

Teaching consulting to academics: a reflection on professionals supporting an academic teaching program.

Dr.ir. Sebastiaan A. Meijer, assistant professor TU Delft, faculty TPM

Ir. Geert Roovers, senior consultant Organization and Management at Oranjewoud Engineers and Consultants, member of Antea Group

Drs. Tanja Verheij, managing director public policy and safety, Berenschot Groep BV.

Dr. Ivo Wenzler, senior expert, Accenture and associate professor TU Delft, TPM

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Introduction

The recruitment of new talent for consultancy firms confronts these firms with a gap between the academic tradition taught in university and the professional identity required for a consultant to work in a professional firm. This paper reflects upon an initiative to bridge this traditional gap. In 2010, Delft University of Technology developed a minor on consultancy. In this minor a combination has been made between traditional courses and a course that involved senior consultants to steer and evaluate small groups of students in real-world consultancy practices.

The senior consultants supervised the students on two assignments. First, ten weeks are spend on formulating an advise to a real problem of a real client. Each senior consultant supervised two groups. All of the groups had weekly meetings with the university teacher to discuss progress reports and potential academic inputs. The second assignment was the acquisition of a consultancy trajectory in a tender format. The senior consultants acted as the stand-in clients for real tenders they participated in themselves.

The authors reflect upon the process of supervision and the influence on the resulting documents. The central question is how the supervision that was shared between consultants and academics contributed to the learning outcomes of the students. The standard work of Argyris (1991) on the learning of professionals has argued the value of professional consultants reflecting upon their work and confronting each other with their findings. Our case is different because the students or not yet by any means professionals. It could be seen as a professional learning community (PLC) in which the students were taken up temporarily. The review paper on PLCs by Stoll et al (2006) specifically notes the importance of collaborations and networks around a learning institute. TU Delft involved senior consultants from its network to form a joint team of academics and professionals. This fits what Hargreaves (2000) calls the current postmodern age of professionalism in teaching. In the literature on teaching, major attention is paid to the (self) learning of professionals, to teacher professionalism, and to the transfer of practical skills and tacit knowledge from experienced to young worker. This paper contributes to the body of literature a case where the learners are not yet professional, but academic students without

work experience in consulting. This is different from the transfer of tacit knowledge in the worker domain, as it not only about the tacit knowledge of doing the job, but also providing the contextual setting to raise the conceptual level of understanding of theoretically taught contents.

The paper is organized as follows. First we describe the learning goals and the way they have been arranged in the course structure. This positions the place where professionals could contribute. Then we describe qualitatively the learning that took place on which we reflect to identify the differences between the academic and professional supervisors. The paper ends with some conclusions on success factors for learning in this setting.

Learning goals and curriculum design

The minor curriculum had been designed after the observation that external advice functions have an increasingly important role in the future work setting of engineers. The number of young engineers that start with external consultancy or engineering firms in an advisory role is growing, and the graduates who don't take such a job will be confronted with external Delft University of Technology educates engineers in a range of fields from electrical and civil engineering to architecture and policy science for the technological domain. From an educational perspective, a need to provide more background on consultancy to interested students in the engineering studies had been apparent for some years already. Early 2010 the decision was made to build a 'minor' curriculum on consultancy.

The minor consists of 30 ECTS points (Equivalent to approximately half a year fulltime study load), organized in one block so that students can be completely immersed in the topic of the minor. The target audience consists of 3rd year BSc students. In the first year 24 students participated in the program, from 8 different studies.

To define the learning goals we followed the popular categorization scheme for types of objectives by Benjamin Bloom (1956) *Taxonomy of Objectives for the Cognitive Domain*, which includes the following levels:

- **Knowledge** - Primarily concerned with students' ability to memorize or recall certain specific facts.
- **Comprehension** - Usually involves the ability to interpret, paraphrase, and extrapolate, thus demonstrating students' basic understanding of ideas that they did not originate.
- **Application** - Includes activities in which the student applies concepts and principles to new and/or practical situations.
- **Analysis** - Concerned with breaking down a piece of information into its constituent parts, differentiating and denoting.
- **Synthesis** - Involves the blending of elements and parts to form a whole. Students should be able to create a structural pattern that was not previously present.
- **Evaluation** - At this highest level, students might judge the value of a work, the logical consistency of written data, or the adequacy of someone else's conclusions.

Based on this, we formulated the following learning goals. After a successful completion of the minor, the student:

1. Knows and can paraphrase the 30 most used models in management consultancy, their application and limitations.
2. Can interpret the different roles of consultants in organizations.
3. Can apply different methods of working in technical consultancy.
4. Can analyze the complexity of the power relations in and around an organization.
5. Can apply the most used tools, skills and instruments for consultants
6. Can evaluate the quality of a presentation and report.
7. Can synthesize theory on professionalization in public and private sector consultancy.

For the theoretical foundations, the minor builds upon four courses, and for the application on the two assignments described above. The four courses are thought by the academic staff, with the addition of some consultants for guest lectures. The courses are:

The consultant as an analyst

The use of models in different contexts requires insight in the constraints of the generic applicability of these models. The balance between generic models and specific solutions is further complicated by the incomplete or even contested information available. In this course, five ways of analyzing the problem were discussed, being:

1. The 30 most used management models
2. Multi-agent simulation
3. Serious gaming / gaming simulation
4. Societal cost-benefit analysis
5. Taxonomy of analytical models.

Consultants in multi-actor settings

Both within and around a client organization, power relations, interests and relations between stakeholders have a major influence on the work of a consultant. This includes media, the general audience and sometimes shareholders. Guided by literature and exemplary cases this course discovers the specific options and constraints that the role of an external expert has to handle the political minefield.

Tools, skills and techniques for consultants

In addition to the domain-specific knowledge of a consultant he has to master a range of tools, skills and techniques to collect information, facilitate group processes, and present reports and outcomes. In this course a range of tools, skills and techniques are taught and practiced in role plays and other exercises.

Consultants as professionals.

The growing role of consultants in the public sector raises questions about quality insurance and transparency. In the private sector there is a tendency to make the consultant (partially) responsible for the achievement of an

improvement. These developments push consultants to safeguard their professionalism both individually and as a group. In this course theory on quality management, ethics and professionalizing are reviewed and we have a look on the practical implementation in various firms.

Involvement of the consultancy firms

For this minor, we found three consultancy firms willing to contribute. They were involved through:

- The supervision of student teams in the first group assignment. This involved an advisory process in the medium to small-scale business domain. Each of the student teams had three meetings with the senior consultant assigned to them.
- The supervision of student teams in the role of a fictitious client for a tender. The senior consultants had 2 meetings with each team, and were present at the presentations of the proposals. Each senior consultant was assigned two student groups who had to compete for his tender. The tender was a real one that the consultant had worked on himself.
- Each firm gave access to people to be interviewed for the course on professionalization and quality insurance.
- On occasional request, we had guest lectures in the courses mentioned above on selected topics.

Reflecting on the learning

Through the four courses, students learned the seven learning goals up to the level of application in the Bloom (1956) hierarchy of learning levels. The evaluation came from traditional university examination techniques like a written exam (The consultant as an analyst), essays (Consultants in multi-actor settings), and portfolios combined with oral exams (Tools and Professionals course). It goes beyond the scope of this paper to go into the learning results of these courses, as the hypotheses here is that the involvement of real senior consultants helps to increase the level of learning. This means that learning goals 1, 2, 3 and 5 could be obtained through the academic staff, but that learning goals 4, 6 and 7 required further investigation.

For this paper, the authors who were involved as consultants reflected upon their contribution to the learning on four topics: the planning process, understanding the client expectations, the development of a solution and their own role in this.

Observations on the process of planning their work:

All senior consultants noted the very linear process that the students had in mind when starting out with the assignments. From the analysis to the advice they built in limited room for iteration and continuous engagement with the client. Or like one of them notes *“Engineering students. They are trained to find a solution, for every problem. One problem, one solution, until the Minor Consultancy.”*

On the group work the consultants note that during their first meetings with the student groups there was an interesting dynamics in how different roles and responsibilities within the teams were assumed or assigned. It was an emergent,

almost organic process, unlike the reality of most consulting teams where the roles and responsibilities are the result of specific competencies team members need to bring to the team and/or hierarchical relationships within the teams.

Observations on the process of understanding client expectations:

The students had a strong inclination to take the written document provided by the client as the main source of understanding what the client wanted, instead of using it only as a source for structuring their questions to the client, which a professional consultant would do. The students had an expectation that the client not only knew exactly what he needed but that he was able to express it clearly and unambiguously in the briefing he provided, resulting initially in a limited challenge on the definition of the need as well as the definition of the expected outcome of the advice (what should be the result of their work). In an early engagement with the client, which the senior consultants had to suggest and encourage in their role as advisor, the students confessed that they had difficulties in focusing only on the questions and not already discussing the solution, which is also a common issue with many 'real-life' consultants which think that they know better what the client wants than the client itself. Another interesting observation is that it appears that just by assuming the role of consultants there was a shift in students' attitude, with a slightly arrogant 'you have a problem and I have a solution' approach.

The senior consultants noted that in the case of one assignment with two principals the students had problems to understand that two principals make two perceptions of a problem. Most problems in the minor had many stakeholders as well, each with their own perception of the problem, and many different interests. As one of the consultants asked rhetorically "*So, engineer-students, for which problem are you going to find a solution? And what about the rest, dear? Learn about multi-issuing!*"

The senior consultants had to confront the students on their assumptions about data: if you measure right, the data is right. In practice this is not the case with different stakeholders, with different problems en different views. Data is contested, methods are contested, system-boundaries are contested. "*So what now, engineer-students?*" The senior consultants made the students find out that rational instruments, like economic and environmental assessments aren't always useful to solve a problem, or to make a right decision. Besides, what is right, in a stakeholder-environment?

Observations on the process of developing the solution:

One of the key success factors when helping clients with their performance challenges or opportunities is making a clear distinction between the solutions to the perceived problems or opportunities and the questions that needs to answered in order to come to the right set of actions addressing these problems or opportunities. All student teams had some difficulties in the beginning in making this distinction, not realizing that the solution is the responsibility of the client and their role is in ensuring that a right set of questions are being addressed and answered, to ensure that the proposed solution is specific, measurable, actionable, and can be resourced. The senior consultants had to confront the students with these insights. In the beginning the teams were also not focusing on the value of their advice to the client – what will each of the

proposed actions deliver, what is the 'size of the prize' of these actions, what are the choices the client has (in terms of required effort and the implementation speed), and what is the rationale behind these choices.

Major attention of the senior consultants went into the art of questioning to teach students to postpone their professional judgment, and to search first for the question behind the question. What does your principal really bother? To find out what not yet can be seen. Only the art of questioning makes an engineer a consultant. And that's what the students found out.

Some observations on the scholarly role as a senior consultant:

The senior consultants all expressed that it was a very nice experience in doing what they do every day at Accenture, Oranjewoud or Berenschot, but then for an audience that is yet starting to learn about the challenges of being a management consultant. Their difficulty was in preventing themselves of taking the process over or dominating it through their experience, thus preventing them to learn by doing instead of by just repeating what they told them that needs to be done. At the actual client engagement the senior consultants would intervene much quicker, since there is often no room for an unguided learning process. Another challenge was in trying to engage the whole team, and not only the few proactive members of the team. In the actual consulting setting the structure of the team would be quickly adjusted to ensure that all the competencies required are on board, and that there is a clear agreement on who is responsible for what? The dynamics would be less free flowing and more structured. What was nice to observe was that students were genuinely eager to learn and that all of the suggestions, either on what they should be doing or on how they should be doing, were taken seriously and implemented to the extent that the students were able to (regarding the short time they had and the lack of experience in such settings). What the senior consultants also found pleasant to see is that the students were able to switch quickly in the way that they interacted with them depending on the role they took. Due to the limitation in the students' access to the real client (during the proposal work) the seniors were playing the client in addition to being their advisor on how to approach the client and the problem at hand.

Conclusions

What shows from the reflections is that the senior consultants added context and knowledge to the consultancy minor in a way that cannot be taught from theory. The academic teachers gave the students background and theories to actually start working, to apply and partially to analyze problems in the consultancy domain. The senior consultants were able to provide guidance to the students to bring the level of the learning towards synthesis, where students could create new advice and creative solutions, useful for real clients. It should be noted that from one out of the six student teams the actual advice led to a presentation for the governmental board working on the water recreation topic, and that their advice was accepted and now in preparation for implementation. The learning level of evaluation of the quality of the advice proved present at the final symposium that ended the minor. Here the students were judged on a poster presentation in which they defend and evaluate a statement on a topic in

consultancy. Out of the 24 students, 22 successfully defended their topic at the evaluation level.

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