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Deepened, holistic viewpoints on current issues.

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Dear Readers

Welcome to the second issue of JPR-Focus, our newsletter in a new format.

The topic of today's issue is dedicated to the search and, above all, finding of professionals an important issue for companies.

I hope you enjoy reading this newsletter.

Best regards

Yours Jean-Pierre Rickli

The lack of professionals - A reality? - An excuse? - A question of perception? - A modern appearance?

1. Introduction

If you look around in business circles, the topic of professionals and to get them is almost unavoidable. At the same time questions arise automatically: Is this a reality, a modern appearance, an excuse or just a question of perception?

These questions and many more clearly indicate a high complexity of the subject. In the discussion one rather beats around with catchwords and looks for the problem cause and solution at the others. This does not make it any easier to get a deep understanding of the problem.

Everyone talks about knowledge, about education or about knowledge transfer, whereby many apparently do not really know what lies behind these words. Also the terms specialists or experts are interpreted very differently. Sometimes it is enough to pronounce certain technical jargon words fairly correctly, and you are already a specialist. If you can even spell them out, then you are an expert. Only the term professional refers to a completed apprenticeship and are credible.

In the following discussion we will try to bring some clarity into this jungle and offer some solutions.

2. The Knowledge

2.1 General Considerations

In our everyday life we know many expressions, sayings, idioms and wisdoms on the subject of knowledge. Here is a very small excerpt of it:

- Knowledge is power
- What little Hans does not learn, Hans never learns.
- Your house can be taken away from you; your knowledge cannot be taken away.
- The knowledge that is over 5 years old is obsolete.

The problem with such sayings and idioms is that they all speak of apparently the same knowledge and can thus be understood as laws of nature. However, they are all strongly integrated in their own context or only apply to a certain type of knowledge. These limitations are practically never mentioned, so that their ceaseless repetition makes them appear as facts, as long as they are not critically questioned. Thus they continue to shape our thinking, although the boundary conditions have changed and thus they have lost their validity. Let us take a closer look at what the above wisdoms tell us:

a) The saying "**knowledge is power**" comes from the time of the class struggle, a time when knowledge was very unevenly distributed. Those in power had knowledge in the general sense and the others were kept in the dark.

Later on, in the offices, many experienced employees made this statement their own and kept their knowledge in drawers under lock and key. This gave them the feeling that they were protected against the whims of the bosses and that they could have a stronger standing in negotiations. With the first wave of digitization, knowledge carriers experienced their heyday. The knowledge had to be documented in order to be programmed into the codes. They stood in the foreground. However, this only lasted a few years. Then, the bosses on the higher floors suddenly got the feeling that they had secured the knowledge for the company. They now had the power and the knowledge carriers were no longer needed. That met well at that time, because these people soon reached retirement age. Early retirement was invented to pass costs on to the community.

With the time, the bosses' expectations were not confirmed, this for the following reasons:

- Knowledge is like a blossom. It must be fertilized from the outside to give fruit. Without contact with the outside world there is no fruit. Of course, when the flower becomes a fruit, it must be replaced by another. This is how the conservation of the species works.
- If you hold on to something, you get caught. A little story from Indonesia, I think. The locals on an island catch the monkeys as pets with a simple trick. They weave small baskets which they attach to a tree. These baskets have a small round opening. In it they place an apple-like fruit, which is very much desired by the monkeys. As soon as the monkeys have noticed the sweet fruit smell, they gently bring their hand through the opening and grab it. The opening is large enough for the fruit or for the hand, but not for the hand and the fruit together. So the monkeys get trapped. An easy way to free themselves would be to let go and

pull the hand out of the hole without the fruit. They do not come to this thought, they do not notice even if the fruit is rotten and would no longer taste.

- You cannot only administrate knowledge. It must be maintained and nurtured, otherwise it atrophied and is no longer flexible enough to be used.

Today the knowledge is hardly available, at least not enough to be able to argue on it with the boss. It is only sufficient to gain a small advantage with the colleagues and once again it finds its way into the drawers.

b) The second saying **"What little Hans does not learn, Hans never learns"** comes from a time when school and the professional world were clearly separated. In addition, the changes in the professional world were very slow. A job could be the same for a lifetime. You just grew up with the work and the experience. The people were confronted only very slowly with new knowledge. Thus the knowledge acquired at the school was very long-lived and it was hardly necessary to add something. Thus one had to and could get along with the school knowledge by the whole life.

Later on, when the wheel of development began to turn faster, professional people also had to go back to school. It was found that this step was very difficult for them. The saying seemed to be confirmed, even more so when scientists found differences in the brains of children and older people: the brain flexibility seemed to be lower in adults than in children. This observation was interpreted as a natural unavoidable aging process.

Our school system today is still based on this insight when it comes to defining the school plan, where experts, teachers and parents together overburden the children with school matter. The result is that the sense and joy of learning is quickly lost - too much is simply learned in advance for a theoretically possible application. Learning thus becomes a horror experience and repeating it should be avoided at all costs. No wonder that "lifelong learning" is so unpopular.

But since the early 2000s, with the new direction in cell science, epigenetics, it has been known that brain cells must also be trained, otherwise they atrophy. However, this requires a supportive environment. The earlier exceptions, in which the brain of individual persons remained fit into old age, were therefore not very special. These people simply trained their brain cells and did not let them atrophy.

Rather, we forget that what one had to learn as a child back then was first and foremost to find oneself in society and to behave accordingly. Politeness, decency (whatever is understood by it), respect, in short everything that was expected of an adult in society, had to be learned as a child. It proved to be very difficult to learn such qualities as an adult. This, by the way, is also the case today. There this saying still has its full validity.

c) With the third saying **"Your house can be taken away from you, not your knowledge"** one actually addresses a special kind of knowledge, the experience. It is not about what you have learned in school, at work or elsewhere at a seminar, but about what you have made of it. This knowledge is very simply personal and also very difficult to transfer.

Why this? Because this knowledge is connected with personal emotions, feelings and sensations. This knowledge does not come with a factual transfer. Only when the knowledge carrier is

emotionally placed in the original learning situation does he become aware of it and thus can it be shared. Otherwise it is not perceived and remains hidden.

A house can be taken, lived in and declared as one's own. It is not so easy with this kind of knowledge.

d) The last statement **"Knowledge that is more than 5 years old is obsolete"** is a saying by a Swiss professor and director of the research institute of a large corporation. It was intended to invite employees and the research world to further their education and to question what they had learned over and over again. In reality, this statement has frustrated most people because it has challenged every effort to learn. The most common reaction was: "Why should I learn that when in five years' time everything will no longer apply?"

Many also took it as an opportunity to declare everything that was more than five years old irrelevant and to believe only in the latest. Science has thus tendentially made a step backwards. The fundamental natural laws of physics - thermodynamics, electromagnetism, etc. - as well as the ones of biology suddenly no longer applied. Perpetuum Mobile was reinvented. The wealth of experience in the companies was thrown overboard: old reference documents were disposed of, experienced employees lost recognition or were frustrated, the documentation was neglected, etc.

In order to stick to the example of nature, this statement is correct as far as it refers to the fruits. These clearly have an expiration date, where one must always ask oneself whether it has been reached or not. The knowledge that belongs to the DNA of the plant or the company, on the other hand, should be cultivated and respected.

2.2 The Various Kinds of Knowledge

We have seen before that knowledge is not simply knowledge. A differentiation in content as well as in language is therefore necessary to define the "right" procedure for the development, maintenance, conservation and transfer of knowledge. Thus it becomes also possible to structure the topic "education" more near.

Five different Kinds of Knowledge

1. **The general knowledge.** It is what we need to survive as a social being in society. This includes essentially the ability to read and write; to understand and interpret common texts in life; to solve everyday mathematical problems; to live and interact with other people and act in recognition and respect of the different personalities and cultures. This also includes knowledge of one foreign language. In this way, the importance of language as a vehicle of cultural heritage is to be recognised and a foreign language promotes openness to other cultures. Being familiar with the history, geography, culture, fauna and flora of one's own country. Understand the fundamental laws of nature, physics, chemistry and biology. To know the basics of geography and the historical stages. Not to be forgotten are also the arts - music, theatre, painting, etc.
2. **The deepened general knowledge and the deepened specific knowledge.** It is what is needed to enter the various professions or the academic path.

It is only when specific knowledge is acquired that it is necessary to introduce differentiation, because not all occupations or fields need the same depth in all disciplines. This type of knowledge is the common basis of different professions or fields of study such as natural sciences.

3. **The professional knowledge.** It is the knowledge that is common to a specific profession or course of study.

This knowledge is officially laid down in many professions, namely in the official professional register, which defines, for example, the content of the topics for the final apprenticeship examinations. It is also the knowledge that changes the most, particularly rapidly in recent decades as a result of the fast-paced technological development.

Many professions no longer exist; in craft industries often because the products are no longer in demand or because technology has made them dispensable, such as the stenotypist in the offices. In many other professions, the content is changing. The rapid development of new technologies either produces new products, new processing methods, new materials or a combination of all. This challenges not only the professional training but also the continuing professional training.

Liberal and academic professions are also undergoing major change: new knowledge, new demands and new expectations are driving the wheel of change.

4. **The experience.** This knowledge is the most personal and comprehensive knowledge, because it combines life and human experience with professional experience. All are very different from person to person.

The content of this knowledge can only be described qualitatively: small, large, broad, comprehensive.

This knowledge is not only the result of many experiences, but above all of what one has learned from these experiences. The place where you acquire this knowledge is called the school of life!

5. **The institutional knowledge.** This knowledge is something very special. It is what makes a company different and enables the outside world to distinguish it from other providers. This is despite the fact that the differentiation criteria are often neither conscious nor quantifiable. It is, so to speak, the DNA of the company. It is the knowledge of all specialists working in the organization. What does this knowledge consist of? From a visible and an invisible part, which in turn are divided into tangible and intangible components. The visible part are the documented documents such as calculation notes, work and process regulations, manufacturing regulations and documents, calculation programs, error and research reports. The invisible part is the knowledge and experience of the employees with the company products. The intangible part of both parts is the experience of the previous employees. Either their experience was not documented or only their decisions and not how to make them. Many such decisions have been integrated into computer programs, thus supposedly visible, but since no one knows the content of the programs or the programming language of that time anymore, this

knowledge cannot be accessed, built upon and further developed. The tangible knowledge of both parts forms the experience of today's personnel. Unfortunately, today this is very often limited to the correct reading of information from the computer.

2.3 Where can you access the different types of knowledge?

The answers to this question should in fact be obvious. Only under pressure from overzealous parents, from unimaginative managers who wanted to externalise their costs, and from educators who rely on old but false knowledge, many things have been shifted from professional education and training to general education. This was also possible because too much emphasis was placed on material things in child and youth education. Subjects such as painting, drawing or music still suffer from this today. These days you often have to take the time to do so when you have suffered a burnout!

Thus the general knowledge would have to be taught in the school years up to the 16th age, the deepened general knowledge would lead to the Matura or Abitur. One possibility would be to start the deepened general knowledge from about the age of 14, so that it could be transferred for the apprenticeship.

The foreign language issue should be part of professional training at the earliest. There the connection between a certain language and the choice of career is only clear and thus the motivation for it is also present. This has actually proved to be the success factor for all age groups. The possibilities of learning a foreign language in a relatively short time are available today. The success rate of elementary school language training today is a little above zero. The exceptions confirm the rule. Even worse for me is the fact that the school experiences made in this field tend to lead to a total denial to learn more languages or to continue learning at all.

In professional training, care must be taken to ensure that there is clarity between general and (company-) specific knowledge. For example, in certain disciplines it is important to know what programming is and how it works. This can be done using a common programming language. However, the use of specific languages is clearly one of the company tasks that use these languages, or of specialised institutes that offer further training on behalf of the companies.

In continuing education, a clear distinction must also be made between general professional knowledge and company-specific knowledge. The general professional knowledge can be learnt either in the professional schools or through events organised by associations. Institutional knowledge is clearly an in-house matter.

The institutional knowledge, the knowledge of the company and the specialists can actually only be found in one place, namely in one's own company or organization. Today, when the call for specialists is particularly strong, this seems to have been largely forgotten.

Experience comes with time, professionally with tasks and humanly with contact and work with other people and cultures.

3. Information and Knowledge: a Huge Difference

We are right in the middle of the information society. Knowledge is (supposedly) only a few clicks away. Nevertheless, one notices that there has not been so little knowledge for a long time and the trend continues to point downwards.

As one once said, we sink into a sea of information and thirst for knowledge.

What is going wrong here?

The problem is that knowledge and information are not the same. The highly praised transfer of knowledge is also a utopia as it is practised.

All we get from the outside is information. This information becomes knowledge only after internal processing.

The mother tells the child that the iron is hot and it has to be careful not to touch it. For the child they are just words, just information. The child only gets the knowledge that the iron is really hot when it burns itself. Mothers used to let their children have this experience under supervision. Then the thing was done, mostly for the whole life. Today, this is considered irresponsible, even barbaric. The new way is the absolute avoidance that the child can have such an experience. It never really learns that the iron can be hot until perhaps something goes wrong, sometimes with bad consequences because it is not controlled.

This is the same at school. The teacher brings in his knowledge as information for the pupils. They try to understand, process and comprehend this in their own personal way. The teacher's task is to accompany and support them in this personal process. Well understood homework could also give the pupils the necessary time to acquire the knowledge.

Even more difficult is the knowledge that has been developed from experience. This is either the sum of many experiences, mostly unconsciously integrated or also connected with an emotion. In the first case, the knowledge carrier does not even know that he has a special knowledge that should be transferred. In the second case, if the emotion is not present at the moment, the knowledge is not retrievable. The information is incomplete in both cases. This makes it difficult or even impossible to process the information into knowledge without the support of an experienced coach. This often leads to a general rejection or at least to a distrust of the experience. The value of the experience is therefore completely underestimated. Many companies had to experience this painfully when their experienced specialists were no longer available. Some even had to give up the business.

4. Where and how can I find the professionals and the specialists?

We now know where which knowledge is transferred and what distinguishes professionals and specialists. Now we can search for these people.

4.1 The professionals

The professionals as we have seen are trained in technical and professional schools or have completed a corresponding academic education. From there, they bring the latest technical knowledge to the companies. They are first and foremost to be called in from these schools. You have to take into account that experts deal with the content and so you have to offer content if you want to convince them. But that requires patience, perseverance, time and presence.

Already active professionals need to update and develop their expertise. This is particularly important in industries where major changes are taking place rapidly. This updating or further development of general knowledge can take place in technical schools, specialised institutes or at professional conferences.

Both the professionals and the companies have an advantage when this training takes place. It is therefore the responsibility of both sides to take the initiative.

The updating of professional knowledge can also take place within the company if the new professionals coming from the school are instructed to pass on the new knowledge. This possibility is all too often neglected, even overlooked, because in many places the opinion still prevails that only the "old hands" have the knowledge and not the "greenhorns".

In today's society, the so-called "MINT" disciplines (mathematics, informatics, natural sciences, technology) are certainly more difficult than other disciplines or professions. In fact, they are associated, among other things, with special gift, diligence, perseverance, profundity and low public profile. Things that receive little recognition in society and can even easily be called "nerds".

Such a situation already existed in a similar way in the times of the industrial revolution. The founders of companies such as BBC and Sulzer in Switzerland or Cockerill in Belgium had many people willing to work in front of them, but hardly anyone with technical knowledge, even less the one in their special field. As a solution, they founded technical schools or the like, where not only their own staff was taught, but also any capable person. These schools not only became a reservoir for future employees, but also made a significant contribution to the development of the entire region around the workshop. They also served as flagships for the companies and for interesting professions.

Today one makes it easier for oneself: one points with the finger at the public institutions!

4.2 The Specialists

By definition, specialists are experts who have built up a certain wealth of experience with a certain technology and, above all, in dealing with it in a company.

Such people are therefore practically only to be found in one's own company or are to be built up and promoted accordingly. Looking for them on the job market is nonsense and therefore also a clear, albeit unwanted, declaration of incapacity on the side of management and human resources managers. Even more if they pass the first evaluation of the applications to an algorithm. Which companies today have such development and support programmes? It is much easier to point the finger at the others!

One will counter me that there are special fields where specialists can be found outside. An example of this is informatics. Programming is a neutral matter. It follows strict rules and thus any person with the appropriate expertise can achieve the same result. It would be nice! In reality, every programmer brings his or her personality inside. An Indian doesn't think and act like a Swiss, a German or an Italian. Even a programmer who only drives a car will have a different idea of an efficient program for a railway ticket machine than someone who knows the network well and also travels a lot by train.

This fact is perhaps also a possible explanation why the first programs produced in India were initially unusable and were only made usable for the standard case after painstaking detailed work. Or why online ticketing for international rail journeys only works at the ticket counter, which can only be completed with great effort if the staff has sufficient experience.

5. Conclusions

As we have seen from these remarks, all the questions asked in the title apply to a certain extent:

- The lack of specialists is a reality. In companies you hardly meet real experts and specialists anymore. Whether this means that there are no specialists at all is another question. They may have followed the call for a "career" and as managers, according to the Peters principle, have reached their level of incompetence. Or are they where they are not looked for? Like the man who looks for his house key under a lantern even though he has lost it outside the front door where it is dark. Maybe they are just waiting to be spotted?
- The lack is also an excuse: for one's own inability to find such people and, not to be underestimated, to attract and retain them. It is much easier to blame others.
- It is also a question of perception. Because if you have the idea that a specialist is a young person with low expectations and average professional training and just waiting to be hired by someone like me, disappointments are pretty much certain. Even more so when the company enjoys a bad reputation as an employer. The look on the market is absolutely wrong: the specialists are in-house!
- Although real professionals and specialists tend to be rare, today's shortage is also a modern phenomenon. Why? In the past, someone was respected for his knowledge, but today he is only regarded as an unnecessary cost factor. Why spend money on maintaining this cost factor? It is much more efficient, at least until your next job change, to get rid of it!

I admit, this take-up is not very pleasing. Nevertheless, when the problem is clearly on the table, its solution is already there. However, I should not write about solution, but about solutions that have to be combined. Many companies live by these principles and, surprisingly, they are the ones who comment little, if at all, on the lack of professionals. Of course, these principles all require a rethink of everyday practice, which is mostly inhuman. What they require, above all, is a return to common sense, and therefore only a few additional comments are needed.

Here are they:

- Each level of education should focus on what the vast majority of students at that level really need. Learning in stock is not an option. This keeps the learning frustration to a minimum and the joy of learning well into old age.
- Companies also have a training function, which they have to perform in order to have specialists at all.
- The definition of the terms "career" and "making a career" must be drastically expanded in society. Today, only the administrative hierarchy and the number of people - I am deliberately not referring to leading them here, because very few can - in the organisation chart are relevant. Every person who has approached excellence in his professional or private life has made a career. Companies or employers can set an example.
- Content is important for professionals and specialists. Companies should therefore operate according to real values. To be the "number 1 in the field" is practically only of interest to

the top boss. For everyone else, quality, reliability, sustainability or social commitment or the like are in the foreground.

There are actually only a few points to consider, but they can have a far-reaching effect. Each training level must perform its own tasks. However, companies and employers in general have a primary interest in good professionals and specialists. They are therefore on duty.

The establishment of a real knowledge management concept by the specialised coach is the basis for this. Then patience and perseverance are required. It's worth it!

Yours Jean-Pierre Rickli

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