Teaching Management Accounting in a Competencies-Based Fashion

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Abstract
Traditionally, management accounting has been regarded as a monodisciplinary field of study that mainly focuses on calculating costs and prices. Today, we see that the field encompasses an ever-increasing number of knowledge domains, including for example economics, sociology, psychology, and ethics. Modern-day management accountants have to be able to apply elements from all of these domains when solving concrete, real-life problems. The Open University of the Netherlands has therefore tried to construct a competencies-based management accounting curriculum that uses the well-known case method and integrates issues from various knowledge domains. In the curriculum, a unique problem solving strategy is introduced that helps students to tackle any (management accounting) problem they may encounter during their studies, as well as in their daily practice. We thus attempt to achieve a far transfer of competencies between the learning situation and the real world. Judging from the reactions of a group of test students, the way our curriculum is currently set up may well be one of the routes to follow for management accounting education in the future.

Key words: management accounting education, curriculum development, competencies, problem solving, teaching innovation.

* Bernard Verstegen is the corresponding author. The usual caveats apply. Copyrights exist on the general questionnaire®. This is a draft version; please do not quote!
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1. Introduction
With any teaching program, one hopes that students will learn a bundle of methods, techniques, theories and possibly also skills that may help them when they go through their professional career and are confronted with certain issues, persons and problems that may either resemble the situations they have encountered during their studies or not. That is to say, some kind of transfer is thought to be evoked by teaching programs between a learning situation and the real world. In his seminal article on the transfer of learning, Royer (1979) describes transfer as “(...) the extent to which the learning of an instructional event contributes to or detracts from subsequent problem solving or the learning of subsequent instructional events” (p. 53). Among the kinds of transfer discerned we find near and far transfer. Near transfer is witnessed when an original learning event closely resembles another learning event, and thus acts as a stimulus. Far transfer takes place when an original learning event acts as a stimulus for a real-life problem or a real-life learning situation, but is not completely identical to it. This is what educators, especially in a competencies-based learning environment, ultimately strive for. Nevertheless, Royer (1979) tells us that generally speaking: “(...) educators have not been overly concerned with determining whether school-learned skills transfer to real-world tasks” (p. 54). In addition, “(...) it remains entirely possible that a learner could have mastered a particular skill or bit of knowledge (as evidenced by performance on classroom activities) and still not be able to correctly apply the knowledge or skill to a task that differed from the original conditions of instruction (a far transfer situation)” (p. 59). Revans (1971) lists several abilities that modern-day managers should have if they want to handle the problems they are confronted with in practice effectively and efficiently. These are book learning abilities (knowing what to gain from textbooks, and how to use these), practical utility (being able to assess the value of the information that is gathered in practice), and the adaptation of generabilities to specific conditions (every problem situation calls for a careful interpretation of the way it came about, the persons engaged therein, the amount of time one has to solve it, the ways in which it can be solved, the subsequent steps in which a solution may be implemented, etc.). In a far transfer situation, the aforementioned abilities must all be put into practice.

Acting upon these principles, the Open University of the Netherlands has tried to construct a management accounting curriculum that is entirely competencies-based, focuses on real-life problems, and attempts to give students not only a thorough grounding in various management accounting theories, methods and techniques, but also tries to enlarge their problem-solving skills and behaviour. In the doctoral phase the curriculum consists of two courses. The first course, entitled “Management Accounting”, focuses on the collection of information for the purpose of reporting to the management of an organization. The information that is gathered is actually used to facilitate decision-making within an organization. The role of management accounting in facilitating the steering of management decisions is addressed in the second doctoral course, called “Planning and Control”. Both courses are part of a Scientific Masters program based on distance-teaching principles and of a Professional Masters program that is mainly taught in a classroom setting. This paper deals with the first of the two courses, in both settings. Although based on what Royer (1979) calls environmental theory, the “Management Accounting” course does specifically examine what is going on in the learner’s head (as opposed to ‘regular’ environmental theory), and contains an explicit procedure for
promoting transfer from the learning situation (the course material) to the real-life world, thereby alleviating the problems associated with environmental theory. In the following Sections, the set-up of the course, its unique procedure to promote far transfer, the type of examination, the teacher’s role, and the impressions of a group of test students will be discussed (in Section 2, 3, 4, 5 and 6 respectively). Section 7 summarizes.

2. Set-Up
When examining textbooks in management accounting, we see that they often emphasize the collection of methods and techniques that are a part of the discipline. The background of these techniques, the circumstances in which they can effectively be applied, and the reasons for using them, all gain much less attention than their inner workings (Scapens and Arnold 1986). Students may thus get the impression that management accounting is just a mixture of certain ‘tricks of the trade’, for which the reasons why to use a certain trick in a certain situation are unclear, and in which the tricks can be presented in virtually any order. Such a point of view does not allow students to place management accounting in its broader management context, although the provision of information for a firm’s management is the main reason why many of its techniques have evolved. Presenting the methods and techniques of the discipline in a proper context is one of the key issues we wanted to achieve with the new course.

When students have passed their exams and enter an organization as professionals, for instance as financial officers or controllers, they encounter problems that have to be solved and decisions that need to be made. In such situations it mostly is not easy to determine what in fact the problem is, whether management accounting methods may be of help, which methods should be used, how effective their actual use will be, whether all parties concerned will also be willing to use the methods, etc. In practice there are no signs telling the controller or the financial officer which methods to use, or which textbooks, if any, to apply in order to find the proper techniques. In other words, what professionals need, and what is mostly not taught in courses, are problem-solving procedures that can be used in problem situations they meet in practice. We have to realize though that real-life problem situations should never be regarded as monodisciplinary constructs. For example, the way in which an organization distributes responsibilities can be conditional on the leadership style chosen, the organizational structure, the system of performance evaluation, the qualities of the accounting information system, etc. Decisions made in the past and the environment in which an organization functions are relevant too. When designing or implementing an accounting system according to responsibility accounting principles, a management accountant should take all these factors into account, weight their importance and have an eye for their interaction. Therefore, an accounting professional should be able to do a lot of things besides merely knowing the tricks of the trade. For instance, he should be able to formulate the problem at hand, identify all parties concerned, assess the circumstances of the problem, search for possible solutions, identify the role, major or minor, that management accounting methods and techniques may play, choose a solution, and start the implementation process. Besides, he has to take into account an ever-increasing group of factors that influence a manager’s decision-making process. This may be one of the reasons why management accounting is becoming more and more multidisciplinary in nature, addressing –apart from economics– such bodies of knowledge as psychology, culture, finance and organizational theory (Groot and Lukka 2000). This implies that when studying management accounting methods and techniques, one simultaneously has
to look at aspects like (national) culture, group behaviour, economical factors that affect the information requirements of an organization, and the consequences of a certain decision. The course “Management Accounting” contains several of such cross-linkages. We ask students to go through the course material individually. This resembles the role of a management accountant in practice, who also works alone a lot to obtain solutions for the problems posed to him.

Cases are a natural way to mimic problem situations students will meet in practice. Teaching management accounting on the basis of multidisciplinary cases tends to raise the complexity for students as compared to more ‘conventional’ curricula. They not only have to choose and apply management accounting methods and techniques, or solve some rough-and-ready exercises. They also have to choose a point of view through which to address a problem (for example, an economic point of view or a psychological point of view), they must be aware of the type of problem they are dealing with (a strategic, organizational, or operational one), and they must analyze various characteristics of the problem situation. Of course the management accounting methods and techniques that are presented in the course are not linked to all kinds of decision-making and all points of view one may distinguish therein at once. Students are confronted with less complex situations, in which only parts of these issues are studied within the framework of a single case. We have structured the management accounting techniques and the (multi)disciplinary points of view we selected around themes, and placed the themes in a didactical order (rather than in an order that follows the planning and control cycle). Thereafter, we matched a number of cases to these themes. Thus the general course overview emerged that is shown in Table 1.
<table>
<thead>
<tr>
<th>Theme</th>
<th>Management accounting method or technique</th>
<th>Point of view involved</th>
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</thead>
<tbody>
<tr>
<td>Introduction</td>
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<tr>
<td>Accounting and operational decision-making</td>
<td>Unit cost calculation</td>
<td>Economics, ethics</td>
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<td></td>
<td>Cost-Volume-Profit (CVP) analyses</td>
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<td>Variance analysis</td>
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<td>Cost allocation</td>
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<td>Accounting and organizational decision-making</td>
<td>Budgeting</td>
<td>Psychology, culture, organizational theory</td>
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<td>Accounting and strategic decision-making</td>
<td>Balanced Scorecard (BSC)</td>
<td>Finance, economics</td>
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<td>Activity-based costing (ABC)</td>
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<td>Investment analysis</td>
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<td>Shareholder value / Economic value added (EVA)</td>
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<td>Integration</td>
<td>Several of the above</td>
<td>Several of the above</td>
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<td>Exam</td>
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In total we have selected 15 cases, with an estimated preparation time of 10-15 hours for each. As we already argued, we thus try to mimic realistic problem situations that may arise in practice in a variety of firms. Needless to say, the amount of assistance one gets to cope with the problems in the cases is larger than the amount of help one might expect when solving problems in practice; after all, this is a management accounting course. Part of the assistance one gets in solving the cases is the literature. The role of the literature in this course is somewhat different from the role one normally sees in teaching programs though. This is caused by the fact that the (problem situations contained in the) cases will lead students through the knowledge domain of management accounting, not one or two books. The literature has an important role in supporting the students’ learning processes, and it certainly aids in working through the cases, as it functions as the main information source on management accounting (among others). However, since it is an information source, the amount of literature selected is way too large to be read in the 200 hours within which the course has to be completed. Students simply cannot plough through all of the literature meticulously if they want to finish the course in time, and they are therefore learned to select those parts of the literature that may be helpful when solving the problems presented in the cases themselves. This resembles the way in which students will handle the literature when confronted with a real-life management accounting problem in practice.
But not only the literature serves as a beacon that students may hold on to in this course. Of much greater importance is the unique problem solving method that underlies it, the application of which is considered to be the course’s central goal. We will examine this procedure closely in the following Section.

3. **Promoting Far Transfer**

Using cases in teaching a course like management accounting is not new. The most prominent example is perhaps the Harvard Business School, where the case method has been applied for years. Other institutions that lean heavily on the method include Darden University, The Richard Ivey School of Business, MIT and INSEAD. When using the case method, students are often confronted with huge casebooks that provide little assistance as far as actually solving the cases is concerned. Sometimes cases are accompanied by questions that focus the attention of students on certain aspects of the case, and sometimes there is no guidance at all. Even when there are guiding questions added to a case students may ask themselves “Why focus on these aspects, why not on other elements?” and “How will I know that I ask the right questions and look at the right aspects?”. Students will be more competent professionally, and will therefore feel more secure, when they have a certain problem solving strategy to work with in all cases, which is also general enough to tackle problems they may encounter in practice (thereby stimulating far transfer).

In the “Management Accounting” course, learning how to use such a strategy is taught in phases. The strategy is founded on the awareness that, for every case in the course, students should look at certain aspects of a problem, which are really rather self-evident for a course that focuses on management accounting having a facilitating role in organizational decision-making. These aspects are:

- The surroundings of the organization or part of the organization that is relevant;
- The problem situation at hand;
- The parties involved;
- The available information technology;
- The management accounting methods and techniques that may be of use;
- The actual choice of a solution for the problem from a whole set of possible solutions, and the management accounting methods and techniques that may be relevant therein;
- The consistency of the line of argumentation.

For every aspect we have comprised a long, thematic, and quite general questionnaire® that can be regarded as a heuristic. The questionnaire bares resemblance to the well-known topical questionnaire (De Boer 1982), but a specific management accounting flavour is interwoven in it. The questionnaire is shown in appendix I. Since it has to be applicable to a great number of problem situations, the questionnaire naturally contains superfluous or irrelevant questions in each specific situation. Therefore, one has to transform the general questionnaire into a specific questionnaire that is tailored to a given problem or case (namely by throwing out, reformulating, or taking together certain questions). By using this reformulated, specific questionnaire, each specific problem or case can be handled adequately. The big advantage of the questionnaire is that one is confronted, case by case, and problem by problem, with a similar set of deliberations and aspects to be considered. This allows students to develop constructive problem solving behaviour, so that they do not immediately jump to conclusions as one often sees when
they are confronted with case material. Do note however that there is no guarantee that the general questionnaire® is complete. One thus always has the opportunity to enhance or alter its content should the need to do so arise. It is an evolving problem solving method that can only be used in a self-critical manner.

The solution procedure that in contained in the general questionnaire® is partly founded on Kolb’s learning cycle (Kolb 1984) and Revans’ system gamma (Revans 1971). When solving a problem, both authors think that managers never know all the details concerning the problem that arises, as they only know their own perception of it based on the facts they gather, which may well be incomplete or coloured by those who provide these. Therefore, Revans stresses the need to examine the internal and external environment of an organization, to be critical towards the information that is acquired to tackle the problem, towards those who provide the information, and towards their role in a particular problem situation. When choosing a solution, this has to be done in accordance with an organization’s norms and value systems, and its routines and habits. Both Kolb and Revans feel that a combination of action, reflection and learning is highly relevant for any business professional in order to cope with the challenges posed by today’s quickly changing economy. Especially continuous reflection is thought to be at the heart of someone’s learning process. The general questionnaire® is a direct outgrow of these ideas. In fact, when applying old-institutional economic principles on the nature on decision-making, an identical approach towards problem solving is found, which bases our solution procedure strongly in economic theory too (Verstegen 2000).

When building the general questionnaire® we acknowledged that decision-making within an organization is subject to a number of interdependent influences. For instance, at the level of the surroundings of an organization, decision-makers should be aware of the legal climate, the cultural background of the country, state, etc. it operates in, and the market conditions. In a number of cases, but certainly not in all cases, such influences may be important for a proper understanding and functioning of the relevant management accounting techniques. For example, when market conditions become more severe we may see a movement towards the use of (other) accounting principles like target costing. At the level of the parties concerned within an organization, decision-makers should consider issues like organizational structure, incentive systems, group and cultural norms and values, habits, the various roles that are present, etc. Again it holds that factors like these may be of great importance for the functioning of accounting and control principles. To name an example, when designing a system of performance evaluation, a decision-maker should take notice of the norms and work ethics that have evolved within an organization. All these factors, which we have called ‘rules’, and which together both shape and influence organizational culture, determine the preferences and opportunities of the actors and decision-makers involved in a certain problem, and thereby directly affect the solution space of a decision-maker. In this context, organizational culture may be regarded as a coordinating mechanism assigning relative importance to each of the aforementioned factors. Of course, a decision-maker, when opting for a certain solution, also puts his own (personal) decision-making mechanism to work that takes into account all of the preferences and opportunities that he feels to be of importance. Thus, a decision will be made. This describes, in a nutshell, the background of the solution procedure that is built into the “Management Accounting” course. A schematic overview of the decision-making process that is embodied in our general questionnaire® is shown in Figure 1.
Figure 1  Schematic representation of the decision-making process contained in the general questionnaire® in case of two decision-makers (A and B).

Of course there is no unique solution to a case. Often, one can think of several avenues to reach a solution to a problem, in which the final choice depends on a personal weighting of each alternative’s advantages and disadvantages. Applying the questionnaire therefore does not guarantee that all students will obtain the same solution to a problem or a case, but it does mean that a consistent and structured decision process is followed to find a solution, thus giving more insight into the decision-making process of a (potential) manager (Verstegen 2000). In addition, learning targets are formulated at the beginning of each case, so that students have at least some idea of the competencies they should have acquired by the time they are finished with it.

A step-wise method is used to teach students how to cope with the general questionnaire®. For each case feedback is given in two phases. The feedback given in the first phase is comprised of process reflections. This is meant to ensure that students do not forget essential steps in the problem solving process, without actually diving into the questions of the specific questionnaire. The feedback in the second phase is especially tailored to the problem situation (case) at hand. This feedback (which is presented at the course’s website) is password-protected for those who chiefly follow the course in a classroom setting. As students progress in the course and become more experienced in using the questionnaire, the information in the feedback gradually changes and becomes less detailed, thereby forcing students to become more and more responsible for their own learning process.

More specifically, in the first case it is first explained, question by question, how a specific list of questions can be distilled from the general questionnaire®. Thereafter, the answers to the specific questions are presented, and students are asked to compare these to

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1 This is also indicated in Figure 1, where two decision-makers each choose a solution for a certain problem based on an identical set of rules. The proposed solutions may well be different.
2 Baird (1986) thinks that such a responsibility is crucial in order to prepare oneself for the problems one will face and the decisions that need to be made in practice. However, it is often lacking in teaching programs, particularly when students do their courses in a classroom setting.
their own thoughts and considerations. In the second case, students receive both the specific questions and their answers, but it is no longer clarified how these questions have been obtained. Further on in the course, students only find a list of specific questions per case and have to answer these themselves. Our own answers are no longer immediately revealed. Later, they have to build their own specific sets of questions and answer them, whilst receiving even less feedback. Ultimately, they have to write a management report of a certain length on the basis of a problem situation (case) they have to analyze. A decent description of the problem at hand, the organization that is confronted with it, the persons who are engaged therein, the information technology that is used, the management accounting methods and techniques that play or may play a (crucial) role in its solution, and a final (motivated) choice, all have to be contained in the report in a structured manner. At first, we set out how a management report can be generated from the answers to a set of specific questions (which is a rather straightforward process for the general questionnaire® is very broad, tackling virtually all the relevant aspects that may be encountered in a case constructively, so that using the copy and paste buttons of a word processing program will already take one very far in writing the report). Thereafter, students are completely on their own, get no more feedback from their teachers, and have to solve a small group of problems just like that (only a grade is given). Thus a typical situation is resembled that may occur in practice, namely when a management accountant has to write a report on the basis of a certain problem that is ‘thrown’ at him within a specific time frame.

To conclude the course, students are confronted with an integration case in which several of the previously introduced management accounting methods and techniques, and various points of view and theories by means of which problems can be examined, have to be combined in order to reach a solution to the problem put forward in the case. As far as complexity is concerned, the integration case may be the most difficult case in the course. Again, a management report is asked for. Having written that, students are allowed to participate in the final exam.

4. Examination
In this course, competencies are defined as the application of knowledge, skills, attitudes and insights to concrete problem situations (Spencer and Spencer 1993). As competencies, the acquirement of which we try to bring about by studying cases and analyzing them by means of our unique problem solving strategy, play such an important role in the “Management Accounting” course, it will not come as a surprise that the exam consists of casework checking these competencies as well. On the one hand the exam tries to test whether students have attained the proper knowledge and skill level, as we ask them to apply their knowledge and skills to cases they already know. On the other hand the exam tries to test whether students have acquired the ability to handle our problem solving strategy, namely by asking them to apply their knowledge, skills, attitudes and insights to cases they have not seen before.

The “Management Accounting” exam is comprised of two parts. In the first part, students can choose between three rather small cases, which focus on accounting ethics on the one hand, and hypes in management accounting on the other. With these cases we want to show that management accounting is an ever evolving field of study, in which managers or controllers are often confronted with new concepts that are thought to be the ‘best’ solution to any (management) accounting problem that may be encountered. We feel that
students need to see how such hypes come about, what is written about them in newspapers, journals and textbooks for example, and how they may ultimately become common practice in management accounting, although then mostly their claim to fame as solving any problem has been tempered somewhat. Students have to be able to judge how they may react when they themselves have to deal with these hypes in their daily practice. We both look at hypes that in the end did not reach standard management accounting textbooks at all, and hypes of which the advantages and disadvantages are currently still being debated in the literature. Students are encouraged to search the Internet in order to find relevant publications that may alter or strengthen their points of view, given the concrete problem situation under consideration. The management report that follows from their analysis determines 25% of the final grade students get for the course.

The remaining 75% are made up of the grade of a written examination that lasts three hours. In these three hours, students are confronted with two problem situations of limited length, for one cannot expect them to perform a detailed analysis of two cases within just three hours, whereas they have approximately 10-15 hours to work on each case in the course. Writing a detailed analysis while having a lengthy preparation time is already covered by the first part of the exam mentioned above. Besides, writing clearly and constructively within a limited space is what lies at the heart of any good management report anyway.

The first case is completely new to students. Its level of complexity can be compared to the integration case that they made during the course. Students are asked to look at the problem(s) put forward in this case using certain points of view. Given that they only have limited time to grasp what exactly is going on in the case, we say that they work in a team of which the members have to solve the problem(s) the organization in the case encounters together. Students therefore only need to do a part of the analysis that would have to be done if the entire general questionnaire® was to be applied. They now only have to focus on, for example, the management accounting methods and techniques that may be useful, an analysis of the environment of the organization within which the problem(s) occur(s), or the persons who are engaged therein (and their preferences and priorities). Thus the management report that has to be written is only about a part of the general questionnaire®, which automatically limits its length. A bonus of this system is that the same case can be used several times as an exam case, provided that long enough a time frame is considered before reusing it.

The second case is an elaboration on one of the cases students already encountered in the course. We now place them in a different role than they had initially, and they have to reexamine a certain problem situation using new information that has recently come in. Students should have no difficulties in solving the newly posed problem, provided that they have carefully studied the original case. Alternatively, we may ask them to elaborate on their findings put forward in their original management reports. This case thus acts as a check on students’ activities. Did they really do all the cases? Again, a management report has to be prepared.

The combination of all the aforementioned cases, and splitting up the exam in two parts, ensures that all competencies that we find students should have picked up by the end of the course are adequately tested. We see how students are able to apply the entire general questionnaire® and search for their own source material in solving a problem, we see how they deal with a (part of a) completely new problem, and see if and how they have studied
a certain case in the course. Perhaps the most important aspect to realize however is that as students are being looked upon as problem solvers throughout the course, they are looked upon as problem solvers during the exam as well. The exam has to begin where the course left off, and we therefore do not suddenly start to ask for pure textbook knowledge alone. We place students in a case setting at every stage of the course, so that we are able to approach them as (potential) business professionals throughout, thus hopefully stimulating far transfer.

5. The Teacher’s Role
The “Management Accounting” course is accompanied by an extensive website, which is updated regularly, so that students can find (additional) information on the course, the cases they have to work out, our proposed solutions to them, the exam dates, links to other interesting (management accounting) websites, etc. whenever they wish. As the website is so extensive, students are able to find the answers to most of their questions there. Thus, there certainly is no work overload for teachers as far as answering students’ questions is concerned, be it either in a classroom setting or in a distance-teaching situation, where the contact with students mainly takes place via e-mail. When we see that certain questions come back frequently in the comments we receive, we incorporate them on the website as well, and point out the changes we have made via a special newspaper. Nevertheless, students indicated that they had some difficulties getting to terms with the nature and use of the general questionnaire®. We therefore produced an interactive instruction cd-rom which has been added to the course material, in which our unique approach to handling cases and the goals we aim at by doing so are set out in a short (streaming) video, which lasts approximately 10 minutes. Thereafter, students can ask 35 questions which focus on certain aspects of the course (like for example the reasons for using the case method, the exam, the role of the literature, what students can expect from their teachers, when they can say that they are done with a case, etc.) more thoroughly than was possible in the video itself, given its limited length. The answers to these questions are also presented in video format. We found added value in presenting information in this manner as compared to presenting it merely as a text for example, because in a video it was possible to express body language like affirmation, doubts, enthusiasm and so on, which we could not in writing. The additional emotional content thus revealed was necessary for we came to the conclusion that students needed to be fully aware of the complexity of the subject matter and our way of handling it. The cd-rom that contains the video turned out to be very illuminating and ensured that students more quickly acquainted themselves with the points of departure of the course than before.

It may be clear by now that the role of a teacher in the “Management Accounting” course differs from the role one usually finds. This is not only caused by the fact that students are encouraged to use the website intensively, on which a lot of information is contained already, but also by the fact that cases have such a central role in the course. Teachers are no longer required to provide lengthy lectures on a specific topic, covering a number of chapters from some book. In fact, they should not do so at all, for accounting books are not at the heart of the course. Students have to learn how to find their way through the literature themselves, for this is what they will have to do in practice as well (Baird 1986). This means that instead of being a teacher in a strict sense, one’s role changes into a coach or tutor, motivating students to handle the case material constructively, and allowing and stimulating them to reflect on their actions and ideas, and the methods and techniques they have discovered in the literature. From their own experience, teachers
may tell how they themselves would detect the problems put forward in a case and how they would deal with them. Students are not required to spend as many hours with their teachers anymore as they were used to when following courses structured along more ‘conventional’ lines, for they are now guiding and stimulating their own learning process to a larger extent. Therefore, in this specific course a teacher may be regarded as a senior consultant, and his students as junior consultants. This point of departure implied quite a deviation from what teachers were used to. Several factors alleviated the problems teachers had with their new role though. Firstly, the integration between the theory and practice of management accounting and management accountants was obviously realized, much more than ever before. Secondly, far transfer was visibly facilitated by the course. Finally, students really enjoyed and learned from what they were doing (and recognized its relevance). Thus in the end, most teachers adapted themselves to their newly posed tasks in one way or another. Nevertheless, it remained necessary to lay down the role “Management Accounting” teachers now had on paper, for some people were naturally resistant to change or were inclined to fall back into routine behaviour for one reason or another, whereas a completely different attitude towards teaching is called for by this course. However, teachers who had previously had field experience as management accountants felt quite natural in their new role. Acting as a senior consultant was almost like their second skin. It is therefore especially these kinds of teachers, we think, who must be encouraged to oversee a course like this.

Although the way teachers handled and felt towards the course is an important factor contributing to the course’s overall success, the students’ reactions to it are perhaps even more relevant. We will therefore examine some of these reactions in the next Section.

6. Students’ Impressions

Our group of test students was comprised of 24 people, who all but a few had substantial field experience as assistant controllers or chief controllers in various types of firms. For example, controllers from health care institutions, the chemical industry, ICT-related firms, marketing agencies, etc. were all represented in our test group. The students’ age ranged from 25-45 years, with the ages between 30 and 35 being the most dominant. They were free to participate in this test, and could quit at any stage they wished. After the first couple of cases, we had a group of 19 students who kept on following the course until the very end. Since they had a lot of field experience already, students instantly recognized many of the problems that rose to the surface when analyzing the cases, which in the beginning may have prompted them to jump to conclusions. However, the use of the general questionnaire® prohibited this and students soon saw that there may be more to a problem (case) than they had originally thought. For those students who followed the course in a classroom setting, the discussion time in class was mainly used to bring up stories of their own, in order to clarify or discover how the problem situations contained in the cases would be handled in their own organizations. This naturally increased the amount of enthusiasm students felt towards the course, for elements like these, coupled with the field experience that most of the teachers had, gave their activities an extra dimension. The (theoretical) material was more or less regarded as a starting point for a fruitful discussion, as a means to an end. It was not regarded as the end of the line (so to say), or as the prime incentive to get through the course. The enthusiasm of students only grew as the course went on, namely when they realized that they were more and more able to get to terms with very complex problems that they had sometimes been unable to solve hitherto. We had similar experiences with students who followed the course in a distance-
teaching situation, although they naturally could not exchange stories like students in a
classroom setting could.

There was special praise for the simplicity and comprehensiveness of the website and the clarity of the learning targets we formulated at the beginning of each case. This provided students at least some idea which competencies they should have acquired after having tackled a problem (case). Also, the way in which the use of the general questionnaire® was exemplified was found to be very illuminating. Because ultimately, the application of the general questionnaire® should lead to a well-structured management report, which forms a crucial element of every student’s (future) daily practice, students were more or less instinctively motivated to work through the course in a constructive manner. The advisory role of management accountants gained relatively more attention in this course than one normally finds in similar courses, where the attention is more directed towards the accountant’s role as a financial specialist. In today’s practice however, the former role is of ever-increasing importance and students found it good to see that the “Management Accounting” course both implicitly and explicitly stressed this.

Students had the impression that they had to do more than just ‘learn the material’ in order to complete the course successfully. They had to grasp the essence of an entire problem solving strategy whilst tackling a set of recognizable problem situations. The fact that all problems (cases) were discussed in a group setting (at least for some students), with mostly an experienced consultant supervising, gave the course a certain ‘richness’ that students had not encountered very often before. Apart from the added value of the group discussions, we heard comparable stories from those who did the course in a distance-teaching setting. As it turned out, our own proposed solutions to the cases generally went into the same direction as the professionals’, even though there obviously was not one unique solution possible in every case. This also enlarged the realistic character of the course and enlivened it considerably.

The greatest difficulties that students had emerged at the beginning of the course, when we realized that the course’s points of departure deviated more from more ‘conventional’ courses, where the acquirement of knowledge contained in a book is often considered to be of the utmost importance, than we had previously expected. The interactive video that we added during the course really helped and stimulated students to see and agree with our line of thinking. Even then, some students found it necessary to crack the password-protection we incorporated on the website to ensure that nobody would have access to any kind of feedback before the time had come to go through it. However, these students willingly told us that they had discovered a way to circumvent the passwords, and given that they would be confronted on the exam with a case they would encounter somewhere during the course anyway, they promised not to make use of this advantage and keep following the course’s didactics closely. They did so indeed. We considered this to be an additional advantage of the way we structured the exam. If students had actually decided to make effective use of their knowledge to crack the passwords, they probably would have received an inadequate mark for the exam. In the end, 16 of the ultimately remaining 19 students passed the exam. Still, we have increased the amount of protection on the website. Should we now learn that students have cracked the site, we have every reason to expel them from the curriculum, as we cannot check in every single case whether students will behave in the same way that the students in our test group did.\footnote{Which, since it was a test group, may have induced a certain (more open and constructive) type of behaviour anyway.}
In sum, we feel that it may be a good idea to confront students in an earlier stage of their studies with courses like this as well. Of course, this should not be done immediately in the bachelor phase, as students should first have reached a certain general level of competency before we may start to think about developing their problem solving behaviour. At a later stage however, students should really be able to do a lot more than merely applying certain tricks of the trade, and should be stimulated to steer their own learning behaviour to a large extent. It is especially here that the case-based method, definitely when coupled with the added goal of the attainment of specific problem solving skills in the way we did, can have its relevance.

7. Conclusions
In standard courses, the gap between the theory and practice of management accounting can be substantial. Just as an example, many students in our test group at first did not think that management accounting involved more than just calculating prices or costs, and thus seemed to believe that the subject only consisted of ‘crunching the numbers’. Yet, psychological, cultural and organizational analyses also form an important part of the field of expertise of a management accountant working in today’s practice, certainly now that management accounting is characterized more and more by a multidisciplinary perspective. In order to bring this perspective into the fore, a special curriculum in management accounting has been developed by the Open University of the Netherlands, which consists of two courses. Although the first course, called “Management Accounting”, is based on the far from exceptional case-based teaching method, it explicitly uses a unique problem solving strategy that helps students to tackle any (management accounting) problem they may encounter in a structural way. By following the course’s didactics, a student will learn, step by step, how to write a management report on the basis of a certain problem that he is confronted with. The course turned out to be very stimulating, at least as far as our group of test students was concerned. They recognized the importance and value of the way the course was set up, understood the management accounting methods and techniques they were being acquainted with more fully than we mostly see in ‘conventional’ teaching programs, and acknowledged the practical relevance hereof. Teachers were very enthusiastic as well, although it was important to realize that they now had a different role: they became coaches instead of teachers in a strict sense, and could do with providing students less extensive feedback than before, as students had a comprehensive website an their proposal and were better able to structure their own learning process through the set-up of the course. Perhaps the biggest compliment for the course was that some students already applied our general questionnaire®, on which the course’s problem solving strategy is based, in their own firms and found that they now were really able to dive into problems, to examine all of their aspects and difficult angles, and to take decisions that were supported by a larger part of their organization than before. The far transfer that we hoped to achieve with the course when we started to develop it thus seems to have taken place. And that is what this course in essence is all about.
References


Appendix I: General Questionnaire®

1. The organization and its surroundings
   - Which organization or part of an organization is relevant?
   - What type of organization is it?
   - What are the goals of the organization, or of the relevant part of the organization?
   - What are its surroundings in terms of culture?
   - What are its surroundings in terms of law?
   - What are its surroundings in terms of meso-economic conditions?
   - How does the (relevant part of the) organization position itself in its surroundings?
   - How did the (relevant part of the) organization position itself in its surroundings?
   - Did the position change over time?

2. The problem situation (note: there may be more than one problem contained in a case)
   - Which concrete problem situation is relevant?
   - In what way does the problem reveal itself?
   - Which type of decision-making is relevant: strategic, organizational, administrative, or operational decision-making?
   - How did the problem come about?
   - What circumstances caused the problem to arise?
   - When was the problem noticed?
   - How severe is the problem?
   - Is it clear what the problem really is?
   - Is the problem simple or complex?
   - Is it a problem that can be solved routinely in the organization?
   - Is the timing of decisions important?
   - What will happen if nothing is done about the problem?
   - When does a solution have to be found?
   - What information is required to take a decision?

3. The actors (persons, departments, groups, etc.), their culture, roles, preferences, limitations, behaviour, and information
   The actors are studied:
   - With regard to one another;
   - With regard to the surroundings;
   - With regard to the concrete problem situation.
   - Which actors are present?
   - How do the actors relate to one another in an organizational context?
   - Is the actors’ behaviour of influence on the decision-making process?
   - Which cultural factors affect the actors’ behaviour?
   - To which groups do the actors belong? How are these groups interrelated, both within and outside the organization?
   - What roles or functions do the actors have within these groups?
   - What are the relevant group values and norms?
   - What habits do the actors have?
   - How do the actors perceive their surroundings? What is their attitude towards it?
   - Which economic incentives, like a system of compensation, are of influence on the actors?
   - How are the actors limited and activated by legislation or by past decisions?
- What does their set of choice alternatives look like?
- What are the actors’ interests with regard to the problem under consideration? Who may benefit from the decisions to be taken and who may not?
- Which differences in information are present between the actors?
- Will the actors be willing to share information?
- Should the actors’ behaviour be changed in order to solve the problem?
- What person, or which group, takes the final decision in solving the problem under consideration?
- Do all actors think that this is the right person or group to take the decision?
- What knowledge, skills, attitudes and insights does the person or the group that takes the final decision have to have in order to ensure that an effective decision is taken?

4. The information technology used
- Through which technology is information generated?
- How can we judge the quality of this information?
- Which relevant information currently cannot be generated?
- What potential improvements in technology do you see, given the problem under consideration?

5. Methods and techniques
a. The management accounting methods and techniques that are currently used
- Which methods and techniques from the realm of management accounting are relevant, as far as solving the problem is concerned?
- Are all of these methods and techniques currently in use? Which are and which are not?
- How have the methods and techniques that are in use been implemented?
- Were these methods and techniques designed at will? If so, by means of which criteria have they been designed?
- Did these methods and techniques evolve in one way or another? If so, can the evolution path be described?

b. Possible alternatives
- Are there alternative management accounting methods and techniques that may be used to solve the problem?
- What are the advantages and disadvantages of the various alternatives as compared to the methods and techniques that are currently being used, with respect to speed of information transport and the robustness against outside shocks?
- Do you consider all alternatives useful in tackling the problem at hand?
- Are there problems to be expected when working out and implementing the alternative management accounting methods and techniques?

c. The information that the various methods and techniques generate in order to solve the problem
- What information do the various alternatives generate when the proposed management accounting methods and techniques are applied to yield information that may be used to solve the problem at hand?
d. **Links with other aspects of the organization**
   - How far is an effective use of the proposed management accounting methods and techniques dependent upon the cultural norms and values that are present in the organization, group behaviour, socio-organizational aspects, the past, the actors’ preferences, and the information technology?
   - Do you think that changes should be made in the socio-organizational relationships in the organization, or in the system of incentives, when applying the previously discerned alternatives?

6. **Choosing solutions**
   - What are the costs (transaction costs, production costs, etc.) of implementation of the various management accounting methods and techniques, combined with the proposed changes in the socio-organizational relationships and the incentive structure?
   - What risks are involved when implementing the proposed measures?
   - What changes do you expect to see when implementing these measures, in combination with the implementation of changes in the socio-organizational relationships and the incentive structures, as far as solving the concrete problem and reaching the organization’s goals are concerned?
   - What is your final proposal, and what management accounting methods and techniques play a role therein?

7. **Line of argumentation**
   Closely examine the previous list of questions, and your answers to them. Do you want to make any changes?