

MANAGEMENT ACCOUNTING EDUCATION A CHALLENGE IN FACING THE 21st CENTURY

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Abstract

Since the beginning of 1980s, businesses have been challenged by some problems, such as the keener competition and world-wide competition. The major cause of those problems is the changing business paradigm from producer-driven to customer-driven. Advanced technology that has replaced the traditional and manual technology has accelerated the companies to change their business style.

Accordingly, accounting education should respond to the change of business paradigm by improving its curriculum to be in line with the new paradigm. For the same reason, the Accounting Education Curriculum Committee (AECC) in the USA has changed its curriculum by including three major components in their courses : skill, character, and knowledge. Unfortunately, in Indonesia, changes in the curriculum as a response to this new paradigm is relatively slow compared to those in developed countries. This is due to the concentration of its accounting education which would rather produce management accountants than public accountants. Data from a study show that the increase in the number of management accountants is faster than that of public accountants. This condition should be anticipated by betterment of management accounting education.

The dynamic and complex nature of today's business environment has mandated a change within the accounting education and profession. Since the invention of the personal computer and other advanced technologies, and the issue of globalization coming up to the surface, the business world is changing its face: Information to guide management in decision making can be provided in a minute by utilizing computer facilities; competition is getting tougher while consumers are getting smarter.

The change in business environment should be anticipated and responded by accounting education. Accounting education is the only producer of accountants who will enter the management accounting and other accounting profession jobs. The accounting education should have been able to catch up with rapid change in business, so that the business world would not make our alumni wait too long before they get a job.

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In Indonesia the change in the business environment has begun since the government allowed the flow of foreign investment. The change was accelerated by the deregulation policy and the reactivation of the capital market in 1987. The accounting education responded to this change by restructuring accounting curriculum in 1994 and forming a task force in co-operation with the Indonesian Institute of Accountants (Ikatan Akuntan Indonesia = IAI) to continuously improve and develop professional education. All efforts responding to business environment changes are more concentrated to produce professional public accountants rather than to produce professional management accountants.

The growing of private sectors could have an impact on the need of professional accountants-public and management accountants. Those accountants should be made ready for their tasks since the time they are in college so that they are ready to face the rapid changes which recur in the real business world.

This paper aims to give an analysis on the efforts that have been done and what should be done by the accounting education to respond to the changes of business environment.

THE PROFILE OF CURRENT BUSINESS ENVIRONMENT

In recent years, world-wide competition, rapid change in advanced technologies, and quality demanding consumers, have already become new challenges in the business world. Management accountants who serve management with information also have to anticipate in helping management making decisions. Hansen and Mowen (1997) stated that the key factors bringing about changes in business environment which have an impact on management accounting information system are as follow:

- Customer orientation
- Cross-functional perspective
- Global competition
- Total quality management
- Time as competitive element
- Advances in information technology
- Advances in manufacturing environment
- Growth and deregulation in service industry
- Activity-based management

Customer Orientation

On a certain level, Indonesian business are facing similar situations as those in the advanced countries. Producer stimulate customers by providing customer value: the difference between what customers receive and what customers sacrifice. Producers should try to provide higher quality goods and services than competitors holding the same price, or provide the same quality with competitors charging lower price.

Management accounting information system should provide information about customer value to the management for producing that kind of products and services. The information should include internal sources and external sources. Management accounting should follow the needs of this situation. Accurate and timeline basis of information is the key variable in creating usefulness of management accounting information.

Cross-functional Perspective

Management accounting as one of the important information system for management is no longer independent from other functions in a company. The interrelated and coordinated functions should be conducted by almost all functions in the company. When the marketing department encourages customers to buy more volume by giving big discounts to wholesalers and other customers, the production department should work extra time. The delivery department should increase its activities, and the buying department and logistic have also been impacted.

Management accounting should accommodate all information from marketing, delivery, buying, logistic, and other departments into a set of information that will be used by management to control all those activities. Management accounting no longer just provides cost information but all related information for decision making.

Global Competition

Twenty years ago, we never thought that we would have to consider the cost of conflict with Japan caused by the case of Mobnas in a company account. Today, if we did business without obeying the global 'regulation' we could be certainly in trouble. The global competition is already at work. In the next six years we will have to

compete directly with regional (ASEAN) businesses and indirectly with other parts of the world. We should not have any protection from the government as before.

The global competition makes, management accounting information more complex and complicated. Management accountants should take into account to give cost information and other related information to management for making decision about competitors. Twenty years ago there were only three or four electronic companies competing in this country. Lately, more than twenty companies (take ten of them: National, Samsung, Mitsubishi, Sony, Sanyo, GE, Philips, Aiwa, Pioneer, Polytron) have been competing in the same market. In other industries the situation has been similar.

Total Quality Management

To survive and sustain in the global market, the company should have its management create management environment to facilitate all members of the company to be concerned with the building of manufacturing excellent. All employees from top to bottom need to work together to create a world class company with zero defect manufacturing.

The consideration that lower-quality products mean higher cost should always be civilized to all employees. To create such a situation management should continuously have relevant information. Information about cost of quality is the backbone in creating manufacturing excellent. Management accounting information should be set as the core of all relevant information. Such a setting of management accounting information needs high integration and dedication of all parties inside the company.

Times as Competitive Element

Managing time is the heart of creating company value. Reducing time of production, marketing, and delivering of the products will increase customer satisfaction and reduce cost of product and distribution. The motto "*time is money*" is very relevant to create an excellent position inside and outside the company.

Management accounting information system should facilitate the management of time. Information delivered by management accountant should consist of information about the time consumed

by each step of value creating company. Information of time consumed by each step of delivering product together with cost bearing with those activities should be counted by management accounting information system.

Advances in Information Technology

Management needs to make prompt and accurate decisions for the company to be able to lead in the competition. It was the invention and development of advanced technology that has helped to deliver and process all relevant data to become useful information. By installing Local Area Network or Wide Area Network, management can communicate with managers in remote areas without wasting a lot of time.

The problem faced by management accountants is how to select relevant information for decision making. Useful information can be destroyed when management accountants are not able to avoid getting overloaded information. The danger of giving management with too much information is equal to giving it zero information.

Advances in the Manufacturing Environment

The 'legend' that we have comparative advantage by indicating that our population, means worker availability, would be able to reduce production cost is almost over. The advanced manufacturing facilities have already been exploited in almost all companies around the world. The exploitation has already indicated that by using these advanced manufacturing facilities the quality of product can be improved and efficient cost of production can be guaranteed.

The Just In Time (JIT) manufacturing shows that application of the JIT has brought about the improvement of quality and efficiency. Computer Integrated Manufacturing, Flexible Manufacturing, Computer Aided Design, and many other methods have proved to be superior than traditional and manual manufacturing environment.

The responsibility of management accounting information is to facilitate its accuracy to deliver information on benefit-cost for each application of advanced manufacturing method.

Growth and Deregulation in Service Industry

Since the government issued deregulation policy in 1988, service industry such as banking, insurance, telecommunication, and hotel have increased dramatically. So far, management accounting classes have always been discussing manufacturing companies. We need to start setting management accounting classes by accommodating the service industries in classroom for discussions. Experts predict that this sector will continue to grow as service productivity grows.

The central issue of the service sector trend is the need for an increased awareness of the usefulness of management accounting. This objective can be achieved to a large extent by illustrating the applicability of management accounting concepts to service-based setting.

Activity-Based Management

From Kaplan and Johnson (1991) and Johnson (1992) who published their books about relevance lost and relevance regained, we know that traditional cost accounting distorts cost information. The traditional cost accounting is not able to trace activities so that its information is misleading.

Activity-based costing (ABC) and also activity-based management (ABM) can help accountants to solve the problems. ABC and ABM provide more accurate and relevant management accounting information. Activity based management is the heart of the contemporary management accounting system.

THE PROFILE OF ACCOUNTING EDUCATION AND ACCOUNTANTS IN INDONESIA

Historically, accounting in Indonesia was developed from bookkeeping in the Dutch version. The purpose of accounting was to introduce the importance of internal control for government-owned companies (say: BUMN). There were no big private companies existing in Indonesian business and there was no real competition among them, in the past. The Government gave close protection to companies and all government-owned companies were given benefits to become monopolists or oligopolists. This led to the ignorance of

the importance of management accounting information. All accountants who worked in big (BUMN) companies were acting as cc or internal auditors not as important information facilitators and providers.

The government then issued a law No 34/1954 to regulate graduates from certain faculties of economics majoring in accountancy to get certificates as public accountant by working in government owned companies or government offices for at least two years.

Without trying to improve the accounting curriculum and education process, accounting education was focused on producing government accountants only. The initial change in the education of accounting happened in the late sixties when some academicians from Gadjah Mada University and University of Indonesia returned from their study in the USA. These US graduates, in cooperation with the government (say: Orientation Finance Department and Education and Culture Department) changed the accounting education from the Dutch style to that of US called accounting replacing the former bookkeeping.

Thus the accounting education in Indonesia began to introduce management accounting by including cost accounting in its curriculum. There had been no radical change in the business environment for more than twenty years until the government launched some deregulation policies to encourage private sectors to be involved in developing the economy. At the same time the government began to open its door by inviting foreign countries to invest in Indonesia.

The second phenomenon was that in the 1987 the government reactivated capital market and invited private companies to issue stocks to the public. The regulation continued by privatisation of Jakarta Stock Exchange in 1992. Accordingly, the government encouraged government owned companies to sell their stocks to the public. This situation, dramatically, changed the accounting graduates' orientation. Ideals to become public accountants as well as management accountants increased. Within the company, the role of management accountant was also changing from just the role of an internal auditor to that of a management team in decision making.

The increase of companies going public stimulated the increase of the number of accountants working in public accountant firms as well as in internal companies. Comparing two groups of those accountants, the increase in the number of accountants working in accounting public firms was not as fast as the increase in the number

of accountants working in companies. Data taken from IAI (see Table 1) show that the number of accountants working as public accountant was only 21 percent compared to all accountants. The others worked in education and mostly in companies.

Table 1
Registered Accountants and Their Jobs

POSITION	NUMBER
Accountant with register (certification)	14.000
Public Accountants (member of IAI)	1.080
Government Accountants	2.767
Educators (member of IAI)	274

Accountants with register working as management accountants are around 10.000 or 10 times compared to accountants working in public accounting firms. This number does not include accountants graduated from schools that not registered by the registration from government as accounting schools. Around Indonesia there are about 1.200 private and state accounting schools without accountant registration from the government. Supposed each school produced 50 accountants each year, the increasing number of accountant working as management accounting could increase by 60.000.

All those accountants are the products of accounting education. A relevant question to be raised is "Are they qualified as professional management accountants?" This is not easy to answer. We need to have an overview on the accounting education process in Indonesia. We are faced at least to five problems in accounting education that can distort the output. These are:

1. Curriculum,
2. Facilities,
3. Research habit,
4. Educators, and
5. Reading habit.

Curriculum

The curriculum of the accounting education was changed by the Minister of Education and Culture in 1994. It is still a question whether the new curriculum will be able to yield graduates who can respond to the challenges of the current real business world.

According to the new curriculum (the national curriculum of 1994), students have 12 credit hours for the basic knowledge of business:

1. Introduction to business3 hrs
2. Introduction to management3 hrs
3. Commercial law3 hrs
4. Financial institution3 hrs

These courses represent about eight percent of the total hours of the undergraduate degree; Basic skills (MKDKA and MKK) are allocated 74 hours or represent 50 percent from the total; The new curriculum provides 10 hours for the building - up of characters, which are:

1. 'Pancasila'2 hrs
2. Religion.....2 hrs
3. Nationalism2 hrs
4. Basic nature2 hrs
5. Basic culture2 hrs

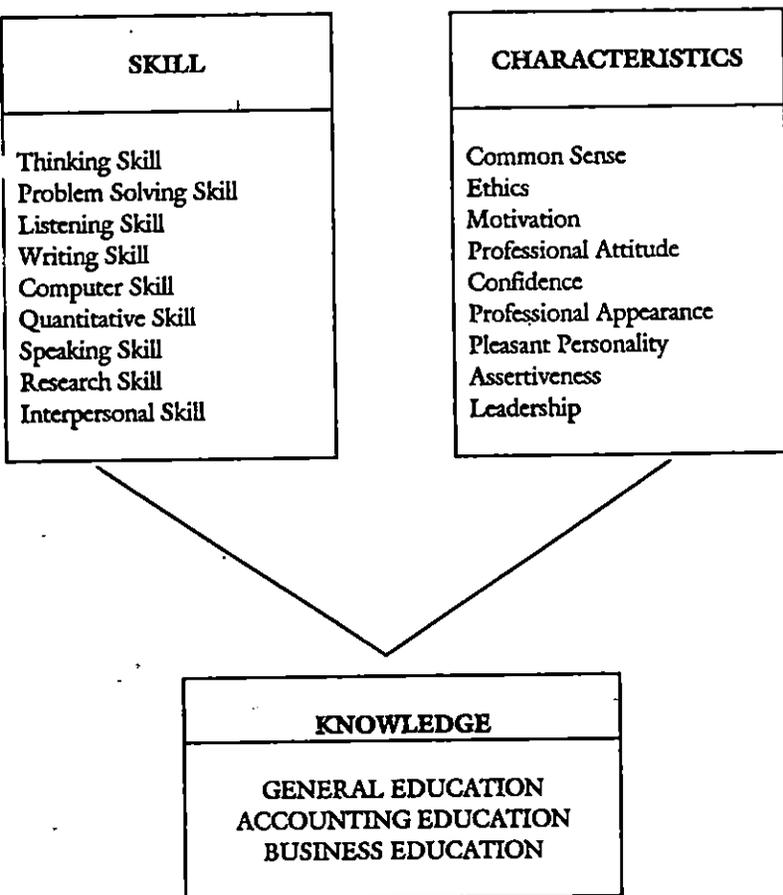
The curriculum indicates that accounting education aims at producing skilled graduates instead of professional graduates. When we compare it to the curriculum in the USA, we see that it goes to the opposite direction. The curriculum in the USA is set up with the aim of building professionalism of accountants. According to Novin and Tucker (1993), the accounting curriculum should consist of three basic elements of professionalism as shown in Figure 1.

According to Figure 1, the curriculum should consist of three elements: Skill, Characters, and Knowledge. To become a professional, the accounting student should have nine skills: thinking, listening, writing, computer, quantitative, and speaking skills. In getting these skills, the courses offered in the accounting department should accommodate courses relevant to those skills. Accordingly, the courses in the accounting department should also include courses that can provide students with professionalism and a sense of responsibility. These courses should include trainings in creating common sense, ethics, professional attitude, confidence, professional appearance, pleasant personality, assertiveness, and leadership.

When students have taken those courses that can be expected to build their skills and characters, it would be easier for them to accept the knowledge that includes: general, accounting, and education knowledges. The building of those skills and characters should be delivered in any class. On the other hand, lecturers should be instructed to include those skills and characters in their teaching.

What facilities should be provided to prepare students to enter the real professional job environment? Ideally, a college of business needs to bring business life into the campus and classroom. Accounting students need to know what Local Area Network (LAN), speed data processing by computer, Internet, etc., are. Those things require complete computer lab facilities. Colleges also need to have

Figure 1.
The Design of Accounting Education in The USA.



appropriate libraries for student learning business around the world through reading current issues, magazines, journals, and other resources.

It is also important to have a classroom with a small number of students to run and facilitate class discussions. Let colleges be a second home which students may miss whenever they are absent.

Unfortunately, these facilities need giant investment thus will increase student tuition-fees. With an income per capita around US\$1000, it is very difficult for colleges in Indonesia to charge their students with high tuition fees such as in the USA, Australia, or Singapore.

Research habit

It is very important to know the real business life by conducting research. Jojia, Tosi, and Hinkin (1987) conducted research in order to know the compensation effect to the behavior. They found that managers tend to receive financial rewards more than any other type of reward. In their lectures, these three researchers can tell their students what happen in the real business world.

By doing research, lecturers will be able to make courses more explainable and cleaver baneful for students. Students will have more pictures about the business world when their teachers find out what happens in the real business world.

In Indonesia, the habit of conducting researches should still be encouraged. The appreciation of doing a research is still very low, the civil effect is not significant to encourage a lecture in accounting school to conduct a research, and also the "opportunity cost" is too high.

Research in Indonesia, usually, is conducted by lecturers holding S2 or S3 degrees. Only ten percent of the lectures having those degrees work at private schools, while 25% work for public schools (see Table 2). The lack of capable researchers holding S2/S3 degrees has an impact on the number of research.

Table 2
Number of Lectures Holding Master/Doctoral Degree
Working at Public and Private Colleges
Year of 1995

FACULTY	STATE			PRIVATE		
	Total	S2/S3	Prop	Total	S2/S3	Prop
Engineering	6.250	1.781	28,5%	8.386	1.002	11.9%
Science	3.241	1.468	45,3%	2.673	330	12.3%
Agriculture	7.668	3.282	42,8%	3.125	661	21.2%
Medical	4.199	1.548	36,9%	1.136	284	25.0%
Sub-total Science Group	21.358	8.079	37,8%	15.320	2.277	14.8%
Social	12.079	3.029	25,1%	23.065	2.307	10.0%
Education	13.298	2.718	20,4%	13.298	2.178	20,4%
Sub-total Social group	15.377	5.747	22,6%	29.791	2.778	9.3%
Total	46.735	13.826	29,6%	45.111	5.055	11.2%

Source: Framework of Higher Education Long-term Development Program

Educators

The forth problem faced by the accounting education is the lack of professional educators. Accounting education should be in the hands of educators with experience in the real business world. Without experience or at least knowing well how business work, educators will just provide somebody else's story.

In the developed countries, lectures have the opportunity to experience the real business world by doing sabbatical leave - leaving the campus for six to twenty months to get a real job in business or in other fields. Here, in Indonesia this sabbatical leave could be very expensive. Almost all educators in the accounting schools may not be willing or may think hard before they are allowed to have a sabbatical leave. With this situation, educators in the accounting schools provide their lectures with assumed illustrations which they draw from reading the books without having any evidence from the real world.

Reading Habit

From my fifteen - year experience of teaching, I found out that students as well as young lectures have a very low reading habit. Perhaps this is due to :*first*, books are considered a luxury; *second*, their English competency is very low while most textbooks and supporting books are written in English; *third*, the education process does not much expose students to a lot of reading; *finally*, almost all courses for undergraduates do not require papers so that students are not encouraged to read a lot.

All these lead to student's lack of general knowledge. When students do not have enough general knowledge, they will have difficulties to respond to changes. Consequently, they are usually left behind.

MANAGEMENT ACCOUNTING EDUCATION IN INDONESIA

We have already discussed the accounting education in Indonesia as a whole. In this section I'd like to discuss a specific issue in management accounting education. Management accounting is a part of accounting 'science' as a body of knowledge. If one of accounting education objective is to produce professional management accountants, there are at least three 'basic elements' which should be provided and delivered to students, namely: business knowledge, personal character, and skill.

The purpose of accounting education in Indonesia does not specifically aim at delivering professional management accountants. The objective of accounting education process has been directed more to creating public accountants. The 1994 curriculum was set up with courses that consists of 111 hours skill courses or 78% from the whole course. From those courses only 12 hours-management accounting, cost accounting, management control system, and cost management-support the basic knowledge of management accountants.

The curriculum of 1994 consists of too many irrelevant courses that should be taken by students. Speaking skill, writing skill, and other communication skills do not explicitly exist in this curriculum. Those three skill courses are the backbone of producing professional management accountants. A professional management accountant has

to have speaking skill to communicate with management and other related parties. Writing skill will support a professional management accountant for preparing, providing, and delivering reports to management. Finally, the communication skill of using computers will improve speed and accuracy of their information. Unfortunately, the management accounting education in Indonesia has not yet been directed to producing professional management accounting which can face the 21st century.

SOME SUBJECTIVE SUGGESTIONS TO IMPROVE MANAGEMENT ACCOUNTING EDUCATION

There are some ways to improve management accounting education. In my perspective the following actions should be taken to improve the level of professionalism of management accountants. These include:

- *Bringing manager practitioner into class.* Accounting education needs to cooperate with manager practitioners. On regular basis, manager practitioners are asked to come to class to give lectures or conduct a business class discussion. The problem is that those high level managers are so busy that colleges have to design classes either in campus or outside campus (i.e., in company site). It will work when related government departments support this program. For example, the Finance Department and the Indonesian Institute of Accountants (IAI) need to set up accounting standards to reveal the concern of companies about education which should also be made the concern of the society.
- *Allow sabbatical leaves for lecturers to visit companies.* Eventhough it is still a dream in education, sooner or later this program should be carried out. Colleges provide facilities (financial and non-financial) for lecturers that have been teaching for certain years to go to companies to work for some time (6 to 12 months). After having some experience in the real business world, those lecturers should write cases and give special lectures to students. The problem comes when companies are not willing to provide this facility. Again, it needs some related departments to be willing to support this program.
- *Conduct co-operation among accounting colleges by utilizing advanced technology.* Efforts should be made to have accounting schools cooperate with each other to have a better education process and development. If five or ten accounting colleges work together to build an education information system, the cost for doing it must

be lower. Library loan, teleconference, and other means of communication can be shared by some colleges to promote education.

- *Increase credit hours for moral and ethics including contextual religion.* Some moral and ethics courses have already been in the accounting curriculum. In the 1994 curriculum, those courses are more textual than contextual. Something more applicable rather than dogmatic should be given to the students. If we want the students to correspond to the new paradigm which makes them ready to face globalization, we need to add more moral, ethic, and contextual religions in class. We need to change their view about business and life.
- *Change lecturing style from one way to two way traffic education process.* A wiseman told us that: a bad teacher tells; good teacher explains, the best teacher demonstrates; and an excellent teacher inspires. We need to change our teaching style from just giving instructions to inspiring them to improve their professionalism through transfer of knowledge. It is very often that the teacher is standing in front of the students to read a textbook or write on the board, while students write everything down what the teacher tell them. This type of teaching is called *one way traffic education*. We need to encourage students to express their opinion to become more creative. Our responsibility is to inspire them to become intellectual and professional. This method is called *two way traffic education* process.

CLOSING

To conclude my paper, I would like to cite what Sundem (1993) stated: To assess the future of accounting education, we must first define our industry. In the Chronicle of Higher Education it is pointed out that the product of higher education is learning-not teaching, research, and service, which are simply a part of the learning process. Learning comes in many forms. Students learn in and outside of the classroom, faculty members learn from their research and other scholarly activities, and the community learns from publications and other information dissemination methods. Regardless of the level of activity, no real production occurs until learning takes place. Therefore, demand for higher education is driven by the demand for learning. And because all learning centers around faculty members, the critical factor for productivity in higher education is developing and maintaining productive faculty members.

Accounting education, a subset of higher education, must define its domain within the broad context of learning. Accounting is the process of developing and communicating information for economic decision making. As we enter an "information age," both the demand for and supply of information for economic decisions is rapidly changing. Accounting education must adapt to such changes. Information that had a comparative advantage in the past, such as historical cost measures of transactions and audits of such measures, may not compete well in the future. Therefore, returns for production of such information will fall, and demand for learning of the skills to produce such information will also fall.

We, all academicians and faculties, have responsibility to positioning ourselves in the business world in the period of rapid changes. We need to be aware of the changing and responding these changes by improving and developing the education process for bringing our alumni to prepare for competing in the 21st century.

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