.
- + Up to now, only little is done or tried, but it is possible and surely worth thinking of: In a PF we could test and analyse new forms of management, organisational behaviour or decision making; this fact is also about a model: to experiment.

The advantages concerning **learning** in general:

- + Here we find a place where learning from each other and learning collaboratively is not just possible, often it cannot be avoided.
- + As soon as the students identify themselves with "their" firm, a higher readiness for achievement and commitment can be expected. Furthermore, learning will even be

experienced as motivating, and it can be fun (on the contrary, this can be dangerous too if the identification does not happen at all).

- + We often speak of "learning by combining different subjects"; here it happens because it is necessary. The contents and knowledge of almost all the subjects of the curriculum have to be integrated. By using them the students often realise the first time that what they have learned in theory is useful in practice. Automatically, new technologies have been rated high - not only because their use is cheaper in many ways. Furthermore, as we are dealing with a place of social interaction, many of the key qualifications can be trained in the PF like the ability to communicate, to work in a team, or to deal with conflicts.

Concerning the **teachers** there is the chance but also the necessity (including a possible disadvantage, too)

- + of more co-operation and team-teaching.
- + The teachers have to deal with the often mentioned "new role of the teacher" - less of an instructor, more of a facilitator.
- + Learning opportunities are almost endless - but not everything is possible! Choices have to be made which are then transformed into learning goals. This is a possible disadvantage, as it raises the chance for taking more responsibility by the learners of their own learning.
- + The PF is a dynamic environment: new students (which means new staff) every year, new firms, development in real life and within the model. For the teachers this can be a chance for permanent and ongoing learning and a source of motivation. But at the same time this can be threatening as it brings insecurity and a lot of work. (A side effect for the students: all of them will learn partly different things, depending on many factors. Planning and taking responsibility are necessary.)

Finally, for the **school** as an institution the new learning place has already had some effects:

- + "opening of the doors" to the outside world; often PFs have become a sign of the whole school.
- + a wider co-operation with the business world (partner firms, sponsoring and public relations have become usual) and lectures more related to practice.

The Cons

Besides the disadvantages already mentioned above (with the pros) we found:

- Acting in a model runs the risk of not being taken seriously - like "nothing can really happen", this is "not reality", and it is "only playing around".
- As already mentioned, mistakes are allowed or even wanted. But if they are not found or not discussed within the learning group these mistakes can become really

dangerous as students could think of wrong things, solutions or circumstances being correct!

- The market in which the PFs are acting will always be an incomplete one. The simulation offers many opportunities but in the existing setting it never will be perfect. Again: if this is not mentioned and discussed with the students (by learning on the model) they could do or learn something wrong.
- Most of the PFs in schools are just working once a week. The long intervals from one working session to the next can cause difficulties.
- The teachers who are confronted with extraordinarily high demands (many different contents, the social setting, a new role) have to get used to a new way of thinking: they are not able to know everything!
- The planning of what will happen in the PF is much more difficult than in usual lessons - that offers a lot of opportunities, too.
- Quality control and assessment are two topics which are not really solved yet.
- From the point of view of the students too, this new situation can cause problems: Suddenly there are new hierarchies amongst them; the teacher is manager or facilitator and at the same time he is still teacher and the one assessing them; some of the "good" students are no longer the best (and the other way round); the different setting of PFs changes from one hour to the next into usual lecturing - and there are many more.
- For the schools the PF is a rather expensive environment that requires more flexibility within the institution and that causes new demands and unknown difficulties.

And the result?

As a **conclusion** we can summarise: From the author's point of view the advantages outweigh the disadvantages although the Practice Firm is a challenge for students, teachers, and for schools. Its potential has until recently been relatively unexplored. Too often the learning place is just used to practice the already learned contents – but its potential as a place of genuine learning is immense. Therefore, after the first consolidation in Austria a next qualitative step will be necessary.

However, as Internet and E-commerce are becoming more and more important the opportunities of an existing simulated market are too good not to be used. Dealing with this “double virtual reality” offers new aspects that could be interesting to different groups in the fields of education and business administration.

It seems to be important to offer some help and support for the teachers: A new way of further education and training will become necessary as they are asked to practice a new way of teaching. As much as they need knowledge and contents they also need advice, communication, and exchange of experiences – they need a network to help each other. It should be easy to build such a network as these teachers are working with their Practice Firms within a network as well.

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