

Knowledge of University Knowledge Workers

Jozef Hvorecký^(✉)

Vysoká škola manažmentu, Panónska cesta 17, 85104 Bratislava, Slovakia
jhvorecky@vsm.sk

Abstract. Knowledge workers are expected to possess expert knowledge critical for innovation and progress. For that reason, management of knowledge workers is considered to be a substantial part of knowledge management. Knowledge is always present in explicit and tacit forms. Whilst the explicit knowledge is quite easy to demonstrate, the tacit knowledge is hidden and difficult to observe and measure. In fact, our ability to estimate their proportion is also “tacit”. Nevertheless, using a critical analysis, we make an attempt to categorize knowledge-intensive professions by their balance. Such a categorization (which is predominantly tacit as well) could be exploited by human resource managers during selection of knowledge workers for their best fitting positions.

Keywords: Knowledge management · Knowledge workers categorization · Balancing explicit and tacit professional knowledge

1 Introduction

Peter Drucker [1] was the first to use the term knowledge worker. He already pointed to the fact that a portion of knowledge is invisible. Nonaka and Takeuchi [2] then identified two categories of knowledge: explicit (visible) and tacit (hidden in human’s brains) Traditional managerial approaches address visible “products” so they do not fit to knowledge workers management. Due to that, Mládková talks about a necessity of introducing specific management methods [3]. At the same time, the range of knowledge-intensive professions varies from research to arts. To simplify designing and developing knowledge worker management, Kess [4] identified six types of knowledge workers pigeonholed by different proportions between their tacit and explicit knowledge.

The author and his colleagues believe that such differentiation is necessary because a big portion of knowledge transfer depends on not-fully-rational factors such as a gift, imagination, creativity, interpersonal communication skills, and others [5]. The most of these “irrational” factors represents individual’s traits and, as such, has direct consequences on appropriate and successful exploitation of the person’s ideas. And, as a result, on the competitiveness of their organizations. Below, Kess’ typology is used as a guide for juxtaposing knowledge worker’s types with their appropriate positions. The juxtaposing might facilitate the exploitation of highly-qualified human resources in organizations. Such a practice is not common yet. As the author shows in [6], the Slovak tertiary education often neglects it – leading university positions are often

occupied by high quality researchers without relevant tacit knowledge and skills. For that reason, our paper considers the application of Kess' typology to selected academic positions.

2 Kess Typology of Knowledge Workers

Kess [4] defines six types of knowledge workers: Mentor, Coach, Angel, Guru, Politician, and Father.

- Mentor typically has a long and extensive experience of successful business. He/she is willing to share his/her knowledge with younger and less experienced entrepreneurs and managers.
- Coach is a professional with expertise especially in business processes and in their improvement and development. Here, we underline his/her importance to understand informal requirements, e.g. the ability to tailor the process techniques with their operator's qualification and mentality.
- Angel has some financial resources or at least knows where to get these resources for the company. The Angel also knows how to utilize the financial resources that are already within the company.
- Guru has deep professional knowledge about specific areas of expertise. This expertise can be used to products, production, marketing or other processes of the company.
- Politician has knowledge about local, national and even international politics relevant to the business operations.
- Father represents the historical background of the business. In this role the knowledge is strongly combined with the shared "family" values. In our interpretation of the "family" can be any team glued by their shared values.

Our above additions to original Kess typology are in a good relation with his expected proportion of explicit and tacit knowledge. Figure 1 also origins in [1].

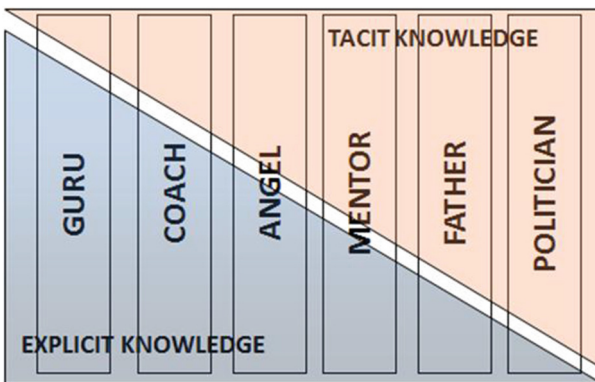


Fig. 1. The proportion of tacit and explicit knowledge in knowledge worker types

First, it is important to admit that “total knowledge” of a knowledge worker (indicated by every particular column in Fig. 1) addresses the knowledge related to the executed position; his/her individual knowledge unrelated to the position is not taken into account. To apply Kess typology in our presumed direction, the suggested reading of Fig. 1 would ignore the total amount of the person’s knowledge. It should only consider the proportion between his/her knowledge on one side and the position itself on the other. The most beneficial situation presumes the optimal correspondence between the person’s type and the position’s requirements.

From this point of view, Guru is a “pure thinker” fully concentrated on his/her field of expertise. During the execution of his/her profession, he/she predominantly rely on his/her expert knowledge – and unlikely on anything else. The amount of the person’s knowledge can be tremendous (e.g. knowledge of a top surgeon) but it is primarily tied to the daily routine – whatever the “routine” means. His/her tacit knowledge links to other fields are minimal. A popular picture of a “mad scientist” corresponds this extreme situation in a paramount way.

The Politician’s proportions between explicit and tacit knowledge represent the other extreme. For proper execution of his/her function, he/she can hardly rely on deep knowledge from a narrow field. In his/her case, the role of explicit knowledge is overridden by tacit knowledge – qualified guesses about a situation of society, a wider context, business experience, an estimation of opportunities and risks, market trends, innovative methodologies, information, procedures, etc. In addition to that, every Politician must have a good sense for people’s qualities. He/she will often act with them and through them. Thus, he/she has to be capable to estimate their capacity, reliability and limits. All by all, his/her tacit knowledge (the ability to “smell” opportunities and risks of planned and executed activities) must be extremal. His dependence on his/her tacit knowledge (e.g. instincts and intuition) is the greatest among all knowledge workers. This type of person is capable to orient him/herself in every situation and to find a way out of troubles.

The characterization of remaining types of knowledge workers can be derived from these two extremes.

Coach must be an expert in a field he/she coaches. In the same time, he/she has to be capable of explaining his/her knowledge and demonstrate his/her skills to his/her less experienced partners to avoid the risk of their misinterpretation. Guru’s tacit knowledge is directly related to the field-dependent explicit knowledge. Often, gurus are not ready to share it with anyone else. Compared to them, coaches are supposed to do so. To succeed, their expert knowledge must be enriched by their ability to identify correct and false potential interpretations by trainees as well as by strategies of their perfection.

All remaining four types are transient ones. Both Angel and Coach are supposed to have quite high explicit knowledge in a certain field but their positions lead them out of it. In particular, Angel must be skilled in looking for applications of the given knowledge and in gaining money for putting these application in life. Similarly, Coach must be capable not only to understand the discussed processes but also to modify them in efficient and effective ways and to estimate whether the other people will be capable of accepting them. He/she must also find when to act and how – and when not. Their capacity to understand people’s needs moves them closer to Politicians.

Finally, Father is a very specific type – quite distinct from the others - because of his/her very personal relationship to the subject. Even if he/she is not real parent of the company and its staff, he/she feels his/her full “parental” responsibility for them. As a result, he/she so deeply involved in the company matters and bets his/her position into the body’s existence. This emotional side moves Fathers even closer to Politicians.

3 Kess Typology and the SECI Diagram

The SECI model [2] describes the transfer between explicit and tacit knowledge and back. It presumes that knowledge develops and is accumulated in cycles. The first letters of the cycle form the cryptonym SECI.

Bearers of tacit knowledge interact with bearers of (possibly different) tacit knowledge during *Socialization*. It is performed by interpersonal communication and/or intrapersonal insights. As such, knowledge gained during socialization is general but quite vague. The same concept can be interpreted differently by different individuals or groups.

To achieve a person-independent knowledge, people try to express their internal understanding of objects and methods in a commonly accepted way using various forms of *Externalization*. Externalized subjects appears in a standardized format legible for all partners. These representations (numbers, texts, graphs, formulas, etc.) create a basis for the wider distribution of knowledge and can be spread over geographic and time barriers.

The pieces of knowledge expressed in their formal notation can be processed using formal rules. Their *Combination* may lead to new pieces of knowledge. Computers and robots are also capable of executing combination incorporated in their controlling programs. On the other hand, a machine-performed combination represents just a part of all actions. Top experts often perform combinations that are beyond computers’ capabilities.

In the last stage, people try to interpret the outcomes of their activity and want to comprehend them. Through *Internalization*, the new piece of knowledge becomes an integral part of the individual’s knowledge and is at hand for its future application.

Notice that different knowledge worker types can be related to the particular stages of the SECI model. The gurus can be placed into Combination. They are primarily interested in formal manipulations – even their tacit knowledge concentrates on the deep understanding when to apply a particular rule and how to do it in an efficient and effective way.

Coaches are domestics of Internalization. They are interested in transfer of exact knowledge into their trainees’ brains and finding appropriate methods for making their internalization easier and faster.

Domestics of Socialization are Politicians. They are keen of information exchange regardless whether it is in a formal or informal way. In a way, its informal version is more appropriate for their aims because it gives them more flexibility.

Mentors are often occupying Externalization because they work on making foggy ideas hidden in our brains more exact and legible by their codification, systematization, classification, etc. A typical example of a mentor is a production line designer. He has

to decompose the process into elementary steps which can be performed by the available staff and technology within a minimal time.

4 Kess Typology and University Positions

Universities offer a good study field for our analysis. The most of their employees are knowledge workers with different specifics done by their positions. As we indicated above, personal traits influence the person's inclinations to a certain field of the SECI diagram. Consequently, moves to other positions may lead to the necessity of changing not only working habits but also the entire communication style.

4.1 Gurus

As said above, gurus are pure thinkers concentrated on their fields of expertise. During the execution of their profession, they rely on their expert knowledge. Likely, the most common positions of that kind are in research. Devoted researchers have to be concentrate on their topics – and do not pay attention to anything that could distract their attention. The situation is not so simple today as various research experiments are under supervision of relevant communities e.g. of ecologists or animal protectionists.

The best fitting positions for guru-like personalities are in research. Their explicit knowledge should concentrate on gaining new data on research methods, results of their partners and competitors. They should share their results with their colleagues but they do not always practice it in order to keep their “knowledge power”. Their superiors should decide when such conspiracy is appropriate and when not. It is right to stress that the university research should be more open to the public than that of private companies.

4.2 Coaches

Coaches combine their expert knowledge with education or training of less experienced individuals. They have to be top-level specialist in their field but, unlike gurus, they are also interested in the links between their field and the “rest of the World”. The familiarity with the links helps them to offer appropriate absent pieces of knowledge to their less experience colleagues. The links should always point to two directions: to the area of origin and to the application of the particular piece of knowledge in it. A good coach should be therefore capable of attracting people to his/her field of expertise.

University educators are a typical example. On one side, they must be high-level experts in their discipline. On the other hand, too narrow orientation to their discipline might discourage less gifted learners. They would not be able to follow their reasoning because they could not bridge it to the world they are familiar with.

4.3 Angels

Angels are often external to the organization they guard or protect. “Internal” angels are the persons taking care of the optimal working conditions for others. At universities, they build appropriate working environment and atmosphere for gurus and coaches for example by taking care of appropriate financing of a particular field. They are actively searching for relevant calls for research and/or educational projects, inform potential candidates, help them in the application preparation, and control their completeness and deadlines etc. Universities which want to prosper should open such positions and assign appropriate persons to them, for example former researchers. Preferably below guru level because gurus are too narrowly oriented.

4.4 Mentors

Compared to coaches, mentors are more oriented to the future. Their efforts should concentrate on building “technology for future”. Coaches transfer guru’s knowledge to the format acceptable by their potential successors. Mentors make the future coming. At universities, they pave the road to the massive application of the guru’s knowledge by designing new study programs, writing textbooks and manuals, building laboratories and so on. They cooperate with coaches who tell them what should be done as well as with angels who facilitate sponsoring. The mentors should also collect information from external sources – research centers and leading universities – in order to design an innovative and competitive university vision and to develop a realistic strategy for its implementation.

4.5 Fathers

Every vision must be adopted by a strong individual (a “father”) who will adopt it and consecrate his/her efforts to its implementation and long-term advancement. As Kess [4] stresses, the fathers play their critical role in two moments: during launching the vision and during its depression. In the first case, their enthusiasm can inspire the others and lead them toward new aspirations. In the second one, it can show them the way out of the misery by pointing to new goals that will modify those that became obsolete. The father has to be a strong personality and a passionate leader. The universities should seek the leaders of research and educational teams among fathers.

4.6 Politicians

The key role of politicians is leading their community. To succeed, they should have a clear vision and the capability to attract people to it. They have to be able to explain to every individual what makes their vision important, why it should be implemented and how. They have to be able to build a strong and reliable team of fellows who will implement it. Top management of universities should consist of politicians sharing the same vision and having a strong informal influence on key academicians. In accordance to Mládková [3], knowledge workers can hardly be ordered, they must be invited to

collaborate. Every good politician intuitively knows that this is the most appropriate tactic for making strong and durable ties between the followers and the vision.

5 Lessons Learned for Slovak Tertiary Education

The analysis shows that all types of knowledge workers can participate at university life starting from gurus are “pure scientists”, coaches as educators, angels as ignitors of development, mentors as its catalysts, fathers as its guards, and politicians as its leaders and coordinators. Universities with an appropriate mechanism for their installations to their relevant positions will move ahead.

Unfortunately, the Slovak University Act [7] prohibits the universities from using their specific mechanism. It introduces a unified model limiting a case-by-case adjustment in selecting “right people for right positions”. All Slovak universities’ top managers – rectors and deans – must be elected by their academic senates. If the senates consisted only of “fathers”, the mechanism might work. As this is rarely the case, the candidates often do not set up their own, distinct visions – they simply follow the Academic Senate’s desires. They do not offer the radical progressive vision. Without such a vision, the university will not develop. An infinite loop of stagnation continues.

Even if a progressively-thinking candidate wins, he/she has limited in his activities by the university legislation. The rector is just a formal head of university. The power remains in the Senate’s hands. As radical changes often lead to tensions and subordinates’ discomfort, the rector can be called-off at any moment. Consequently, the top managers are very cautious to introduce radical changes.

All by all, one can conclude: To make a progress of the Slovak tertiary education system more flexible, the University Act must allow university to function in a more flexible mode and give them an opportunity to organize their human resource policy in accordance to its own goals.

References

1. Drucker, P.F.: Landmarks of Tomorrow, 270 pages. Harper & Row, New York (1957)
2. Nonaka, I., Takeuchi, H.: The Knowledge Creating Company: How Japanese Companies Create the Dynamics of Innovation, 304 pages. Oxford University Press, Oxford (1995)
3. Mládková, L.: Management of Knowledge Workers, 190 pages. IURA Edition, Bratislava (2012)
4. Kess, P.: Knowledge transfusion from external sources to small and medium-sized companies. In: Proceedings of the International conference Human Capital without Borders: Knowledge and Learning for Quality Life Management, Knowledge and Learning, Portorož, Slovenia, 25–27 June 2014
5. Hvorecký, J., Šimúth, J., Lichardus, B.: Managing rational and not-fully-rational knowledge. *Acta Polytechnica Hungarica* **10**(2), 121–132 (2013)
6. Hvorecký, J.: Testament vedca: kolaps školstva a cesta k jeho oživeniu (Last Will of a Researcher: Collapsing Education and Its Revitalization). Premedia, Bratislava (2015). 120 pages
7. Zákon o vysokých školách č. 131/2002 Z. z. (University Act of the Slovak Republic)