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Undergraduate Accounting Programmes in Developing Countries: The Case of Iran

A thesis submitted in fulfilment of the requirements for the award

of the degree



Doctor of Philosophy

From

The University of Wollongong

By

Jamal Roudaki

B.S. (Cost Accounting, Iranian Institute of Advanced Accounting, Iran)

M.B.A. (Central Missouri State University, USA)

Department of Accounting and Finance

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All thanks go to God. It was Him who created human beings and taught them how to write (the Holy Qur'an 96: 2 & 4). Then, thanks go to Prophet Mohammed (peace be upon him) who directs us to be thankful to God by thanking God's creatures.

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ABSTRACT

After the Islamic Revolution in Iran (1979), the entire education system in the country was drastically changed to make it more relevant to the Islamic philosophy. Accordingly, since the beginning of 1982 the undergraduate accounting programmes of all universities and other higher education institutions have been conducted on the basis of a centrally designed common curriculum. From the inception, however, there has been criticism that several features of this new accounting curriculum are not appropriate in terms of the educational objectives and the socio-economic conditions of the country.

This study examined the nature and content of the above accounting curriculum with the purpose of identifying its weaknesses as well as strengths through a survey of perceptions of accounting educators and practitioners in Iran.

The findings of the study reveal that the existing undergraduate accounting curriculum suffers from a number of weaknesses. The excessive emphasis on financial accounting with inadequate attention being devoted to managerial accounting, the failure to include an appropriate instructional package for computer applications in accounting, the lack of coverage in some important subject areas, the inappropriate distribution of teaching time among subjects, and the harmful effect of the excessive restrictions and inflexibility associated with the curriculum on the quality of accounting graduates and morale of accounting educators are some of the major weaknesses identified in the study. Apart from these weaknesses, the ability to provide a broad-base general education to accounting students has been identified as a strength of this curriculum. However, the overall findings of the study show that the existing undergraduate accounting curriculum has not been able to achieve its intended objectives to a satisfactory level due to the above weaknesses. The study also presents a set of recommendations for eliminating the weaknesses and improving the usefulness of the existing curriculum.

CHAPTER ONE

INTRODUCTION

Among the developing nations, Iran has a unique system of providing undergraduate accounting education through a single curriculum designed by the government and imposed on all universities and other higher education institutions on a national basis. An analysis of the nature, strengths and weaknesses of this curriculum is presented in this thesis.

1.1 STATEMENT OF THE PROBLEM

Since the early 1950s, several universities in Iran have been offering undergraduate programmes in accounting. Until the Islamic Revolution of 1979, the accounting programme of each university was based on a curriculum designed by its own academic staff, which was highly influenced by Anglo-American accounting programmes. After the Revolution, however, the entire education system in the country was drastically changed by the government for the purpose of making it more relevant to the Islamic philosophy. One of the most significant features of this change was that a new undergraduate curriculum for each programme of study was designed by the government for adoption by all universities on a national basis. The subject titles as well as the topics to be covered under each subject were given in this curriculum. Accordingly, since the beginning of 1982, the undergraduate accounting programmes of all universities have been conducted on the basis of this common curriculum designed by the government.

Since the inception of this new scheme, however, there has been a considerable amount of dissatisfaction and criticism among academics and practitioners about the quality of accounting education, in general, and accounting curriculum, in particular. The major criticism is that the new undergraduate accounting curriculum is not appropriate in the context of the educational objectives and the socio-economic conditions of the country. Another general criticism is that the quality of recent accounting graduates is not high enough to satisfy the needs of employers. It is also said that the excessive bureaucracy associated with the implementation of the new scheme is harmful to accounting education in Iran. As such, many seem to hold the view that these shortcomings of the existing undergraduate accounting curriculum have become a serious problem for the development of accounting education in Iran.

1.2 PURPOSE OF THE STUDY

Even though there has been criticism that the existing undergraduate accounting curriculum suffers from several weaknesses, no any research has been done to date to verify the validity of this criticism. The main purpose of this study, therefore, is to examine the existing undergraduate accounting curriculum with a view to identifying its weaknesses as well as strengths through a survey of perceptions of accounting academics and practitioners in Iran. The study further attempts to determine on the same basis the most desirable structure, content and scope of undergraduate accounting programmes for Iran. For this purpose, the question of what competencies, knowledge, and skills are required by Iranian accounting graduates is also addressed in the study. Finally, the study aims at making some recommendations which would assist the authorities in taking remedial measures to improve the existing curriculum.

In order to be able to achieve the purpose of this study, the questionnaire survey aims at finding answers to the following major questions:

1. What should be the objectives of an undergraduate accounting programme?
2. What skills are required by an accounting graduate to be able to serve effectively as an accountant in the developing economy of Iran?
3. What importance should be attach to theory and practice in an accounting programme?
4. What is the most appropriate duration for the undergraduate accounting programme?
5. What is the importance of each of the subjects included in the existing undergraduate accounting curriculum?
6. What deficiencies or overlaps do exist in terms of subjects and topics included in the above curriculum?
7. What importance should be attach to each area of accounting in the undergraduate curriculum?
8. What steps can be taken to improve the effectiveness of the existing curriculum?

1.3 RESEARCH METHODOLOGY

The research methodology followed for this study is as follows:

- The relevant literature was reviewed to determine the nature, importance, and development of accounting education in developing countries including Iran.
- A number of libraries, universities, and government ministries and departments in Iran were consulted in the collection of information and data on the relevant policies and plans of the Iranian Government and the historical development and current status of accounting education in the country.

- The principal method used to collect information and data for the study was a questionnaire survey. A pilot survey was also conducted to determine the appropriateness of questions and improve the questionnaire. The purpose of the questionnaire was to obtain the perceptions of accounting educators and practitioners on the strengths and weaknesses of the existing undergraduate accounting curriculum in Iran, and possible remedial measures for enhancing its effectiveness. The questionnaire was provided to 75 accounting educators and 95 accounting practitioners whose minimum academic qualification was a bachelor degree in accounting. Finally, 104 responses were used for the study.
- Interviews were also conducted on 13 educators and 11 practitioners to obtain more comprehensive and independent views on the main issues covered in the questionnaire survey.
- Simple statistical techniques were used for analysing the survey data.

1.4 NEED FOR THE STUDY

At the time of introducing the common undergraduate curriculum in 1982, the government indicated that since the new curriculum was designed within a short period of time, a careful review and revision would be necessary afterwards for eliminating any shortcomings and improving its effectiveness. However, no such review or comprehensive revision has been done during the fourteen years of its existence. Therefore, the findings of this study should provide to the authorities a basis for assessing the existing curriculum and taking steps to improve its effectiveness.

Further, the information provided in this thesis and the results it reveals would be of use to university academics and educational planners in designing and implementing future programmes of studies in accounting.

Generally, accounting research is extremely limited in Iran. No study has ever been conducted particularly in the area of accounting curriculum. As such, this study will be the first attempt to investigate the strengths and weaknesses of Iranian accounting programmes in general, and undergraduate accounting curriculum in particular. Therefore, while contributing to the accounting literature, this study should provide a basis for further research on Iranian accounting education.

1.5 DELIMITATIONS OF THE STUDY

The following delimitations are applicable to this study:

- The study is concentrated on the undergraduate accounting curriculum developed and implemented by the government in universities and other higher educational institutions in Iran with effect from the 1982-83 academic year. Although Iranian accounting education, like in other countries, also comprises other programmes of studies, for pragmatic reasons the investigation in this study has been confined to the undergraduate programmes.
- Since the total number of accounting academics in all Iranian universities and similar higher education institutions at the time of conducting the questionnaire survey of this study was only 75, all of them were included in the survey. Even though the total number of accounting practitioners in the country was much larger than this, for the purpose of maintaining a reasonable balance between the two groups of respondents a sample of 95 practitioners representing the Iranian Auditors Organisation and the

Iranian Institute of Certified Accountants was randomly selected for the survey. The practitioners selected were limited to only those who held an academic qualification not lower than a bachelor degree in accounting.

- No attempt was made to determine the scope or content of the non-accounting subjects included in the accounting curriculum.
- Because of the limiting of respondents to the university-level academics and a sample of accounting practitioners with a minimum of bachelor degree qualifications, this study does not claim to be representative of the opinion of all accounting educators and practitioners in the country.

1.6 ORGANISATION OF THE STUDY

The study has been developed in six phases. The first phase is devoted to an introduction to the study through an explanation of the research problem, the purpose and justification of the study, and the research methodology.

In the second phase of the study, an extensive review of related literature has been conducted to strengthen the major premise of this study. It is clear from the literature review that a definite need exists for enhancing accounting education particularly by improving accounting curricula in developing countries including Iran. Further, this phase confirms the generally held view that accounting education in developing countries, including Iran, has been highly influenced by accounting education of developed countries.

In order to place the subsequent discussion in proper context, the third phase of the study examines the environmental factors that affect accounting education in Iran.

These factors include economic development programmes, accounting profession and government policies on the overall education system of the country. It is seen that the effect of these factors has increased significantly after the Islamic Revolution.

The historical development of Iranian accounting education before and after the Islamic Revolution is briefly reviewed in the fourth phase. This follows a discussion on the development and implementation of a common curriculum for all undergraduate accounting programmes after the Islamic Revolution. This phase also presents an analysis of the problems confronting university-level accounting education in Iran. This analysis has provided valuable information for the development of the questionnaire and interview guidelines for the study.

The fifth phase of the study explains the questionnaire survey and the data collection procedure. The results of the study are expected to be based primarily on the data collected through the questionnaire.

Finally, a statistical analysis of the results along with conclusions and recommendations is provided in the last phase which is represented by Chapter 6 and Chapter 7 of the thesis.

1.7 DEFINITIONS OF TERMS

The following terms, which have been repeated frequently, are defined to reflect the specific meanings they carry in this study.

Accounting Subjects: The Accounting Sub-Committee of the Council for Higher Education Planning classified the subjects in the accounting curriculum into three groups as (1) Accounting Subjects, 2) Basic Subjects and 3) General Subjects. Thus, the term 'Accounting Subjects' refers to all the accounting subjects included in

the current accounting curriculum. They included 22 compulsory subjects covering consisting of 69 semester hours of Financial, Cost, Government, Tax and Auditing subjects. A complete list of these subjects is presented in table 4-8 of Chapter Four.

Basic Subjects: These are the business and social science-related subjects specified in the Iranian accounting curriculum. They include 17 compulsory subjects consisting of 53 semester hours in the areas of business, economics, mathematics, management and social science. A complete list of these subjects is presented in table 4-8 of Chapter Four.

Council for Higher Education Planning (CHEP): One of the departments attached to the High Council of Cultural Revolution (HCCR), and is responsible for policy making and curriculum development for the higher education sector.

Council of Fundamental Change in Education (CFCE): One of the departments attached to the HCCR, and is responsible for curriculum development in the primary and secondary education sectors.

Cultural Revolution Council (CRC): A central government council responsible for policy making and administration of the country's education system during 1979-1985.

Curriculum: "A systematic group of courses or sequences of subjects required for graduation or certification in a major field of study" - Dictionary of Education (Good, 1959: 149).

Developing Countries: This generic term refers to a group of countries which share some common characteristics of underdevelopment. Kohler's Dictionary defines

them as "Countries which have not developed a modern economy with a supporting industrial base"- (Cooper and Ijiri, 1983: 303).

Accounting Educator: One who is engaged in teaching accounting at a university or a similar higher education institution as a full-time member of its academic staff.

General Subjects: Non-accounting and non-business subjects specified in the current Iranian accounting curriculum. They include 8 compulsory subjects covering 20 semester hours of Persian and English languages, physical education, and religion-based subjects. A complete list of these subjects is presented in table 4-8 of Chapter Four.

High Council of Cultural Revolution (HCCR): A central government council responsible for policy making and administration of the country's education system after 1985.

Iranian Auditing Organisation (IAO): A government organisation responsible for auditing of accounts in the government sector.

Iranian Institute of Certified Accountants (IICA): A professional body of Iranian accountants and auditors, which is not recognised by the government for official auditing purposes.

Ministry of Culture and Higher Education (MCHE): The ministry responsible for administration of higher education in Iran after 1979.

Ministry of Education (ME): The ministry responsible for policy making and administration of the entire education system since 1912.

Ministry of Science and Higher Education (MSHE): The ministry responsible for policy making and administration of higher education during 1968- 1979.

Accounting Practitioners: All those who serve as practising accountants. They include not only the accountants or auditors employed by private, government or semi-government organisations but also the independent accountants or auditors who provide auditing, taxation or management advisory services to clients.

Private Sector: That portion of the total economy in which economic units are owned by private investors.

Government Sector: That portion of the total economy in which economic units are owned exclusively by the government.

Semester Hours: Number of class meeting hours required for a subject. For a 3-semester hour subject, for example, a student is required to complete 3 hours of class work per week.

Semi-government Sector: That portion of the total economy in which economic units are owned jointly by the government and private investors.

CHAPTER TWO

Accounting Education in Developing Countries: A Literature Review

2.1 INTRODUCTION

‘Developing countries’ (DCs) is a generic term and refers to a heterogeneous group of countries which share some common characteristics of underdevelopment. These countries, however, are different from each other in terms of their GNP, population, culture, and economic and political systems. Moreover, various definitions and classifications of DCs exist. Therefore, this review includes studies based on countries that have been described by their authors as ‘developing’, ‘third world’, or ‘less-developed’.

Research into accounting education and practice in these countries has begun from an early normative interest in the contribution of accounting to economic development. This was followed by some studies aimed at identifying the merits of a policy of transferring accounting technology from developed countries to DCs as a means of enhancing accounting education and practice in these countries. The next series of studies in this area examined the harmful effect of this policy in the context of cultural differences and specific needs of DCs. Another significant part of accounting research dealt with the problems faced by individual countries or by all developing countries as a whole. Finally, the literature included studies concentrating on the development of models or strategies for enhancing accounting education and practice in DCs. Based on these specific aspects, the relevant literature is reviewed in this chapter under the following topics: (1) Accounting and economic development, (2) Transfer of accounting technology from developed countries, (3) Inappropriateness of

the 'transfer of technology' policy, (4) Problems confronting accounting education and practice in developing countries, and (5) Strategies for enhancing accounting education in developing countries. In addition, the chapter also presents a brief review of the studies specifically dealing with accounting education in Iran because they are directly relevant to this thesis.

2.2 ACCOUNTING AND ECONOMIC DEVELOPMENT

Economic development became the major global issue after World War II. An urgent need for embarking on development programmes and raising living standards particularly in developing countries was widely expressed. The United Nations through its various agencies as well as individual researchers conducted many studies on the causes of underdevelopment in the Third World, and one of the basic causes diagnosed was the lack of reliable, timely and accurate accounting information. Obviously, such information is indispensable for the formulation, selection, and implementation of development projects in any country. Therefore, the lack of accounting information was seen as a significant barrier to economic development in DCs. Consequently, many scholars mostly from developed countries conducted studies with a view to identifying ways and means of improving accounting information systems in these countries. The results of such studies were reported in the literature mainly in the 1960s.

One of the pioneering studies which examined the role of accounting in economic development in DCs is by Enthoven (1965). He was particularly concerned with the effect of accounting information on capital formation. In this regard, he commented that

When no accurate data are generated from the lower (industry and trade) level, the aggregate figures will have little validity or meaning. Necessary loan and equity capital is not likely to be forthcoming from domestic and foreign sources unless investors or lenders have a good

idea of the status and prospects of the enterprise. The underdeveloped nations depend for a high proportion of their capital formation on the inflow of foreign investments, and the success of attracting investors is highly influenced by the financial climate (Enthoven, 1965: 31).

Generally, if a country is to progress economically, its accounting system should provide the required information timely and accurately to all parties involved in the planning, implementing and controlling of development projects. Unfortunately, in most developing economies accounting is not viewed as a tool for such managerial purposes (Enthoven, 1967). It is used basically for the accumulation of historical data for financial statement and auditing purposes. Referring to this aspect, Enthoven stated that

The area of accountancy which is most important to the economic development process is industrial (cost or management) accountancy. This area assists development programming in determining and improving efficiency and productivity; selecting the optimum products; assessing the scale of production to established; setting price policy; inventory valuation and control; allocation of costs to proper sectors and products; plant utilisation; remuneration of the factors of production; product feasibility; and many other vital aspects needed for efficient, productive, and profitable operations. The efficiency and effectiveness of such accountancy at the micro level will clearly leave its impact at the aggregate level and on the country's economic development course (1967, 190).

In addition to Enthoven (1965, 1967, 1973 and 1978), a few other researchers (Englemann, 1962; Low, 1967; Scott, 1970; Samuels and Piper, 1985) as well as two accounting bodies (AAA, 1976, 1978; AICPA, 1964) devoted special attention to the issues relating to the role of accounting in economic development in DCs. One of the common findings of these studies is that the shortage of skilled manpower at all levels and professions including accounting has been a major constraint to the effective implementation of development plans in DCs. Therefore, they concluded that improving the training of accountants should be a priority in the development process of these countries. As such, the enhancement of accounting education received the attention of numerous organisations and individual researchers throughout the world.

Scott (1970) focused his study on enterprise accounting as an aid to economic development. He first explored the several dimensions of the accounting and economic development relationship at both the micro and macro levels. Then he used this relationship as the basis for putting forward conclusions which suggest the role which enterprise accounting should have in economic development and the action which governments, companies, and accounting societies should take to ensure that accounting fulfils this role. Scott was disappointed to see that development economists failed to recognise the importance of accounting to economic development. In this regard, he made the following remarks:

This non treatment of accounting appears to indicate that development economists are not aware of the importance of accounting to economic development; or that accounting is thought to be in some sense “given” in that it is considered unalterable, or is assumed to be either adequate, or adequately elicited as development proceeds (Scott, 1970, p viii).

2.3 TRANSFER OF ACCOUNTING TECHNOLOGY FROM DEVELOPED COUNTRIES

In the early 1960s many accounting scholars and organisations in both developed and developing countries believed that enhancing accounting education and practices in DCs would be possible through financial and technical assistance from developed countries (i.e., Brookner and Heilman, 1960; Engelmann, 1962; Low, 1967; Salas (1967). According to Engelmann (1962),

If technical assistance programs in developing countries are to succeed in expanding local business and industry, an educational program in the field of accounting is essential (Engelmann, 1962: 53).

Salas (1967) conducted a survey of accounting education and practice in several Spanish Latin American countries (Argentina, Bolivia, Chile, Colombia, Central Guatemala, Dominican Republic, Ecuador, Mexico, Paraguay, Peru, Uruguay, Venezuela and five other central American countries). He concluded that most of the problems associated with accounting education in Spanish Latin America could be

satisfactorily overcome by obtaining effective assistance from American universities. Another study in the area of transfer of accounting technology was conducted by Chu (1969). Chu asserted that the shortage of accounting educators was a major obstacle to the development of accounting in Taiwan, and it could be overcome by setting up suitable exchange programmes with developed countries.

The Committee on Accounting in Developing Countries of the American Accounting Association made some detailed recommendations on how the Association should participate in the improvement of accounting education and practice in DCs (AAA, 1976). Enthoven who was one of the members of the aforesaid committee stated that

Various forms of technical assistance may be required if accountancy improvements and plans are to be implemented on a country and regional level. In the first instance, associations in the various branches of accounting, and educational and training institutions in both developed and developing countries should become actively involved. This may well become the function of an International Accounting Development Association, or any other vehicle of international technical assistance (Enthoven, 1976: 139).

Furthermore, the Committee on International Accounting Operation and Education of AAA suggested a framework of accounting educational assistance for the Association. The Committee believed that the AAA could play a vital role in spurring accounting education, research, development, and technical assistance to developing nations (AAA, 1978:103). It also indicated that accounting instructional, curriculum and instructor development is possible through outside financial assistance (AAA, 1978: 79).

In 1983, Enthoven in a paper entitled *U.S. Accounting and the Third World* suggested the establishment of a U.S. accounting assistance coordinating body for the purpose of better coordinating all programmes of assistance (1983: 116). His conclusions in the paper included the following:

Most U.S. accountants are not directly involved in international accounting, but they should be aware that a greater national role in the accounting development of Third World is warranted. Such a role would assist developing countries in their economic progress and would also be in the best interest of the U.S (Enthoven, 1983: 118).

2.4 INAPPROPRIATENESS OF THE 'TRANSFER OF TECHNOLOGY' POLICY

Although the policy of transferring accounting technology from developed countries to DCs was hailed by a considerable number of writers in the 1960s, from about the latter part of 1960s, however, many writers began to point out that such a policy could not provide a satisfactory solution to the problem of producing accountants who are capable of meeting the accounting information needs of DCs. They argued that because of the differences in cultural, social and economic conditions in DCs, the transfer of accounting technology from developed countries could not solve the accounting related problems of such nations, and, instead, it has become an obstacle to the development of their own systems of accounting and accounting education which are more appropriate and effective in the context of the above differences (Seidler, 1967; Samuels and Oliga, 1982; Perera, 1989; Hove, 1986 and Mueller, 1988). Siedler (1967) who was the first to criticise the above policy emphasised that the transfer of accounting curriculum and teaching material from developed countries to Third World countries was neither able to solve the problems of accounting practice nor develop the status of accounting education in these countries. He concluded that DCs should take steps to develop accounting curricula and teaching material to suit their own cultural and economic conditions.

Seidler (1967), who was a visiting professor at the Robert College of Istanbul in Turkey during 1962-65, conducted an exhaustive research on accounting education and practice in that country with the help of some Turkish accounting students. He pointed out that the undergraduate programme in business or accounting in Turkey was similar to the usual programme offered in American undergraduate business

schools (Seidler, 1967: 241). He revealed that the accounting graduates of Turkish universities were dissatisfied with their abilities to work in the national development programmes (Seidler, 1967: 241).

An important institutional study which has addressed this issue is by the Committee on International Accounting Operations and Education of the American Accounting Association. The results of this study are given in a report produced by the committee under the title of *Accounting Education and the Third World* (AAA, 1978). Stressing the harmfulness of direct copying of foreign accounting systems by DCs, the Committee made the following remark:

The accountancy education pattern to be followed or set up must take into account economic aims and means. Merely to copy educational systems from abroad, without assessing them in the light of the countries' requirements, is not very useful. Furthermore, much that is adhered to abroad in education does not have general applicability in a technological age. It needs to be adapted in order to be adopted.

The lack of this correlation between educational requirements and the socio-economic environment is one of the great weaknesses in many Third World economies (AAA, 1978: 19).

Mueller (1988) was one of the leading critics of this policy. Referring to the direct transfer of technology, he said that

In practice, however, the transfer mechanism is much like yesterday's colonialism - major elements of the Dutch accounting system, for example, were transferred to Indonesia, a former Dutch colony; the French system was transferred to former French colonies in Africa and the South Pacific; the British system to most Commonwealth member countries (Mueller, 1988: 80).

Similar views were expressed by Mueller (1988) particularly regarding the use of foreign training and examination systems for producing local accountants in DCs.

The problem becomes especially acute when a specific domestic training and examination system, geared to produce a domestic professional qualification, is administered in developed countries to enhance the local supply of qualified accountants. It's really a form of accounting colonialism: these people are "qualifying" on someone else's terms and conditions (Mueller, 1988: 83).

In conclusion, Mueller conceded that the experience of the 1960s and 1970s on economic development assistance may have taught Third World leaders that "effective self-help is the golden rule of development" (1988: 79). According to him, the direct transfer of Anglo-American accounting technology in DCs has lead to an appalling waste of resources. He also believed that the efforts of IFAC, IASC and other the international organisations were not helpful to Third World countries. Mueller supported the view held by Hove (1986) and many other scholars of the Third World that only education and training systems developed specifically on the country basis, using indigenous sources, are the real hope for success in accounting education and practice in DCs (Mueller, 1988: 81).

Scholars such as Perera, (1989) and Gray, (1988) pointed out that the cultural values, business environment, business ownership structures and attitudes towards information disclosure in DCs tend to differ greatly from those of the developed countries, and, therefore, the accounting education and practice of these countries should be relevant to their inherent differences. Using the theoretical framework developed by Hofstede (1983) (i.e., individualism versus collectivism, large versus small power distance, strong versus weak uncertainty avoidance, and masculinity versus femininity), several writers have attempted to explain the effect of cultural values on accounting education and practice of DCs in the last decade (Perera, 1989 and Gray, 1988).

Briston and Hadori (1993) showed that the training model designed for DCs by the International Federation of Accountants has been based on the UK education system

and is not applicable to a developing country like Indonesia which is significantly different from the UK in terms of many cultural and economic factors.

Another study which addressed similar issues was by Donleavy (1994). He examined the applicability of the IFAC's codified education guideline Number 9 (IGE 9) to less developed countries (LDCs). Donleavy speculated that its key prescriptions are highly influenced by the Anglo-American accounting education and practice. Accordingly, his observations indicate that IFAC has not considered cultural and economic conditions of less-developed countries in formulating its education guidelines (Donleavy, 1994: 93).

Secord and Su in 1994 presented an empirical analysis of culture and accounting models in the developing countries of Asia. The results of their study reveal that the common feature of national culture leads to common elements of basic accounting practice and different accounting systems (1994: 19). In 1995, Pok added to this discussion by providing the results of an exhaustive research on the effects of culture on accounting education of Papua New Guinea (PNG). He concluded that the nationality (i.e., developed countries or developing countries and PNG nationality) and the place that accountants received their last education are two important cultural issues that should be considered by policy-makers when developing accounting education policies for PNG (Pok, 1995: 177). Markell (1968) held a similar view in respect of accounting education and practice in Israel.

Although many discussions have been added to the accounting literature on the cultural issues of accounting education and practice, a few writers in recent years have cast doubts about the validity of such discussions. Baydoun and Willett (1995), for example, have questioned the irrelevance of Western accounting systems to DCs on cultural grounds. They argue that the literature is vague in its assessment of exactly what aspects of Western accounting systems are irrelevant to the needs of

DCs. They claim that it is not clear in the literature that the needs of a user of accounting information are different in kind or in degree in various DCs.

In particular, it was suggested that the charge of irrelevance aimed at an accounting system applied to a developing society was most likely to be substantiated against disclosure rules than against the underlying fundamental recording systems upon which most accounting information is based. This led to an extension of the Hofstad-Gray theory which redefined the concepts of Uniformity, Conservatism and Secrecy in terms of the physical characteristics of financial statements (Baydoun and Willett, 1995: 88).

2.5 PROBLEMS CONFRONTING ACCOUNTING EDUCATION IN DEVELOPING COUNTRIES

In addition to the debates centred around the transfer of accounting technology, many academic discussions on the problems confronting accounting education and practice in DCs are available in the literature. While some of these discussions concentrate on issues common to all DCs, most of them address the problems specific to individual country situations.

A comprehensive study on the problems associated with accounting and accounting education in DCs was conducted by the Committee on Accounting in Developing Countries of the AAA during 1973-1975. The study was based on the perceptions of accounting educators and practitioners in several DCs, which were sought through two mailing questionnaires. According to the findings of this study,

1. The opinions of the participating experts provide a rough ordering of the relative importance of the major accounting practice and education problems and their causes in developing countries.
- 2 The study shows that many of the most important accounting practice problems are believed to result from important causes deeply rooted in accounting education (AAA, 1976: 211).

Five extremely important accounting education problems in DCs and their extremely important contributing problems as perceived by the respondents to the AAA questionnaire are presented in Table 2-1.

Table 2-1

Extremely important accounting education problems and their extremely important reasons, perception of respondents to the AAA's questionnaire

Extremely Important Problem	Extremely Important Reason
1. Locally-Authored Accounting Textbooks are Inadequate	The accountants most qualified to write texts are too busy with other concerns.
2. Inadequate Teaching of Accounting Subjects at the college Level	Accounting instructors often occupy several other positions in companies, government and public accounting firms for the purpose of supplementing their low teaching salaries and they do not have time for adequate class preparation.
3. Lack of Qualified Accounting Instructors at the college level	There is a general shortage of qualified accountants and educators. College teaching careers are not adequately rewarded financially and this has discouraged many qualified individuals from teaching careers.
4. Lack of Professional Development Opportunities for Accounting Educators and Practitioners.	None
5. Inadequate Accounting Education for managers and Prospective Managers.	The accounting education of engineers and scientists who became managers is limited to the bookkeeping aspects of accounting, or they receive no accounting training at all.

Source: American Accounting Association, Committee on Accounting in Developing Countries, 1973-1975, "Report of the Committee on Accounting in Developing Countries", *The Accounting Review*, Supplement to Volume XLXI, 1976, p. 205.

In 1977, Enthoven made an attempt to assess the accounting problems of African and Asian countries including Iran. He speculated that accounting education in these countries suffers, in general, from:

1. too much financial enterprise accounting and auditing,
2. teaching with often outdated foreign texts,
3. very theoretically based, lecture-oriented and void of adequate cases,
4. inadequately geared to managerial and economic circumstances,
5. insufficiently "information measurement" oriented, i.e., void of both a usable micro and macro economic approach (Enthoven, 1977: 88).

Another study on this aspect of accounting was conducted by the Committee on International Accounting Operation and Education of the American Accounting

Association (AAA, 1978). This study concentrated on accounting education in the Third World in general and in five DCs in particular. The accounting education problems analysed by this study were summarised by Enthoven (1983: 112) as follows:

- Accounting is still taught as if it was a technical skill instead of as an intellectual discipline.
- Special fields of accounting, for example, farm accounting, bank accounting and industrial development accounting, for which a great need may not be taught at all.
- Attention to operational and managerial auditing tends to be limited.
- Generally no clearing house for information and publications exists.
- An upgrading of teachers-the development of adequate staff pay for teachers-is needed.
- Teaching aids, for example, texts, labs and projectors, tend to be deficient, and not enough funds are budgeted for them.
- Workshops are needed for accounting educators, practitioners and students.
- Interest in activities, such as conferences and seminars, that expose students, staff and practitioners to developments in accounting may be limited, and accounting training may lack content and motivation.
- Most governments take a limited interest in accounting training and upgrading.
- Educational institutions, in conjunction with government agencies, may have to assess the number of accountants needed and their education requirements.

In a similar extensive study in 1978, Briston analysed the origins of accounting education and practice in DCs. He concluded that

So far no developing country has been able to construct a system of accounting designed primarily to meet its own information needs. In all cases, the external pressures referred to earlier have been too great, and western influences have dominated both education and practice (Briston, 1978: 116).

Foo (1988) conducted a comparative study on accounting education systems in Indonesia and Singapore. According to his observations, although Singapore and Indonesia are both classified as developing nations, due to cultural, political, and historical reasons, their accounting educational systems differ in structure as well as in quantity and quality of the accounting graduates produced. This study found that Indonesia's underdeveloped economy parallels its underdeveloped accounting system. As with many former colonies, the influence of the former colonial master, in this case the Dutch, is still significant in Indonesia. The peculiarity of Indonesia, however, is the coexistence of U.S. influences with Dutch accounting systems, which give rise to dualism in accounting practices and difficulties in coordination. In the case of Singapore, accounting development and practices are still predominantly influenced by the British models of accounting education (Foo, 1988: 135).

In 1992, Lin and Deng examined the evolution of accounting and presented the current status of accounting education in China. They provided a complete list of accounting education problems which are quite similar to those referred to by Enthoven and others in respect of many other developing nations.

2.6 STRATEGIES FOR ENHANCING ACCOUNTING EDUCATION IN DEVELOPING COUNTRIES

There are many studies that have attempted to formulate strategies for overcoming some of the problems discussed in the previous section and enhancing accounting education in DCs. These studies can be categorised into two groups. The first group considers strategies for solving problems common to all developing nations as a whole. The second group includes studies devoted to the formulation and recommendation of strategies for enhancing accounting education in a specific country or region.

The first comprehensive proposal for improving accounting education in developing nations in general was by Scott (1970). His proposal articulated a user-oriented accounting framework which was referred to by the author as “Economic Evaluation Accounting” (EEvA). It involves a “fresh start” approach and a liberal arts-based curriculum. According to Scott, EEvA requires structuring the accounting system to provide information that will facilitate the economic evaluation of enterprises and the activities of management, investors, and the government (Scott, 149). Thus, EEvA appears to have been based on the economic development objective of the Third World.

The second comprehensive strategy, perhaps the most authoritative, was proposed by the Committee on International Accounting Operations and Education of the American Accounting Association. This proposal, which is referred to as Economic Development Accountancy (EDA), calls for the application of existing and potential accounting systems, techniques, procedures, and data to enhance economic development within a nation or nations. Its basic approach is to integrate all branches of accounting to serve both micro and macro socio-economic decisions effectively. As with EEvA proposed by Scott, EDA also assumes that the overriding goal of accounting in developing nations is the economic development of those countries.

In 1987, Tipgos presented a critical evaluation of the EEvA and EDA approaches and argued that both approaches are defective, and even myopic primarily because EEvA and EDA assume that the underlying objective of accounting in DCs is the economic development of these countries.

Tying the objectives of accounting in Third World countries to the economic development of such countries is not only conceptually defective, but also myopic from a planning standpoint. Such a narrow view of accounting disregards the inner dream or goal of educated individuals to attain professional status, comparable with that of other professionals (Tipgos, 1987: 387).

However, he acknowledged that EEvA and EDA are certainly an excellent first step towards improving accounting in DCs. As an alternative to EEvA and EDA, Tipgos proposed a new model which he referred to as a “Two-tiered Education System” (TES). The purpose of the model, according to Tipgos, is to (1) improve accounting education in general, (2) to provide the accounting man-power needs of economic development, and (3) to allow the accounting profession in Third World countries to develop. This model is based on the following four general propositions:

- Economic development in a given country is the result of a concerted and coordinated effort of all the social institutions in the country, and accounting is just one of these institutions, irrespective of the importance of its contribution.
- The accounting profession in the developing countries has certain higher-level goals regardless of its stage of sophistication; therefore, its development should *not* be exclusively tied to or dependent upon the socio-economic development of the country.
- Because of the interdependence of accounting education and accounting practice, any plan to improve accounting in developing countries must provide for a simultaneous improvement of both these sectors of the accounting profession.
- Any form of assistance, present or future, should be offered and implemented on the basis of the first three propositions (Tipgos, 1987: 391-92).

TES consists of two levels. The first level is a two-to-three year paraprofessional course designed to equip the students with the basic accounting skills needed in the development of the country. The second level, lasting two to three years, would give students the opportunity to attain full professional status. According to Tipgos, TES has overcome some of the weaknesses of both EEvA and EDA.

Another important study which examined the possible ways of improving accounting education was by Enthoven (1977). He concluded that extensive efforts should be made to revise accounting education systems in these countries. He emphasised the

need for changing the traditional lecture method to a case-study for giving a more practical approach to the teaching of accounting. He also made the following suggestions:

A better economics and finance based, plus mathematical models, should be incorporated adequately in the curriculum. Focus should not be solely on training technicians or vague theorists. A well balanced teaching approach should be instituted. Academically trained accountants should have an understanding of the broader dimensions of accounting and help spearhead future implementation models. Training for academically oriented accountants should be evaluated thoroughly as part of overall accounting needs and training availabilities (Enthoven, 1977: 89).

Enthoven devoted further attention to this aspect of accounting in 1981 in his book *Accounting Education in Economic Development Management*. In this book he evaluates the status of accounting education in five regions and fifteen individual countries in the Third World. His evaluation of the educational elements in DCs enabled him to draw a picture of Third World accounting education and come up with some valuable recommendations.

A major university's task is certainly to prepare students for a profession. As the students generally, according to their talent and professional opportunity, reach a position of responsibility eight to ten years after completion of their studies, the education must have a prospective character, i.e., there must be included in the teaching programs those problems with which the student will be confronted in ten years (Enthoven 1981: 70).

He emphasised that universities in DCs should play a more active role in accounting education with a greater attention being paid to the accounting curriculum. He presented four basic elements to be considered when designing new accounting curricula for universities in DCs.

- The need of the country

- Resources available
- The direction the country wants to go (socio-economic planning)
- Inventory of current courses and programs (Enthoven 1981: 79)

Hozler and Chandler (1981) proposed a systems approach to the teaching of accounting in DCs. They viewed the accounting establishment as a complex system consisting of the accounting function in private and governmental enterprises, government agencies, the accounting profession, and educational institutions teaching accounting. They identified shortage of qualified staff and inappropriate curricula as the two key problems confronting accounting education in developing nations and claimed that the systems approach they proposed should help in solving these problems.

In an attempt to ease the problem of producing accountants in DCs, the International Federation of Accountants (IFAC) developed a set of guidelines in 1987 for training of accounting technicians who work as support staff for qualified accountants. The IFAC proposal was primarily intended for those countries which suffer from a shortage of accountants to adopt the proposed accounting technician's training program (IFAC, 1987).

Mueller (1988: 81) presented four alternative approaches to the training of accountants in developing nations. These approaches included: (1) the professional technology approach, (2) the independent professional approach, (3) the sub discipline approach, and (4) the full-discipline approach.

He also held the view that accounting academics and professional accountants in developed countries have a responsibility to help DCs in developing their accounting potential. In this regard, he indicated three possible avenues: (1) educational research in a-specific country base, (2) specific country case studies, and (3) joint textbook

writing, participating in seminars, conferences and colloquiums (1988: 83). However, he stressed that the real challenge for such external advisors is to remember that every DC is unique with its own culture and language, and, therefore, any research they carry out and any recommendation they make must reflect that uniqueness.

In a recent study, Briston and Wallace (1990) described the unique experience of Tanzania in improving and developing her accounting education system. According to them, Tanzania has demonstrated the feasibility of an approach aimed at satisfying her own perceived information needs. Although Tanzanians have made use of outside assistance, they are very much different from their counterparts in other DCs in utilising such assistance.

Where the Tanzanians have differed from so many other developing countries is that they have been selective in their adoption of practices from elsewhere. While other countries have chosen to adopt either the United Kingdom/United States, or the French or the Russian system in its entirety, the Tanzanians have made an *ex ante* decision concerning their requirements and have chosen and adapted, where necessary, those components of existing systems which meet their needs (Briston and Wallace, 1990, 296).

Accordingly, Briston and Wallace believed that the Tanzanian approach to the development of accounting education and practice should be followed by other nations in the Third World if they want to find better solutions to their problems.

The idea of enhancing accounting education and practice has received greater attention after 1990. Wallace and Briston (1993: 206-209) examined three alternatives or approaches to the improvement of national accounting infrastructures in DCs. These approaches are: Dependency approach, Self-Reliance (without foreign assistance) approach, and Self-Reliance (with foreign assistance) approach. They viewed the dependency approach as an avenue of transferring accounting practices

from developed countries to DCs without due regard for its relevance to the host nation's socio-economic needs (Wallace and Briston, 1993: 207). They also recognised the fact that the self-reliance (without foreign assistance) approach is not applicable in DCs because of the lack of motivation, the will or self-confidence. Therefore, they believed that the third approach, which is a middle path, should be followed by developing nations. The Tanzanian system cited above is an example of this middle-path approach.

Wallace and Briston (1993) recommended that surveys on national accounting infrastructures at the global level should be conducted to reveal the needs and ability of DCs to grant assistance. They also recommended that regional centres should be created for continental and sub-continental co-ordination of conferences and workshops at regular intervals for enhancement of accounting education in the related region. The other means of improvement is to provide sufficient funds to enable capable students of DCs to undertake doctoral projects related to Third World problems in selected universities (Wallace and Briston, 1993: 219-220).

Many of the research on accounting education in DCs in the 1980s and 1990s were based on individual country situations. Studies conducted by Markell (1985) in Botswana, Shuaib (1985) in Kuwait, Chaderton (1990 and 1994) in Caribbean countries, Rivera (1990) in Panama, Juchau, White and Hopkins (1986) in Southwest Pacific Region, Wallace and Pendlebury (1994) in African countries and Nadzing (1994) in Southern African Development Conference countries are some of the examples. Most of the authors have concurred that accounting practice of these nations is not geared to the related economic needs. Thus, there is a common consensus among these authors that accounting practice in DCs is weak and needs improvement (Wallace and Briston 1993). Enhancement of accounting education, therefore, is considered a vehicle for improving accounting practice.

The accounting education enhancement alternatives as discussed by these authors can be classified into the following broad areas:

1. Curriculum development
2. Teaching methods improvement
3. Teaching staff development
4. Graduate studies development

Curriculum development as an important element of accounting education draws attention of scholars from both developed and developing nations. Many writers believe that curriculum is the core of accounting education at all levels and, therefore, accounting practice will improve as a result of an improved accounting curriculum. However, the common view of these writers is that the accounting curricula in DCs are based almost entirely on those of the developed Western countries and, therefore, they do not cater to economic needs of those countries. Thus, they suggest that universities in DCs revise their accounting to suit their own cultural and economic needs. Table 2-2 presents a list of authors who have conducted several country-based studies in the area of curriculum development in accounting.

Table 2-2
Studies on issues relating to the accounting curriculum in developing countries

Author	Date of Study	Place of Study
Ninsuvannakul	1960	Thailand
Turgut	1976	Turkey
Charney	1978	Ghana
Shuaib	1985	Kuwait
Agami and Alkafaji	1987	Six Arab Countries
Abdeen and Yavas	1987	Saudi Arabia
Osegu	1987	Nigeria
Wallace	1987	Nigeria
Qtashita	1988	Jordan
Sishtla	1989/1990	India
Lin and Deng	1992	China
Min, Song and Kim	1993	Korea
Benerjee	1994	India
Chaderton	1990	Barbados

Several researchers who concentrated on the teaching method improvements believed that the passive lecturing methods used in universities are ineffective and should be changed to include other methods which could more satisfactorily develop students' decision making, analytical and problem solving skills [Shiltla (1989, 1990), Benerjee (1994), Lin and Deng (1992), and Agami and Alkafaji (1987)]. They also recommended the use of case studies based on local business and non-business entities, research material and class discussions in the teaching of accounting subjects.

Some of these studies also address the problem of inadequate compensation for accounting educators. Many university lecturers in these countries are engaged in income-generating external activities to supplement their income. Consequently, they devote relatively much less time to teaching, research, curriculum development, and continuing education. Results of the studies by Agami and Alkafaji (1987) in Arab countries, Shuaib (1985) in Kuwait, Lin and Deng (1992) in China and Akathaporn, Novin and Abdolmohammadi (1993) in Thailand have well demonstrated this problem.

2.7 STUDIES BASED ON ACCOUNTING EDUCATION AND PRACTICE IN IRAN

Accounting research based on Iran is extremely limited. Nevertheless, the few studies available provide a considerable amount of information on the early and existing status of accounting education in Iran.

The first and the only comprehensive study based on this area of education in Iran was by Khodadoust (1975). Her PhD dissertation on *Private Industrial Development and Change of Accounting Education and Profession in Iran* gave a clear picture of the relationship of accounting education and practice to economic and industrial development of Iran in the early 1970s. Referring to the nature and status of accounting education existed at that time, she concluded that:

...accounting education has not been fully geared to the country's industrial and social evolution, and that the Iranian accounting profession is still in the early processes of formation and does not enjoy the recognition it deserves (Khodadoust, 1975: 339-40).

She made a number of valuable recommendations which could bring about improvements in several key areas of accounting education such as curriculum, methods of instruction, textbooks, academic staff, research, libraries and graduate programmes (Khodadoust, 1975: 353-60). More specifically, they included the following:

1. University accounting programmes should provide a more liberal and broad-base education.
2. Efforts should be taken to increase the number of high-quality accounting programmes to meet the needs of quality indigenous accountants.
3. The Iranian accounting curriculum should place emphasis on a systems approach.
4. The training of accountants should be redirected towards managerial accounting techniques such as cost accounting systems, customer accounts analysis and billing, budgeting and elementary financial forecasting.

5. Accounting education programmes should train students to question the value of traditional procedures rather than accept them without enquiry.
6. The accounting curriculum should be standardised in various accounting schools.
7. Some of the important subjects such as economic development, accounting theory and philosophy, accounting for developing countries, social and behavioural accounting should be included in the curriculum.
8. Co-operation between schools and institutes of accounting should be encouraged by the Ministry of Culture and Higher Education (MCHE) to pool the resources and ideas for critical evaluation and advancement of a uniform accounting curriculum.
9. The services of graduate students should be used in teaching the technical and problem-solving portion of accounting to undergraduates so that the accounting professors could devote more time to the teaching of underlying concepts and theories, and conducting research.
10. The size of accounting classes must be reduced to a smaller level in order to permit changes in instruction methods of passive lecturing to more communication between the professor and students.
11. The low salary of accounting academics should be supplemented with additional earnings to make academic work more financially comparable with other professions so that it could attract more high quality full-time accounting professors.
12. Better financial incentives should be provided for writers of quality textbooks and other accounting publications to develop accounting literature in the local language.
13. Research on accounting with special emphasis on the problems of Iran should be encouraged by universities. Research should be conducted by academics research assistants and graduate students.
14. A centre for accounting research should be set up with effective financial and academic staff participation of all Iranian accounting schools and other higher education institutions.
15. Iranian accounting libraries should be improved quantitatively and qualitatively.
16. The Iranian accounting students should be required to have sufficient knowledge of the English language to enable them to utilise the wealth of accounting thought and research material hidden in the libraries.

17. A graduate programme of accounting must be developed and improved with emphasis on accounting theories, accounting thought and concepts as well as research, with less emphasis on applied accounting.

Enthoven (1977) who conducted extensive research on accounting education relating to many countries in the Third World was the next to examine the nature of Iranian accounting education. He concluded in his study in 1977 that accounting education in Iran suffered from the lack of recognition on the side of the government and was in need of great development. His remarks in this regard were as follows:

In general, accountancy education has been neglected and vast efforts are required to spur training on for upper, middle and lower-level accountants. Accounting as a discipline has not been adequately recognised; it has been too fiscal oriented and the government has not recognised its function in the development context (Enthoven, 1977: 343).

In another study conducted in 1981, Khodadoust examined the status of accounting education and profession in Iran prior to the Islamic Revolution of 1979. In this study, she compared the findings of her first study with the results of similar studies conducted in other DCs after 1975. She concluded that the results of her first study and those of the other studies revealed the same accounting problems in DCs (Khodadoust, 1981: 181). In addition, she pointed out that the remedial strategies that were proposed in her 1975 dissertation were not implemented and they were still valid in the context of Iranian socio-economic conditions. Therefore, she included most of them again in the 1981 study as her recommendations for improving accounting education in Iran (1981: 214).

In a very recent study, Novin and Saghafi (1994) conducted a questionnaire survey to identify a set of factors obstructing the development of accounting education in Iran and to determine the effectiveness of four remedial strategies designed for solving the identified problems. The strategies used for this purpose included training and upgrading accounting educators, focus on relevant accounting education, development

of local textbooks and closer co-operation between accounting academics and practitioners. According to the findings of their study, the means of improving accounting education in Iran, in the order of their degree of effectiveness, are as follows:

1. Enhancing accounting curriculum
2. Providing practical training during studies
3. Training and upgrading accounting academic staff
4. Writing accounting textbooks in Farsi
5. Educating government officials about the role and benefit of accounting for economic development
6. Encouraging co-operation between universities and the accounting profession
7. Enhancing usage of computer in accounting.
8. Enhancing publication and distribution of accounting journals
9. Encouraging continuing education for accountants
10. Encouraging students' accounting society (Novin and Saghafi, 1994: 136).

Novin and Saghafi (1994: 136) concluded that Iranian accounting curriculum which is based on the American system places heavy emphasis on the financial accounting aspects of accounting. They recommended that the emphasis be shifted to government accounting, taxation, and cost and managerial accounting. This research also reveals that the Iranian accounting curriculum is weak in the areas of information systems and use of microcomputers in accounting. These researchers suggested that more in-depth studies be undertaken to find out the type of accounting curriculum which can make the maximum contribution to the development of accounting education in Iran.

In 1991, in an attempt to explore the barriers to accounting education in Iran the Hesabdar (the Iranian journal of accounting) arranged a public discussion by a panel of seven accounting educators, practitioners and graduate students. At this discussion, the participants agreed on the following:

- The current accounting curriculum has both deficiency in coverage and unnecessary repetition in some subjects and topics.
- Some subjects and topics included in the curriculum are not relevant in the context of the business and economic conditions of the country.
- The prerequisites are not properly determined within the curriculum.
- In most accounting classes students have to rely almost entirely on their class-notes.
- The accounting curriculum has remained unrevised for over 12 years.

In order to enhance the effectiveness of the current accounting curriculum, the panel recommended that:

- Report writing should be added to the curriculum.
- Greater attempts must be made to improve the English proficiency of accounting students.
- Accounting information systems and computer applications in accounting should be added to the curriculum.
- The internship programme should be reintroduced.
- A permanent committee of accounting educators and practitioners should be set up to in charge of accounting curriculum development.

CHAPTER THREE

ACCOUNTING EDUCATION ENVIRONMENT IN IRAN

3.1 INTRODUCTION

Accounting education in Iran has been greatly influenced by three major environmental factors: the economic development programmes, the accounting profession, and the government policies on the overall education system in the country. Planning for economic development started from the middle of the twentieth century. Consequently, producing timely and accurate accounting information became an absolute necessity for planning and evaluating development projects. Because of the non-availability of an effective accounting information system in the country, the government made efforts to improve this situation by imposing statutory requirements on business enterprises, and by allocating more funds to higher education for producing the majority of accounting graduates locally while sending a considerable number of students to foreign universities for their studies in accounting. Although the accounting profession in Iran is still in its embryonic stage of development, it has also had a considerable degree of positive impact on the development of accounting education in the country. More importantly, since accounting education is a part the overall education system of the country, its current status is an outcome of the government's policies on education.

The effect of the above environmental factors on accounting education has increased more strongly after the 1979 Islamic Revolution. Therefore, the rest of this chapter attempts to review the nature and effect of these factors from an historical perspective.

3.2. ECONOMIC DEVELOPMENT

During the three decades prior to the Islamic Revolution of 1979, five economic development plans were implemented in Iran. These plans have had a significant influence on the development of accounting education and practice in the country. It was during this period that accounting as an independent and separate discipline entered the university level education programmes in Iran. As a result of the increased facilities provided to higher education through the economic, social and cultural development plans implemented after the Islamic Revolution, the number of universities and other higher education institutions with accounting as a separate discipline in their curricula increased sharply.

3.2.1 The economic development programmes prior to the Islamic Revolution

The first economic development plan was launched by the Iranian government in 1948 for a period of seven years. This plan did not achieve its goals primarily due to improper financial planning (Khodadoust, 1972: 113). The other major barrier to the success of this plan was the political conflict prevailed at that time. The British control over the Iranian oil industry had been a source of public protest since the establishment of the Anglo-Iranian Oil Company (AIOC) in 1908 (Halliday, 1979: 140-141). The National Front which was the main political party at that time campaigned strongly in favour of nationalising the country's oil industry. Therefore, Dr Mosadegh, the leader of the National Front who was elected to the parliament became the chairman of the Parliamentary Oil Committee. In the early 1950, the Iranian parliament passed the Oil Nationalisation Act and created the necessary law for the formation of the National Iranian Oil Company (NIOC) to replace the AIOC (Rajaipur, 1987: 139). Eventually, the public protests and demands forced the Shah to appoint Mossaddegh as the Prime Minister of Iran in 1951 (Rajaipur, 1987: 140). This was a great victory for the National Front. However, the British continued their

resistance against the oil industry nationalisation and called for a world-wide boycott of Iranian oil (Halliday, 1979: 140).

The boycott effectively stopped Iran's oil exports, and cut off oil revenues (Rajaipur, 1987: 140) which were absolutely necessary for economic development. As a consequence, the government was unable to carry out its declared economic, social, and political reforms. In 1953, when Mossaddegh's position as prime minister became weak a military coup overthrew his government and brought a pro-American military regime to power (Third World Editors, 1988: 320). Consequently, the Shah who had left the country was brought back to power again. Many pro-Shah members got elected to the parliament. Then, the new parliament empowered the Shah to enter into an agreement with a multinational oil consortium that comprised American, British, French and Dutch oil companies. The agreement allowed the foreign companies to be engaged in producing and selling Iranian oil after 1954.

The inflow of oil revenue that resulted from the above agreement enabled the government to develop and implement a second economic development plan in 1955. Like the previous one, this plan was also a seven-year programme based on only some sectors of the economy. According to Khodadoust (1975: 113), due to the lack of reliable statistical data this plan had not been realistically designed. The performance of the second plan necessitated a comprehensive economic development plan. In response to this necessity, the third development plan based on a five-year period was introduced in 1963. This was a more carefully designed plan. Particularly in terms of its achievements, the third plan was more successful than the first and the second (Looney, 1977: 20). One important reason for this achievement was that an increasing share of oil revenue had been allocated to developmental projects. This resulted in the setting up of a large number of government, semi-government and private companies in the industrial and commercial sectors of the country.

As the number of private and semi-government industrial and commercial enterprises was increasing, a stock market for facilitating share transactions became a necessity. Accordingly, the Tehran Stock Exchange (TSE) was established in 1968. The expansion of commercial and industrial enterprises and the establishment of a stock exchange had a significant positive impact on the development of accounting practice and accounting education in Iran. Some government universities added accounting as a subject to their curricula. A private higher education institution was set up in 1964 for the offering of complete programmes of studies in accounting. Another outcome of the third plan was the use of statistical and accounting data for evaluating the results of development projects.

A fourth plan was launched in 1968 for a period of five years. The increased oil revenue during this period furnished the necessary funds for successfully implementing this plan. The gross domestic investment which was only 421 billion Rials in the previous plan increased nearly three times to 1118 billion Rials in the fourth plan (PBO, 1994). During the period of the fourth plan, government investment was followed by a sizeable amount of private industrial investment. This created an increasing need for more up-to-date accounting information. Because of the severe shortage of educated personnel who could meet the needs of the commercial and industrial sectors in the economy, several steps were taken during this period to expand higher education facilities particularly in the economics, business and accounting areas. As Looney remarked:

Iran's planning strategy has involved recognition of the country's prevailing limitations. It has allocated relatively large amounts of resources to developing more and better statistical information and to the advanced training of elite personnel. To this end, the expansion and modernisation of university education, particularly in economic and administrative, received higher priority than did Primary and secondary education (Looney, 1977: 21).

The fifth development plan was launched in 1973. It was revised in 1974 due to an unexpected rise in oil prices. The revised plan doubled the government expenditure with an exceptionally large allocation of funds for expanding the facilities in higher education institutions. According to Rajaipur (1987: 75), eleven new universities were founded during the 1972-1975 period. Accounting was one of the disciplines offered by these newly established universities. Table 3-1 shows the number of higher education institutions and their percentage increase during 1967-1979.

Table 3-1
Number of higher education institutions in Iran and their percentage increase during 1967-1979

	<u>1967</u>	<u>1979</u>	<u>% Increase</u>
Universities	8	22	175
Colleges	34	222	523
Total	42	244	481

Source: Rajaipur, S. (1987) *The Impact of Political Processes on Educational Development: A Case Study of Iranian Higher Education*. Michigan State University, UMI Dissertation Service, p 77.

As a result of the increased allocation of government funds to higher education and the expansion of economic activities in the economy, in addition to the government universities and colleges several private higher education institutions were set up in the country. Universities were funded by the government while privately owned higher education institutions were run on government grants and internally generated funds. Table 3-2 shows the number of students in higher education institutions and the budgeted funds from government and internal sources during the period 1967-1978.

Table 3-2

Number of students in higher education institutions in Iran and their budgeted funds from government and internal sources during 1967-1978

	Student Enrolment	% Increase	Government Funds	% Increase	Internal Funds	Government funds per student
1967-68	46987		1542314		N.A.	32.82
1968-69	58194	23.85	2231797	44.7	N.A.	38.35
1969-70	67268	15.59	3778921	69.32	582760	56.17
1970-71	74708	11.06	3911429	3.507	175809	52.35
1971-72	97338	30.29	4795210	22.59	N.A.	49.26
1972-73	115311	18.46	6624847	38.16	335839	57.45
1973-74	123114	6.767	9400501	41.9	544852	76.35
1974-75	135354	9.942	13991346	48.84	202728	103.36
1975-76	151905	12.23	28392756	102.9	605354	186.91
1976-77	154215	1.521	38687835	36.26	512020	250.86
1977-78	175675	13.92	54955026	42.05	609800	312.82

Source: Rajaipur, S. (1987) *The Impact of Political Processes on Educational Development: A Case Study of Iranian Higher Education*, Michigan State University, UMI Dissertation Service, p 80-81.

Table 3-2 reveals that there has been a continuous increase in the government allocation of funds to higher education with a corresponding increase in the number of students throughout the period from 1967 to 1978. The increased funds have resulted from the continuous increase in oil revenue. The government oil revenue which was only 908 million US dollars in 1969 increased to 20,488 million US dollars in 1976 (Halliday, 1979: 143).

3.2.2 The economic development programmes after the Islamic Revolution

After the Islamic Revolution (1979), there have been several drastic changes in economic development planning. The economic system became highly centralised with the cornerstone being Islamic thought. On the other hand, soon after the Revolution the country encountered a number of economic sanctions and an exhaustive war with Iraq. After the nationalisation of all private banks and insurance companies in 1979 many changes began to occur in the economy. In 1980 the Protection and Development Industry Law nationalised three groups of industries; 1) the mill and vehicle factories, 2) the portion of shares of those industries which

belonged to the supporters of the previous regime, and 3) the portion of shares of those industries that had overdue liabilities to the banking sector. Consequently, a number of government owned industries emerged. Revitalising the economic activities which had come to a standstill due to the revolutionary atmosphere of the country and reorganising the nationalised firms were the first priority of the government after the Revolution.

Accordingly, the Organisation of National Industries (ONI) was set up under the purview of the Ministry of Mining and Industries for the purpose of managing the nationalised industries and mining companies. Also, two other semi-government organisations, the Mostasafan Foundation and the Martyred (*Shahid*) Foundation were established to take over the management of the companies which belonged to the Pahalvi Foundation or the supporters of the pervious regime.

The first development plan after the Revolution was launched in 1989 for a period of five years. One of the important objectives of this plan was to expand non-oil exports in order to minimise the adverse effect of any unfavourable fluctuations in oil revenue and to promote local industry. Another objective of this plan was to make the government-owned corporations and recently nationalised industries operate profitably (POB, 1989: 12). However, after realising the inefficient management of government-owned enterprises the government became interested in selling them to the public for achieving efficiency. Consequently, the Tehran Stock Exchange (TSE) re-activated in 1989 to make the privatisation process possible (Golestani, 1994; 30). This created a need for the disclosure of accounting information to investors, government, and society at large.

The TSE required financial reports to be audited by independent auditors (Golestani, 1994; 28). Thus, the establishment of an organisation of independent auditors became an urgent need in the country. Moreover, the second development plan introduced in

1994 further encouraged the privatisation process and the promotion of non-oil exports. As such, it is reasonable to assume that the trend of developing the accounting profession which had started in the early 1970s would continue in the future.

One of the priorities of the government after the Islamic Revolution was to develop higher education particularly in the areas which could help in increasing the supply of necessary manpower for further expansion in businesses and economic activities. Because of the temporary closure of all universities and other higher education institutes for two years from 1979-80 to 1981-82 and the suspension of sending students to foreign universities on scholarships, the need for university graduates in all disciplines increased sharply soon after the revolution. In response, as universities and other higher education institutes were reopened in 1982 the government allocated more resources for expanding their facilities and intake of students. Similarly, all private higher education institutes in the private sector as well as two-year colleges in the government sector, which had not been in operation during the revolution, were given special encouragement to re-start and expand their activities. As a result, the number of government universities that was 22 in 1979 (Rajaipur, 1987:77) increased to 61 in 1991 (MCHE, 1991:2). By 1994, another new university and 6 private higher education institutes had been established (Payandeh, 1994, 205). Table 3-3 shows the budget allocations to higher education during 1989-1993.

Table 3-3
Number and percentage increase from previous year of government budget allocated to higher education between 1989-1993 (in Rials)

	Current Budget	Development Budget	Total Budget	Percentage Increase
1989	7312,400	24,821,000	97,947,400	-
1990	9900,800	39,813,000	138,821,000	42
1991	16,925,500	48,531,000	217,784,500	57
1992	233,568,000	81,670,000	315,238,000	45
1993	420,833,000	179,747,000	600,580,000	91

Source: Ministry of Culture and Higher Education. Institute for Research and Higher Education Planning. Statistics and Computer Group, *Higher Education Statistics of Iran (Amare Amuzesh Ali Iran)*, 1993-1994, first edition, (Farsi 1372-1373)..

3.3 THE ACCOUNTING PROFESSION

It is evident from the literature that a powerful and well organised professional accounting body can contribute immensely to accounting education and practice of a country. Unfortunately, such a strong professional body for accountants has not been in existence in Iran. However, practising accountants have contributed to education considerably through their services as part-time lecturers in universities and other higher education institutes. Because of their direct involvement in actual practical problems in industry and commerce they have been able to make use of them as examples to make teaching more interesting and relevant to actual practice. However, Iranian accounting practitioners struggled for years to get government and public recognition for their profession but have achieved only limited success.

Thus, the accounting profession in Iran is still in its very early stage of development. However, several factors have contributed to its current level of progress. These factors include the economic development requirements, accounting education and government regulations on business enterprises. In the previous section, the economic development process was briefly reviewed in conjunction with the development of accounting education in the country. An attempt will be made in this section to review the effect of government regulations on the development of accounting profession before and after the Islamic Revolution.

3.3.1 Accounting profession prior the Islamic Revolution

Even though several attempts were made much before the 1970s for the formation of a professional society for accountants, they were not successful. The first attempt was made in 1944 by eight Iranians who were educated in the United Kingdom and became members of the Institute of Chartered Accountants of England. They formed an association of Iranian accountants in England with the intention of establishing it formally in Iran upon their return to the home country. The main objectives of this association were to protect the rights of its members and promote accounting education in Iran (Khodadoust, 1975: 317-18). However, the organisers of this association were unable to establish it successfully in Iran due to the reasons such as the non-availability of a sizeable number of qualified accounts and the lack of support from government and other organisations.

When the Income Tax Law (ITL) was introduced in 1955 the government indicated the need for the formation of a professional accounting body in Iran. According to this law, an official auditors' association had to be founded by the Ministry of Finance. Article 33 of the ITL required the submission of income statements and balance sheet of companies to the Tax Department after being audited by a member of the official auditors' association (Mokhtar, 1992: 22). This was the first time that the word auditor or 'auditing' (*Hesabras*) was officially recognised by the Income Tax Law (ITL). However, the establishment of an official auditors' association was postponed till 1961 to give more time to the Ministry of Finance for preparing the bill required for the formation of such an organisation. Accordingly, the Ministry of Finance made an announcement in 1961 recognising 36 accountants as the first group of official auditors (*Hesabras Ghsamkhourdeh*) for Iran. The first general assembly of this group was held in 1963 (Mokhtar, 1992: 22). After that, however, no any active participation or functioning of this group has been reported. One of the reasons for its disfunctioning could be attributed to the fact that despite the requirement stipulated in Article 33 of the Tax Law, the Tax Department was not

prepared to accept any auditing done by these 'official auditors' for the purpose of determining income taxes for companies. Instead, the officers of the Tax Department continued to determine taxes purely on the basis of their own examination of company financial statements. This state of affairs has obviously retarded the development of an effective accounting profession in Iran.

The company law introduced in 1953 under the title of "Commercial Code" (CC) had only little effect on the development of the accounting profession. According to the Commercial Code of 1953, every public company was expected to appoint at its annual general meeting one or more inspectors (*Bazrass*) of accounts. These inspectors were to be entrusted with the responsibility of preparing an evaluation report on the balance sheet and other accounts submitted by directors and presenting it to shareholders at the next annual general meeting (Article 144). The CC, however, did not impose any restrictions on the qualifications of inspectors other than laying down some conditions on their honesty and moral consciousness. Thus, no professional or academic qualification in accounting was required for a person to be appointed as an inspector of accounts (Khodadoust, 1975: 166 and 167). Therefore, in practice most of the company inspectors were persons who had no any formal academic or professional qualification in accounting. Referring to the reports of these inspectors, Khodadoust remarked that "the unclear and inexplicit treatment of this issue by the law has led to many unreliable and meaningless inspectors' reports" (1975: 167).

An Amendment to the Commercial Code of 1953 was approved in 1969. This Amendment laid down in more detail the duties and responsibilities of company inspectors. According to this amendment, the inspectors should be selected from a list of qualified professionals which was to be prepared by the Ministry of Finance (Article 144 Amendment). However, no record is available to indicate that such a list has been prepared even in later years (Mokhtar, 1992, 26). It was also stated in

Article 149 that the inspectors could use the services of qualified professionals but the ultimate responsibility should remain with the inspectors. Yet, it is not clear from the wordings in both Article 144 and Article 149, whether the “qualified professionals” referred to professional accountants. In any case, there were not enough qualified accountants who could be used to meet the ITL and CC legislation requirements. Linowes (1969) who took part in a project in Iran under the auspicious of the United Nations Industrial Development Organisation (UNIDO), described the status of the accounting profession of Iran at that time as:

The 11 Chartered Accountants of Iran, are British educated and trained. The Iranian government has not yet established licensing of public accountants; nor is there an active professional organisation (Linowes, 1969: 18).

The Income Tax Law (ITL) of 1967 created a greater need for identifying qualified accountants when it, for the first time, recognised the role of auditors in the examination of financial statements of companies. Article 276 of the 1967 ITL stated that:

Examination of books, profit and loss statements and balance sheets for the purpose of assessment of taxable income will be assigned to members of the association or auditing firms, who have qualifications set forth in the relevant regulations (Part of Article 276 of 1967 of ITL)¹.

Article 279 of the 1967 ITL explains the procedures of preparation of the auditing report by the Official Accountants for the Tax Department.

The Official Accountants' report, which will be prepared on a special form and contain the following points, will be submitted to the Tax Assessor:

1. The official accountant will comment on whether the taxpayer's account books are the statutory books as required under the provision

¹The translation of the ITT Article 276 has been obtained from Enthoven (1977, ch 32).

of this act and whether the taxpayer's account books, papers and documents are adequate for the purpose of auditing and for determining his actual income, and will check the balance sheet, profit and loss statement and figures mentioned therein against the contents of the statutory books and documents;

2. He will determine the taxable income on the basis of taxation rules and regulations (Article 279 of 1967 of ITL)².

According to Article 276 of the 1967 ITL, a Society of Official Accountants was to be established by a council consisting of the Minister of Finance (as chairman), the State's Treasurer General, the president of the Central Bank, the president of the Chamber of Commerce and Industries, and three professional accountants. Although this council prepared a bill for establishing the said society and selecting suitable persons as 'Official Accountants' as well as members of the society, it did not materialise until 1974 because the Tax Department was reluctant to accept the reports of Official Accountants.

The 1970 Amendment to the Income Tax Law of 1976 defined the functions and responsibilities of 'Official Accountants' (*Hesabdar Rasmy*) and provided the necessary support for establishing a Society of Official Accountants (*Kanone Hesabdaran Rasmy*). Accordingly, the Society of Official Accountants was finally established in 1974 by the Ministry of Finance. Subsequently, as the number of official accountants increased, the Board of Directors of the Society nominated and took an active part in directing the Society (Enthoven, 1977: 342). The ability of the Society in performing professional accounting and auditing functions was quite high. The Society granted its membership to UK, US and Iranian qualified accounting graduates so that they could function as authorised auditors. This is the first time in the history of Iranian accounting that a professional organisation was officially established. However, the functions and duties of its members were confined to auditing and taxation.

²The translation of the ITT Article 279 has been obtained from Enthoven (1977, ch 32).

With the increasing number of educated Iranian accountants, the idea of establishing a none-government professional accounting association was also mooted by many interested parties. Accordingly, when the number of accounting graduates of the IIAA increased, they formed an alumni association under the title of the Society of IIAA Graduates (*Anjomane Hesabداران lisansieh Moasseseh Ali Hesabdari Iran*). The first issue of an accounting journal of this society appeared in 1969 (Khodadoust, 1975: 322). This society became inactive after the educational activities of the IIAA were suspended in 1976 due to its political involvement.

Another attempt for establishing an independent society of accountants was made in 1972 by a group of Iranian accountants. Most of the members of this group were graduates of a few British universities. They set up the Iranian Institute of Certified (Expert) Accountants (*Anjomane Hessabداران Khobreh Iran*) in 1972. The members of this institute consisted of accountants who functioned as self employed independent accountants or accountants of private and government firms (Mokhtar, 1992: 27). The Iranian Institute of Certified Accountants (IICA) also accepted accounting and auditing firms as its members if they fulfilled the membership requirements. The qualifications and responsibilities of members as well as a fundamental code of ethics were included in the articles prepared for the establishment of this institute. The minimum requirement for an IICA membership was a bachelor's degree in accounting or related area with post-qualification accounting experience for five years and ethical qualification (IICA, 1983: 3). However, the IICA is still not officially recognised or backed by the government as the professional accounting body of Iran. Therefore, it does not possess the necessary authority to impose any conditions on its members.

3.3.1.1 Accounting firms

Another feature of the emergence of the accounting profession in the 1970s was the establishment of a considerable number of accounting and auditing firms in the country. Two major factors contributed to their establishment. The first factor was

the establishment and expansion of the Tehran Stock Exchange (TSE) and the other factor was the increase in the number of accounting graduates from both local and foreign universities (Mokhtar, 1992: 26). The TSE required all listed companies in the stock exchange to present financial reports after being audited by certified auditing firms. This, in turn, required such companies to prepare their financial reports more comprehensively and accurately than before, and submit them to their auditors on time.

According to Mokhtar (1992: 26), the number of accounting and auditing firms was about 30 in the late 1970s. In addition to the domestic accounting and auditing firms, some international auditing firms were also active in Iran during the same period (Khodadoust, 1975: 270). Furthermore, the Ministry of Finance, in accordance with the Plan and Budget Act of 1973, established the Iran Auditing Firm. This firm was responsible for examining, auditing and verifying accounting records of all institutions and companies owned by the government (Khodadoust, 1975: 321).

3.3.2 Accounting profession after the Islamic Revolution

After the 1979 Islamic Revolution, as a result of the nationalisation of industries, banks and insurance companies the demand for accounting and auditing services shifted from the private sector to the government and semi-government sectors. Therefore, the demand for services of the private independent accounting and auditing firms decreased sharply. On the other hand, the Iran Auditing Firm which was an affiliation of the Ministry of Finance encountered a huge demand for auditing services from the newly nationalised companies. Subsequently, because of the Iran Audit Firm's inability to cope with such a high demand, a few new auditing organisations were set up to meet the increased demand.

One of the new auditing organisations was the one set up in 1980 by the Organisation of National Industries and the Budgeting and Planning Organisation. Furthermore,

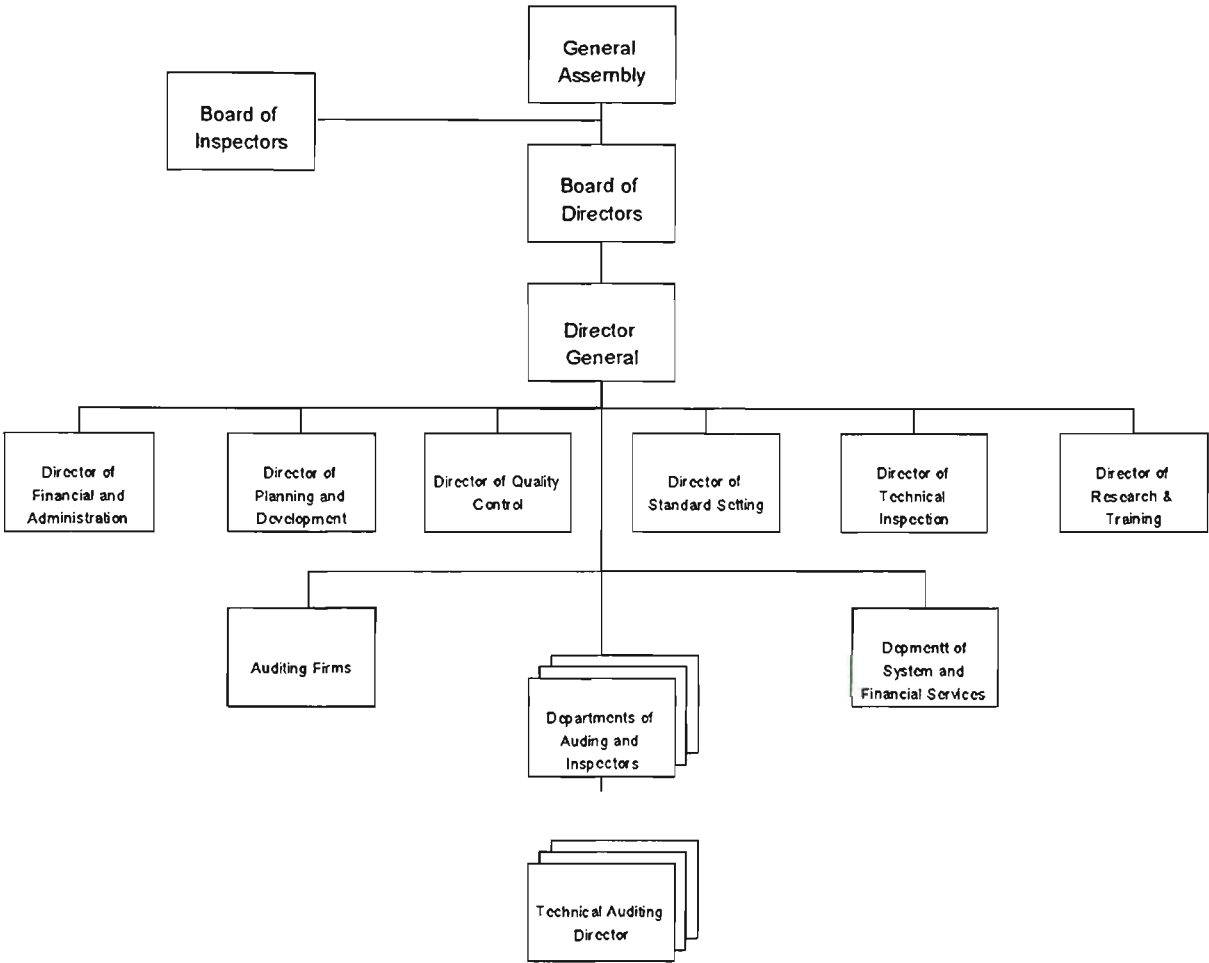
two newly established semi-government foundations, the Mostasafan Foundation and the Martyred Foundation (*Shahid*) set up their own auditing organisation to help with the needed accounting information and to take up annual auditing responsibilities of the nationalised companies which were under their supervision.

Although the above auditing organisations were in active operation, they have not been able to maintain uniformity in their auditing functions due to the non-availability of any national accounting and auditing standards in the country. In 1987, the Iranian Auditing Organisation (*Sazemane Hessabrasy Iran*) was established in accordance with the Sole Article of 1984 by amalgamating the above auditing organisations and the Iran Auditing Firm (IAO, 1994: 1). For the first time in the history of accounting practice in Iran, this new organisation (IAO) was assigned to develop a set of national auditing and accounting principles and standards³. The IAO was also assigned to develop a professional code of ethics on the basis of the Islamic thought to be observed by its auditors. The main function of the IAO, however, was to perform the auditing duties for the ministries, government-owned firms, the nationalised industries, banks, insurance companies and the firms affiliated to the Martyred Foundation and the Mostazafan Foundation. Another responsibility of the IAO was to establish an accounting education institution to enhance the accounting knowledge of its own staff (IAO, 1994: 2-5).

The IAO has a General Assembly, a Board of Directors, a Director-General, and a Board of Inspectors as the governing authorities of the organisation (IAO, 1994: 5). Table 3-4 presents the organisational chart of the IAO.

³In 1990, at the accounting seminar in Zangan the Director-General of the IAO declared that the development of the accounting and auditing standards was underway. However, in 1994 the IAO circulated a draft copy of 10 accounting standards to be approved as official standards in future. As it is specified by the IAO, the final decision on these standards would be taken after taking into consideration the comments of accounting educators, professionals and financial managers (IAO, 1994: b).

Table 3-4
The organisational chart of the Iranian Auditing Organisation



Source: the Iranian Auditing Organisation (IAO), 1995.

In recent years, because of the increased volume of accounting services in the government and semi-government companies the board of directors of the IAO decided to make use of the services of individual Iranian auditors in special occasions under the direct supervision of its Director-General and Board of Inspectors (IAO, 1994: 5). Several auditing firms were established by individual auditors mainly for this purpose. The increased accounting and auditing services of the IAO also forced to increase its own accounting staff. Table 3-5 shows the number of employees in the IAO between 1989 and 1994.

Table 3-5

Number of employees in the Iranian Auditors Organisation between 1987 and 1994

	Manager	Supervisor	Chief Auditor	Auditor	Junior Auditor	Total
1989	63	115	194	420	333	1125
1990	77	133	210	474	385	1279
1991	84	207	178	629	339	1437
1992	84	215	161	823	363	1646
1993	86	230	192	942	272	1722
1994	99	245	375	844	120	1683

Source: Iranian Auditing Organisation, 1995, p 13.

In the private sector accounting profession, the IICA which was made inactive during the Islamic Revolution revitalised its activities in 1982. In this year, the IICA published its first independent accounting periodical, *The Accountant (Hesabdar)* and expanded its activities by admitting new members from government, semi-government and privately employed accountants. According to the IICA publication, in 1983 less than 15 per cent of the IICA members were independent auditors. Over 85 per cent of them were accountants employed by firms. Fifty-three per cent of the IICA members had bachelor degrees, 45 per cent master degrees and 1.6 per cent PhD degrees (IICA, 1983: 4 and 5). Table 3-6 shows the percentage of IICA members by their fields of study in 1983.

Table 3-6

Percentage of Iranian Institute of Certified Accountants' members by their fields of study in 1983

	Percentage
Accounting (General)	48
Cost Accounting	20
Auditing	10
Finance	9
Others	13
Total	100

Source: IICA (1983) "An Introduction to the Iranian Institute of Certified Accountants" Iran Tehran (Farsi)

The number of IICA members shows a constant increase since 1983. Their number has increased from 565 in 1983 to over 1200 in 1994 (Eskandari, 1994). The relatively high number of both IAO employees and IICA members reveals that the quality of the accounting profession in Iran has been considerably increasing in recent years with the increase of university graduates in accounting and related areas. Also, the performance of the first development plan (after the Islamic Revolution) indicated that the accounting and auditing services have been in great demand. In response to this demand, the bill of Using the Professional Services of the Qualified Accountants was passed in 1993 to give more recognition to qualified accountants in the country (Kayhan, 1994: 25). This bill can be considered as an important legislative step taken towards the development of the Iranian accounting profession. Through this bill, government organisations were encouraged to accept the professional opinion of certified auditors. These auditors are expected to provide the following services:

1. Auditing of firms listed on the Tehran Stock Exchange
2. Auditing and official inspection of joint stock companies
3. Auditing of other non-joint stock companies and not-for-profit organisations
4. Auditing and official inspection of ministries and other government organisations
5. Auditing of all economic entities and sole-proprietorships for tax purposes

Under the provisions of this bill, the government approved in August 1995 an article stipulating the minimum educational qualifications and selecting procedures for certified accountants. The minimum requirement for a person to take the qualification examination for becoming a certified accountant is a bachelor degree in accounting or related area and six years of professional accounting experience (Jomhori Islami, 1995: 13). The article also requires the certified accountants to renew their licences once in every five years. According to this article, a committee under the supervision of the Ministry of Finance should be set up for conducting the qualification

examination and approving the licenses for certified accountants. This committee should also provide the necessary guidelines for establishing an official Society of Certified Accountants for the country (Board of Ministries Approval, 1995, Article 6). The proposed Society of Certified Accountants is expected to be operated as a private organisation under the supervision of the Ministry of Finance.

The 1993 law of Using the Professional Services enabled the government to rely on the services of certified accountants. This, of course, requires these accountants to follow a set of uniform accounting standards and a code of ethics in performing their professional auditing functions. Therefore, in the near future, after establishing the proposed Society of Certified Accountants, the first task force of the Society is expected to contribute towards the development of a set of national accounting and auditing standards and a code of ethics. Furthermore, the 1993 law has produced the necessary background for enhancement of accounting education in the country. It expects from universities a greater contribution by the way of producing quality graduates who can become members of the proposed Society of Certified Accountants. According to the information available at the time of writing this thesis, the preliminary activities are under way for establishing this professional accounting society with the necessary legal backing in the near future.

3.4 THE EDUCATION SYSTEM IN IRAN

The education system in Iran has undergone many changes particularly from the beginning of the twentieth century. The most significant change occurred after 1979 as a result of the new political, social and economic transformation brought about by the Islamic Revolution. Obviously, accounting education, being a small but significant part of the country's overall education system, has been highly influenced by this transformation. Therefore, a review of the education system in Iran is presented in this section in two parts as before and after the Islamic Revolution.

3.4.1 The education system before the Islamic Revolution

In ancient Iran (Persia), the education system had been based solely on Islamic principles and included only two levels as primary education (*Maktab*) and higher education (*Madrasseh*). Reading and writing were taught to children at the *Maktab* level. They also became familiar with Holy Guran and classical Persian texts (Slocum, 1969: 6). Continued education was possible at the *Madrasseh* level through religious academies. Students in these academies studied such subjects as the Interpretation of the Guran, Religious Law, and Religious Philosophy (NOOSR, 1992: 1-2). Parents paid tuition fees for their children's primary education in the form of consumer goods and cash. Classes were held in the house of the headmaster and rarely in the mosque (Arasteh, 1969: 8). The academies were affiliated to the mosque and supported by the religious funds (NOOSR, 1992: 2). Some mosques had an exclusive building extension for *Madrasseh* classes. This system of education more or less continued until the late nineteenth century when the modern (Western) education system was introduced to the country by the Europeans (Slocum, 1969: 6-7).

The period from 1850 to 1910 was considered as the era of technical and scientific awakening in Iran. Prior to this period, two exhaustive wars with Russia made the Iranian rulers aware of their inadequate fighting strength due to the low-quality military equipment. It was at this time that Iranian intellectuals realised that the country's education system kept them far behind the technical advancement of the Western world (Bazargan, 1977: 62). Consequently, Iranian rulers were compelled to seek help from the European powers. At first, the help came from the French. During this period, a considerable number of higher education institutions based on the French style of education were established in the country (Bazargan, 1977: 62).

As an attempt to develop a system of domestic higher education, the first Iranian higher education institute, Dar-Ol-Fonun (Abode of Learning), was established in

1851 by Amir Kabir, the prime minister (Slocum, 1969: 6). The instructors for this institute were drawn mostly from France and Austria in addition some Iranians who had been educated in European countries. However, the education system of the institute was based entirely on the French style and French was the medium of instruction. At the beginning, the duration of study at Dar-Ol Fonun was seven years and later it was reduced to four years. There were six faculties in this higher education institute. Table 3-7 shows the distribution of Dar-Ol-Fonun students by their fields of study during the first year of operation of the institute (Arasteh, 1961: 326).

Table 3-7

Distribution of students by their fields of study at Dar-Ol-Fonun in 1851

	No
Artillery, Infantry, and Cavalry	61
Engineering and Mining	12
Medicine	20
Chemistry and Pharmacy	7
Mineralogy	5
Total	105

Source: Arasteh, R., (1961) "The Growth of Higher Institution in Iran" *International Review of Education*, Vol. 7. p 326

From about the beginning of the twentieth century, several ministries in the government devoted greater attention to the development of higher education in Iran and set up a number of colleges. For example, the School of Political Science was established in 1901 by The Ministry of Foreign Affairs in Tehran. The main objective of this college was to prepare students for various positions in the Ministry of Foreign Affairs and other government organisations (Slocum, 1969: 7 and Arasteh, 1961: 330). According to Arasteh (1961: 330), the School of Political Science offered a three year programme of study. The first year of this programme was devoted to general subjects and the last two years to specialised subjects such as International, Administration, or Commercial Law, Principle of Judicial Trials,

Taxation Science, and Jurisprudence and Logic. Most of the teachers of this college were of Iranian origin.

The modernisation process of the Iranian education system received official endorsement in 1911. In this year the parliament (*Majlis*) passed the Fundamental Law of Education. Then, the Ministry of Education (ME) was established by *Majlis* to enforce this law. According to the Supplementary Law of Education and the Fundamental Law of Education, the ME was responsible for school establishment, teacher hiring, and curriculum approval for all levels of education in the country (Deighton, 1971: 212). The higher education received further attention during the 1920s and the 1930s. According to Rajaipur (1987: 58) there were 12 higher education institutions in Iran in the 1930s.

The act of establishment of the University of Teheran was passed by the *Majlis* in 1935. This university brought all the small existing institutions of higher education under a single administration (Burton and Gay, 1992: 326). This university remained as the sole university in Iran until the end of World War II. In the post war period, when the government started implementing economic development plans the higher education development became the focus of government concern. The number of universities and other higher education institutions increased sharply and the overall education system of the country changed from the French style to the American style.

According to Hendershot (1975: 1), Iran was the first country to sign an agreement to obtain technical assistance under the Act of International Development of the USA. This agreement, which was signed in the late 1950, enabled the Americans to transform the entire education system of the country into the American style of education. They started their changes from the elementary level of education and then extended the reforms to the secondary level. The higher education was also expanded and reorganised by the Americans (Hendershot, 1975). Between 1950-

1955, five new provincial universities were established in five major cities with the help of American universities. This figure increased to seven universities and four other higher education institutions in 1962 (Rajaipur, 1987, 62-64). Many Iranian universities established close links with American universities. In the late 1960s and 1970s, more than 12 Iranian universities signed agreements with one or more American universities for educational improvement (Hendershot, 1975). In the same period, more than five government Ministries or organisations entered into contracts with American universities for development purposes. According to Hendershot (1975: 205), a team of advisors from the University of Southern California made some recommendations for improving the quality of the University of Tehran in 1958. Another university which received considerable attention from the US advisors was the University of Shiraz.

By 1967 Pahlavi [at first known as the University of Shiraz then Pahlavi University and now again the University of Shiraz]⁴ had become firmly established as an "American-type" university. It had its Board of trustees, a constitution granted by the Parliament, an administrative organisation of four colleges each with several Departments and all under a Chancellor, a central library and separate college libraries, a letter-grade and grade-point credit system, and an advanced form of student government (Hendershot, 1975: 251).

In the 1970s, as the government revenue from oil increased the government investment in education increased dramatically. Thus, The University of California, Los Angeles was called for preparing a report on a master plan for higher education in Iran for the newly established Ministry of Science and Higher Education (MSHE) in 1975 (Rajaipur, 1987: 261). In an effort for expansion of higher education, the MSHE was established in 1968 to be responsible for the policy development and administration of university education in the country (NOOSR, 1992: 3).

⁴The worlds within the bracket are from the author.

After the establishment of the MSHE, several private higher education institutes were established under its supervision. According to Rajaipur (1987: 74), in the academic year 1967-68 there were eight universities, 29 public two-year and four-year colleges, and five private four-year colleges in the country. During the years prior to the Islamic Revolution, the primary attention of the MCHE was to set up two-year colleges throughout the country and expand higher education institutions beyond the capital city. There were 115 higher education institutes including eight universities and 107 colleges or junior colleges in 1972 (Rajaipur, 1987: 74). This figure increased to 244 higher education institutes including 22 universities and 222 colleges and junior colleges in 1979 (Rajaipur, 1987: 76). Most of these colleges and junior colleges were private institutions.

In addition to the expansion of higher education facilities within the country, the government also adopted a policy of sending selected students to foreign universities for their higher degrees. Although most of these students did not return to the country, the few returned became university professors or top-level government officials. They have been significant contributors to the expansion of Western-type education in the country.

3.4.1.1 Foreign education for local students

Long before the development of higher education in Iran, in the early nineteenth century the first group of Iranian students was sent to England to study medicine and modern science in an effort to hasten educational modernisation. Another group of government scholarship students was sent to France in 1844. They were followed by a group of 42 students in 1861 and a group of military students in 1873 (Sadeghy, 1972: 41).

In 1918, there were 500 Iranian students studying in various European countries (Arasteh, 1969: 39). In 1928 the Ministry of Education was authorised by law to send 100 students abroad every year for a five year-period (Sadeghy, 1972: 80). A few other ministries and government agencies also sponsored students for sending them abroad for higher education. According to Sadeghy (1972: 81), the number of students sponsored by the Ministry of Finance was 16 in 1935. Moreover, some wealthy families sent their sons or daughters to European and American universities for higher education at their own cost.

In 1935, there were 1,171 students abroad. They included 771 government sponsored and 400 privately sponsored students. From 1960 until 1979, the number of government and privately sponsored students abroad was on a constant increase. Table 3-8 presents the number and percentage of government and privately sponsored students abroad during selected years from 1935 to 1978.

Table 3-8
Number and percentage of government and privately sponsored Iranian students in foreign universities

Year	Government	%	Private	%	Total
1935	771	65.8	400	34.2	1171
1960	1500	10	13500	90	15000
1971	2121	10.1	18888	89.9	21009
1978	NA	NA	NA	NA	75000

Source: 1) Arasteh, R. (1969), *Education and Social Awakening in Iran 1850-1968*, E. J. Brill, Leiden, Netherlands.

2) Rajaipur, S. (1987). *The Impact of Political Processes on Educational Development: A Case Study of Iranian Higher Education*. Michigan State University, UMI Dissertation Service.

As shown in the above table, the number of students abroad has increased from 1,171 in 1935 to 75,000 in 1978. Because of the European influence on Iranian education in early years most of the students preferred to study in France or England before 1960. Later when the American education system dominated education in Iran the American universities became the target of study abroad for many students. The number of

Iranian students in the United States shows a constant increase since 1968. In 1968, about 33 per cent of the total Iranian students abroad were in the United States. The number increased to 50 per cent in 1978 (Rajaipur, 1987: 89-92).

3.4.2 The education system after the Islamic Revolution

After the Islamic Revolution in 1979, the MSHE and the Ministry of Culture and Art were merged together to form the Ministry of Culture and Higher Education (MCHE) (NOOSR, 1992: 3). Then, in 1980 the Cultural Revolution Council (CRC) (*Setade enghlabe Farhangy*) was set by the leader of the Islamic Revolution to be responsible for the curriculum development and educational policy making at all levels of education: primary, secondary and university education (HCCR, 1985: 20). The CRC formed many committees and sub-committees for curriculum development in all fields of study. In 1983, a new university curriculum for each field of study was introduced by the CRC. Since then all universities were required to adopt the new curricula developed by the CRC.

In 1985, the CRC was reorganised and renamed as the High Council of Cultural Revolution (HCCR). The members of the CRC became members of the HCCR. After a few new members also being added, the HCCR comprised the President (as Chairman), the Islamic Assembly Spokesman (as secretary), Chairman of the High Council of Justice, the Minister of Islamic Culture and Guidance, the Minister of Culture and Higher Education, the Minister of Education, seven senior academics, one senior clergy, and one senior university student (HCCR, 1985: 20 and 21). The HCCR was expected to continue with the educational reorganisation process to de-emphasise the Western style of education and develop an indigenous education system based on Islamic principles. Seven different councils were set up by the HCCR to carry out this task.

The Council for Fundamental Changes in Education (CFCE) was one of the HCCR councils established in 1985. This council prepared a new general education scheme in 1986. After being reviewed and approved by the HCCR, the new scheme became operative from 1992 (M E, 1993). Accordingly, as shown in Table 3-9, the current general education system includes one year of pre-school (*Pish Dabestan*), five years of primary education, three years of guidance cycle (*Dereh-e Rahnamaii*), three years of secondary cycle (*Doreh Motavasete*) and one year of pre-university cycle (*Pish Daneshgahi*).

Table 3-9
Structure of the general education system in Iran

Pre-School	Primary Education	Guidance Cycle	Secondary Cycle	Pre-University Cycle
1 Year	5 years	3 years	96 units (3 years)	1 year

Source: Ministry of Education, New General Intermediate Education Policies, New Intermediate Executive, 1993 (1372 Farsi).

On completion of three years of Guidance Cycle pupils have the choice to select one of the three streams of "Theoretical Branch", "Technical Branch", or "Vocational Skills Branch" as their major in the high school. According to the new scheme, high school education is based on a unit system. During the three years of high school pupils have to successfully complete 96 units to receive their high school certificate (HSC). The holders of HSC are eligible to study in a pre-university course for one more year if they want to continue their studies at the university level. Otherwise they may enter the labour market. The new education system will be tested in some chosen high schools until 1999, before being fully adopted in 2000 (M E, 1993).

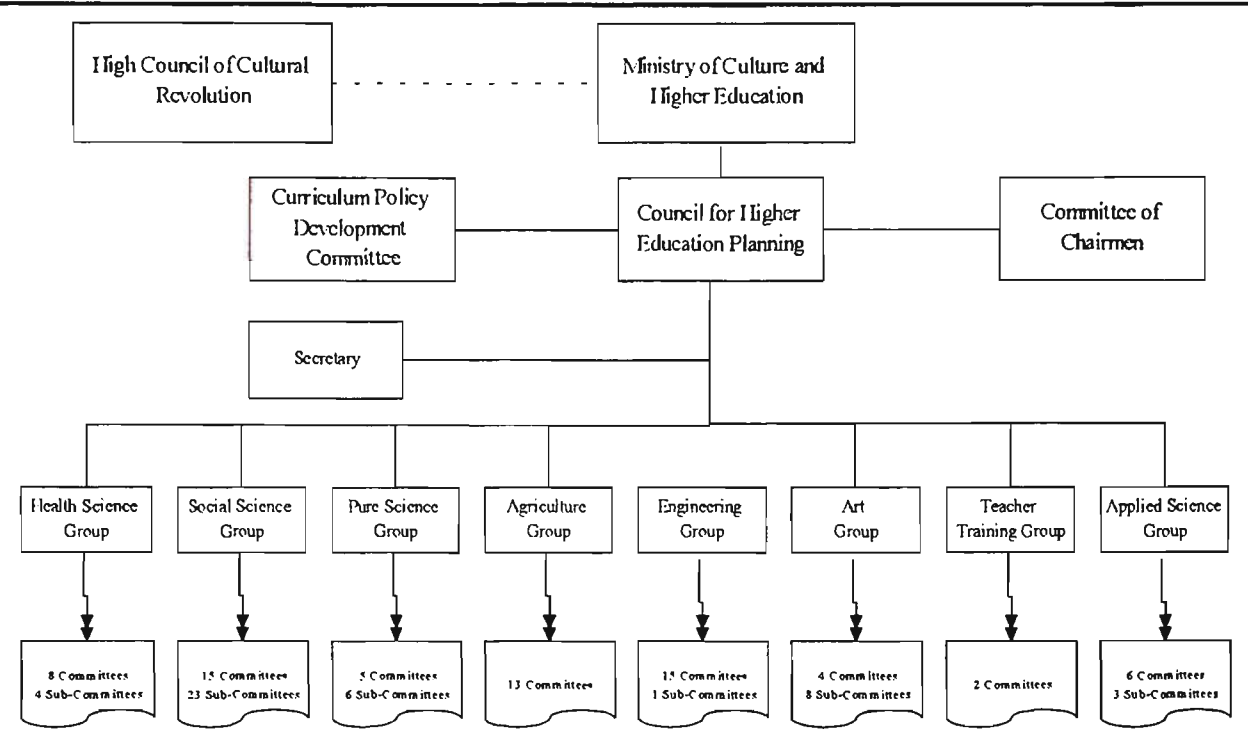
During 1980-1985, the CRC curriculum committees and sub-committees were responsible for the university-level curriculum planning. As the CRC was re-organised as the HCCR, the curriculum committees and related sub-committees were merged into a single organisation under the title of the Council for Higher Education

Planning (CHEP). Since then, the CHEP has been responsible for the planning of higher education policy and curriculum development. The CHEP comprised the Minister of Culture and Higher Education (as the chairman), six members of the HCCR, eight chairmen of the Curriculum Groups, secretaries of the academics affairs of the MCHE and the Ministry of Health and Medical Education, secretaries of research of the MCHE and the Ministry of Health and Medical Education, and one academic as the secretary of the Council (HCCR, 1985: 153 and 154).

The CHEP entrusted the curriculum development work to eight curriculum planning groups. Each curriculum planning group was headed by a chairman, who was also a member of the Committee of the Chairmen. The other members of the group were academics from related areas of study. Each group had several curriculum committees and each committee included a supervisor and several university academics from the related field as consulting members. Most of the curriculum committees had sub-committees to help them in curriculum development for the major disciplines. Table 3-10 shows the organisational chart of the CHEP.

All the curriculum development groups of the CHEP had 68 curriculum committees and 49 sub-committees. More than 570 academics who served on these committees were involved in the process of curriculum development (Naeini, 1997: i). Each sub-committee prepared a draft curriculum on the relevant discipline and submitted it to the related committee. When the draft curriculum was approved by the group, after being revised if necessary, it was submitted to the CHEP for incorporating it in the overall university curriculum network. The overall curriculum was finally approved by the HCCR. Accordingly, all universities and other higher education institutes in the country were required to adopt the above curricula since 1982 (Naeini, 1997: 11).

Table 3-10
Organisational chart of the CHEP



Source: Nacini, S. M. K., (19?) 'Familiarity with Council for Higher Education Planning (Ashenaei ba Shorayali Barnamchrizi)' Ministry of Culture and Higher Education, Council for Higher Education Planning (CHEP) No. 5 (Farsi).

3.4.2.1 University education

According to the higher education policy of the HCCR, there are four types of awards granted by the MCHE. The first award is the Higher Diploma (*Kardani*) which is granted by some universities, other higher education institutes, junior colleges and technological institutes in the country. This course normally requires completion of 72-78 semester hours equivalent to two years of full-time study. The second award is a Bachelor degree (*Karshenasi*) granted by universities and other higher education institutes. This course requires completion of 142-146 semester hours equivalent to four years of full-time study (NOOSR, 1992: 12 and 13). Admission to the higher diploma or bachelor degree programme is through the national university entrance examination (NOOSR, 1992: 12).

The third award is a Master degree (*Karshenasi-arshad*) granted by universities and some other higher education institutes. The master degree requires two years of full-

time study or 32-36 semester hours of study beyond the bachelor degree. Admission to a master degree programme is possible only for those who have been awarded a bachelor degree with good grades and who are successful at the central postgraduate entrance examination. However, in some disciplines, such as health sciences, undergraduate students continue their studies towards the master degree on a continuous basis (*Karshenasi-arshad payvasteh*). This integrated professional master degree normally requires completion of 174-182 semester hours equivalent to six years of full-time study (NOOSR, 1992: 14).

The fourth award is the Doctor of Philosophy (PhD) which requires completion of a 60-semester hour course⁵, passing a comprehensive examination, and submission of a thesis based on research conducted over a period of three to six years. Candidates for PhD programmes are selected by examination and interview (NOOSR, 1992: 15).

3.4.2.2 Faculty

Due to the revolutionary condition of the country during 1982-83, many university academics left the country for overseas employment. However, as evident from Table 3-11, the number of university academics has increased significantly in recent years.

⁵ In late 1994, the CHEP approved a major change in the number of the semester hours of various levels of university awards. According to these changes the number of semester hours required for Higher Diploma is 67-72, for Bachelor is 130-135 (with the exception of engineering which is 140), for Master is 28-32, for continuous Master is 172-182 and for PhD is 42-50. In the PhD programme 16-32 semester hours should be devoted to the research project (Payam Ashena, 1994: 1).

Table 3-11

Academic staff (full-time and part-time) in Iranian universities and other higher education institutes, 1978-1994

	Male	Female	Total	% Increase
1978-79	2214	14008	16222	
1979-80	2455	14422	16877	4.04
1982-83*	1424	7618	9042	-46.42
1983-84	1822	9672	11494	27.12
1984-85	2141	11557	13698	19.18
1985-86	2281	12409	14690	7.24
1986-87	2293	12048	15341	4.43
1987-88	1654	13936	15950	3.97
1988-89	2937	14510	17447	9.39
1989-90	2024	18387	20411	16.99
1990-91	4050	19326	23376	14.53
1991-92	4258	20950	25208	7.84
1992-93	5539	24723	30262	20.05
1993-94	5800	27134	32934	8.83

Source: 1) Ministry of Culture and Higher Education. Institute for Research and Planning of the Higher Education. Centre for Statistics. Higher Education Statistics of Iran (Amare Amuzesh Ali Iran), 1990-1991, first edition. (Farsi 1369-1370).

2) Ministry of Culture and Higher Education. Institute for Research and Planning of the Higher Education. Centre for Statistics. Higher Education Statistics of Iran (Amare Amuzesh Ali Iran), 1993-1994 (Farsi 1372-1373).

* All higher education institutions and universities were in recess for cultural revolution during 1981-1982.

The reason for inclusion of part-time academics in the above table is that the majority of such academics are involved in teaching for more than six hours a week. The shortage of full-time academics has forced the universities to use the services of accounting practitioners as part-time instructors in large numbers. Since part-time academics have permanent employment elsewhere, they prefer to be on part-time contract with universities and other higher education institutes. Table 3-12 shows the number of full-time and part-time academics in universities and other higher education institutes during 1988-1994. The table indicates that about one-third of the total number of academics have been part-timers.

Table 3-12
Number of full-time and part-time academics in Iranian universities and other higher education institutes (government-owned), 1988-1994

	<u>Full-Time</u>	<u>Part-Time</u>	<u>Total</u>	<u>% Part-time</u>
1988-89	11030	6417	17447	36.78 %
1989-90	12595	7816	20411	38.29%
1990-91	14160	9216	23376	39.43 %
1991-92	15847	9361	25208	37.14%
1992-93	21217	9045	30262	29.89%
1993-94	20970	11964	32934	36.33 %

Source: Ministry of Culture and Higher Education. Institute for Research and Planning of the Higher Education, Centre for Statistics. Higher Education Statistics of Iran (Amare Amuzesh Ali Iran), 1993-1994 (Farsi 1372-1373).

3.4.2.3 Students

After 1968, the number of applications for admission to university courses far exceeded the number of places available in universities (NOOSR, 1992: 12). This shortcoming continued until 1979 when the post-revolutionary government attempted to reduce the pressure of demand by establishing additional universities in some remote and economically disadvantaged areas and encouraging the private sector to establish private universities (NOOSR, 1992: 10). Table 3-13 provides some data on the enrolment and graduation of students in all areas of university education during 1982-1994.

Table 3-13
Students profile in Iranian universities and other higher education institutes (privately-owned), 1982-1994

	Students Enrolled	Percentage Increased	Number of Graduated	Students Per 1000 Population
1982-83	117148	-	5793	2.7
1983-84	121048	03.3	12831	2.6
1984-85	145809	20.5	19944	3.2
1985-86	151495	03.9	28868	3.1
1986-87	167971	10.9	26927	3.3
1987-88	204862	22.0	28637	4.0
1988-89	250709	22.4	33018	4.7
1989-90	281388	12.5	37384	5.2
1990-91	312079	11.0	42857	5.6
1991-92	344045	10.2	52353	6.2
1992-93	374452	08.9	59312	6.3
1993-94	436564	16.6	63866	6.9

Source: 1) Ministry of Culture and Higher Education. Institute for Research and Planning of the Higher Education, Centre for Statistics, *Higher Education Statistics of Iran (Amare Amuzesh Ali Iran)*, 1993-1994, first edition. (Farsi 1372-1373).

2) Payandeh, M. R. 'Higher Education Performance in the First-Five Years Plan (Karnameh Amozesh Ali dar Barnameh Awal)', Majlis And Research (Majlis and Pezohesh) 1994 (Farsi, 1973).

3) The World bank. *World Tables 1994*. The Johns Hapkins University Press, Baltimore, Maryland USA.

Table 3-12 indicates that the number of students has had a constant increase since 1982. However, the ratio of students to every 1000 persons in the country has increased from 2.7 in 1983 to 6.9 in 1993 (Payandeh, 1994: 11).

In an effort to decrease the pressure for higher education in government universities, the Islamic Azad University was established as a private university in 1982. It received only indirect support from the government, but progressed very fast (Payandeh, 1994: 205). This university extended its branches to almost all the cities and several remote areas in less than one decade. In 1993 it had 120 branches all over the country (Islamic Azad University, 19? :1). This university admitted students in all fields of study mostly for undergraduate degrees and two year diplomas. Table

3-14 shows the number of students in the Islamic Azad University from 1989-90 to 1993-94.

Table 3-14
Number of students in the Islamic Azad University between 1989 and 94

	Number of Students	Percentage Increase
1989-1990	176222	
1990-1991	222913	26.5
1991-1992	283759	27.3
1992-1993	303326	6.9
1993-1994	386139	27.3

Source: Payandeh. M. R. 'Higher Education Performance in the First-Five Years Plan (Karnameh Amuzesh Ali dar Barnameh Awal)', Majlis And Research (Majlis and Pezohesh) 1994 (Farsi, 1973).

In order to expand higher education throughout the country, a legislation permitting the establishment of private universities was passed by the CRC in 1985 (HCCR, 1985:167). Accordingly, in addition to one private university six other private higher education institutes are currently in operation in Iran.

3.5 SUMMARY

This chapter examined from a historical point of view the major environmental factors that have influenced the development of accounting education in Iran. It was found that the economic development programmes, the accounting profession and the overall education system in the country have had an enormous impact on accounting education and also that the nature and degree of this impact has changed significantly after the 1979 Islamic Revolution.

After the Revolution, the government through its development programmes and related legislation provided a greater support for the enhancement of the accounting information system. It also allocated larger amounts of funds to higher education for expanding the supply of locally produced accounting graduates. The need for an effective accounting profession was felt more strongly during this period due to the

increased demand mainly for auditing and taxation purposes. The development and enforcement of a common curriculum by the government for all universities since 1982 was one of the most significant changes that have occurred in the history of accounting education in Iran.

CHAPTER FOUR

ACCOUNTING EDUCATION IN IRAN:

PAST EXPERIENCE AND PRESENT STATUS

4.1 INTRODUCTION

Accounting education in Iran, like in many other developing nations, has had a relatively short history. Its development began mostly after the World War II as a response to the country's industrialisation programme which depended heavily on foreign assistance. However, the most striking change in accounting education in Iran occurred after 1979 as a result of the Islamic Revolution. After the Revolution, not only accounting education but also the entire education system in the country was drastically revised to give every sphere of education a strong Islamic orientation. This has resulted in a significant difference in accounting education before and after the Islamic Revolution. As such, the evolution of accounting education in Iran is examined in this chapter in accordance with these two periods.

The literature review presented in Chapter 2 reveals that in any programme of development in accounting education, a priority should be given to the enhancement of accounting curriculum. Moreover, the undergraduate accounting curriculum is the core of the subject matter of this thesis. Therefore, the discussion on the past experience and present status of accounting education in Iran is presented in this chapter, with an emphasis placed on the nature and composition of the undergraduate accounting curriculum.

4.2 ACCOUNTING EDUCATION BEFORE THE ISLAMIC REVOLUTION

Bookkeeping, which covers the record-making aspect of accounting, has been taught in few educational institutions in Iran from about the beginning of this century. However, accounting as a complete subject area entered the higher education curriculum only after the World War II.

4.2.1 Accounting education in higher education institutions

The first higher education institution which included accounting in its curricula was Dar-ol Fonun. According to Moulkaraei (1991), the first bookkeeping certificate was issued by this college around 1909. Another ancient higher education institution which included basic accounting in its curricula was the School of Political Science. A certificate issued in 1904 revealed that bookkeeping was one of the optional subjects offered by this institution (Moulkaraei, 1991). Although there were many higher educational institutions in existence by the end of the first quarter of the twentieth century, only a few offered accounting subjects (Fatemi and Bourroughs, 1969: 22). For example, Abadan Institute of Technology which was set up by the oil industry, American College attached to the American missionary in Iran and the School of Commerce affiliated to the Ministry of Finance offered bookkeeping as a subject in their programmes of studies (Salami, 1993: 149).

The first higher education institution which provided a complete programme of studies in accounting was set up around 1944 by the National Bank of Iran (*Bank Melli Iran*). The purpose of this Western-style programme was to enhance the accounting knowledge of the bank staff. The first chairman of this institution was an Iranian who had obtained both his university education and the membership of the Institute of Chartered Accountants from England (Khodadoust, 1991: 221). Ten years later, in 1955, the Faculty of Public and Business Administration (*Daneshkadeh Olume Edari va Modiriate Bazargani*) was founded as an independent affiliated

institute of the University of Tehran. This faculty included modern accounting subjects in its curricula. However, it was only in late 1960s that accounting as an independent discipline was added to the curricula of the Faculty.

As the economic development programmes were progressing more institutions of higher education in accounting appeared in the country. The National Iranian Oil Company (NIOC) established the Institute of Accounting (*Amozeshgah Ali Hesabdari Sherkat Naft Iran*) in 1957. This school provided training exclusively for the accounting staff of the NIOC. In 1958 the Tehran College of Business (*Madresseh Ali Bazargani Tehran*) added an accounting programme to its business curricula. As a result, the students of this college were able to choose Auditing or General Accounting as their major course of study. In the next decade (1960s), several other private and government institutions of higher education started offering accounting courses as a response to the increased demand of accounting personnel for the development programmes of the country.

As the demand for higher education in many areas including accounting increased the Ministry of Education set up the Central Council of Colleges and Universities (CCCU) in 1962 for the purpose of policy making and administration of higher education. The Council was responsible for approving the curricula as well as the instructional and administrative organisation of universities and other higher education institutions in the country (Slocum, 1969: 14). Under the supervision of the CCCU, special effort was made for the expansion of higher education particularly in the private sector. Consequently, a number of private higher education institutions offering accounting courses emerged. One of such institutions was the Iranian Institute of Advanced Accounting (*Moasseseh Ali Hesabdari*) which was established in 1964 as the first private independent college of accounting. This Institute conducted a Bachelor of Arts programme in accounting. The highly specialised accounting curriculum of the Iranian Institute of Advanced Accounting (IIAA) allowed students

to select one of the three majors of Cost accounting, Auditing, and Government Accounting in the last two years of study. Unfortunately, the IIAA was closed down in 1976 due to political reasons.

In response to the rapid expansion of universities and other higher education institutions in the country, the Ministry of Science and Higher Education (MSHE) was established in 1968. This ministry became responsible for several important functions such as educational planning, determination of educational policy for the whole country, supervision of all universities and other higher education institutions, and issuing of licenses for the establishment of new higher education institutions¹ (Deighton, 1971: 213). Thus, the CCCU was attached to the new ministry to retain the same responsibilities. Referring to the establishment of this new ministry, Khodadoust remarked that

Establishment of the Ministry of Science and Higher Education in 1968 was an impetus for the expansion of several badly needed fields of university education. One of these areas was business, the need for which was increasingly felt as industries developed in the country. ...Accounting is taught as a required subject in these institutions, but only a few of them offer major degrees in accounting (Khodadoust, 1975: 285).

After the establishment of the MSHE, many universities and other higher education institutions started paying increased attention to the expansion of their course offerings for producing more skilled manpower. The Iran National University (*Daneshgah Melli Iran*) introduced an undergraduate accounting programme in early 1970s. A Department of accounting in the Iran Girls' College (*Madresseh Ali Dokhtaran Iran*) was established in 1971. In total, five government universities and

¹This is not a complete list of the responsibilities of the Ministry of Science and Higher Education. For more detail please refer to the Encyclopedia of Education 1971, p212-3.

three private higher education institutions² offered accounting courses in 1979 (MCHE, 1994). Table 4-1 presents the number of undergraduate accounting students in higher education under supervision of the MSHE in the 1970s. The sharp drop of students after 1976 was due to the closing down of the Iranian Institute of Advanced Accounting in that year. According to Slocum (1969: 81), this institute's annual intake of students prior to 1976 was about 300.

Table 4-1
**Number of undergraduate accounting students in
higher education under supervision of the MSHE
from 1971 to 1978**

	BS
1971-72	3082
1972-73	3928
1973-74	4037
1974-75	3676
1975-76	3228
1976-77	1916
1977-78	1965
1978-79	2031

Source: Ministry of Culture and Higher Education (MCHE), (1994) Higher Education Statistic Bureau.

Before the Islamic Revolution, in addition to the teaching of accounting by universities and other higher education institutions under the supervision of MSHE, basic accounting under the subject title of bookkeeping has been taught in vocational schools, high schools and junior colleges under the supervision of the Ministry of Education. While vocational schools and high schools offered bookkeeping as one of the main subjects in their curricula, several junior colleges conducted a Higher Diploma course in accounting. The purpose of this course was to make students familiar with simple bookkeeping techniques and concepts (Khodadoust, 1975: 284). In 1979, the Ministry of Education had under its supervision four junior colleges

² Most of these universities and other higher education institutions were renamed after the Islamic Revolution.

which offered the higher diploma course in accounting (MCHE, 1994). Table 4-2 shows the number of accounting students who pursued this course in the 1970s.

Table 4-2
Number of accounting students in junior colleges under supervision of the Ministry of Education from 1971 to 1978

	Higher Diploma
1971-72	306
1972-73	238
1973-74	223
1974-75	304
1945-76	397
1976-77	633
1977-78	742
1978-79	1094

Source: Ministry of Culture and Higher Education (MCHE), (1994) Higher Education Statistic Bureau.

The Central Council of Colleges and Universities of the MSHE was active until the introduction of a new system of higher education in 1979. Accordingly, before the Islamic Revolution all public and private universities and higher education institutions (except those supervised by the Ministry of Education) were required to submit their curricula to the CCCU for approval. However, one of the most significant features of this system was that each institution had the freedom to design and adopt its own curriculum even though it was to be approved by the CCCU.

4.2.2 The nature of accounting curriculum

The undergraduate accounting curriculum of each university that existed prior to the 1979 revolution have been heavily influenced by the accounting curricula of British universities. For example, the accounting curriculum of the NIOC School of Accounting, a pioneer in accounting education in the country was based on the British model. The major reason for this was that most members of the teaching staff including the dean of the school were graduates produced by the British university

system. In addition, the dean of the school was a member of the Institute of Chartered Accountants of England and Wales. Students of the NIOC School of Accounting were required to be engaged in accounting-related employment in various organisations during day time and to attend classes in the evening. In the year prior to the 1979 Revolution, this school offered accounting programmes at three different levels – a 2-year diploma (*fogh-diplom*), a 4-year bachelor's degree (*licence*) and a 1-year graduate diploma (*fogh-licence*) (Slocum, 1969: 82).

Although the undergraduate accounting curriculum in Iran was based originally on the British model, later the American model gained ground more rapidly in all areas of accounting education. One of the leading institutions which adopted the American model was the Iranian Institute of Advanced Accounting (IIAA). Its founder held a PhD in accounting from an American university. He also adopted the American-style credit point system in the institute's programmes of studies. The four-year degree curriculum of this institute also included 8 semester hours of on-the-job training for accounting students.

By the end of the 1970s, in addition to the Iranian Institute of Advance Accounting and the University of Tehran, several other public and private institutions of higher education including the National University³ had revised their accounting curricula to be in line with the American model (Khodadoust, 1981: 192). The structure of the accounting curriculum, however, varied to some extent from institution to institution.

Subjects were divided commonly by all institutions into three groups as General Education, Business and Economics, and Accounting. The General Education group included subjects such as sociology, Persian and English languages. The Business and Economics group included a variety of subjects such as business law, business

³ After the Islamic Revolution this was renamed as the Shahid Beheshty University.

mathematics and statistics, economics, banking, insurance, and marketing. General accounting subjects and accounting core subjects were included in the Accounting group. The general accounting subjects which were taught in the early years of the accounting degree programmes included financial and corporate accounting subjects. The accounting core subjects which were offered in later years included cost and managerial accounting, auditing, financial statement analysis, government and tax accounting. Nonetheless, accounting curricula in Iranian educational institutions attached relatively little importance to the theoretical aspects of accounting and placed heavy emphasis on the technical aspects of accounting (Khodadoust, 1975: 198).

The undergraduate accounting curriculum of the Iranian Institute of Advanced Accounting shown in Table 4-3 is typical of the type of curricula used by most higher education institutions during the period up to the 1979 Islamic Revolution. In the final year of studies, students were given the option of selecting one of three majors which were usually limited to cost accounting, auditing, and government accounting. Inclusion of Research Methods was a special feature of this undergraduate programme because such subjects are normally found in graduate programmes in other countries.

The undergraduate accounting curriculum of the University of Tehran also provides some insight into the system prevailed before 1979. The accounting degree programme of the University of Tehran was offered through its Faculty of Public and Business Administration. In addition to taking the required accounting core subjects and business subjects which were offered within the Accounting Group, students were required to enrol in general subjects such as Persian, English, Mathematics, and other humanities and economic subjects listed in the general section of the university calendar. Table 4-4 shows the number of semester hours of accounting and business subjects offered at the University of Tehran in the 1973-74 academic year.

Table 4-3
The curriculum of the Iranian Institute of Advanced Accounting (IIAA) 1975

	Semester Hours	Total
General Education Subjects:		
Persian language (2 Subjects)	4	
English language (3 Subjects)	8	
Sociology	2	14
Business and Economic Subjects:		
Research Methods	2	
Management (4 Subjects)	8	
Marketing	2	
Public Finance (2 Subjects)	4	
Financial Administrative	2	
Principles of Budgeting	2	
Principles of Economics (3 Subjects)	6	
International Business (2 Subjects)	4	
Banking (2 Subjects)	4	
Insurance (2 Subjects)	4	
Calculating Machines (2 Subjects)	4	
Mathematics (2 Subjects)	4	
Business Mathematics (2 Subjects)	4	
Business Statistics (2 Subjects)	4	
Law (6 Subjects-Civil, Fundamental, and labour)	12	
Public Accounts Law (2 Subjects)	4	
Business law (2 Subjects)	4	
Industrial Management	2	
Government Organisations of Iran	2	78
Accounting Subjects:		
Principles of Accounting (5 Subjects)	20	
Managerial Accounting	2	
Accounting Systems Design	2	
Financial Statements Analysis I	2	
Accounting Terminology (in English)	2	28
Major Subjects:		
(1) Cost Accounting Majors		
Cost Accounting (3 Subjects)	10	
Internship in Cost Accounting (2 Subjects)	8	
(2) Auditing Majors		
Auditing (3 Subjects)	10	
Internship in Auditing (2 Subjects)	8	
(3) Government Accounting Majors		
Government Accounting (3 Subjects)	10	
Internship in Government Accounting (2 Subjects)	8	18
Electives:		
Accounting Theory	2	
Financial Statements Analysis II	2	
Administrative Law	2	
Comparative Public Finance	2	
National Accounts	2	2
Total		140

Source: Personal file and the Institute's catalogue, 1975.

Table 4-4
Accounting and business subjects included in the undergraduate accounting curriculum of the University of Tehran: 1973-74

	Semester Hour
Accounting Core Subjects:	
Accounting I	3
Accounting II	3
Accounting for non Partnership Companies	3
Government Accounting	3
Partnership Accounting	3
Cost Accounting I	3
Cost Accounting II	3
Financial Report Analysis	3
Managerial Accounting	3
Auditing I	3
Auditing II	3
Accounting Systems	3
Business Courses:	
Principle of Business Management	3
Public Finance	3
Business Law	3
Quantitative Method in Management	3
Banking and Bank Management	3
Human Relations in Management	3
Computer in Management	3
Managerial Finance	3
Accounting Studies (in French) I, II & III	6
Accounting Studies (in English) I, II & III	6
Electives:	
Tax Accounting	3
National Income Accounting	3
Accounting For-None-Profit Organisations	3
Standard Costing Accounting	3
Calculating Machines	2
Budgeting in Business	3
Research (Individual) I & II	4

Source: The University of Tehran Calendar 1973-74 (*Rahname Daneshgah Tehran 1352-53*), p. 596-602.

When compared with the IIAA it is seen that the accounting curriculum of the University of Tehran did not include specialisation areas. It had a greater number of elective subjects. However, Research Methods and Accounting Theory were not included either as core or elective subjects. National Income Accounting and Individual Research (Research Projects) were also among the elective subjects.

4.2.3 Instruction and assessment

As reported by Khodadoust (1975), the lack of qualified full-time teachers and suitable textbooks, and the ineffective methods of instruction and assessment were among the major obstacles existed in the 1970's. The passive lecturing method was used almost exclusively for the teaching of accounting. Term papers, essays and research projects were rarely assigned to students. The assessment of student performance was based on the end-of-session examinations. According to the author's experience in university education in Iran, the type of questions usually asked in those examinations required from students a high degree of memorisation. Thus, the examinations seemed to assess the students' memorisation ability rather than the actual understanding of the subject matter. Another major obstacle to accounting education was the inadequate salaries paid to accounting academics. Therefore, most of the accounting graduates who were qualified in Iran or overseas preferred a professional accounting career rather than going into full-time teaching. Thus, universities had to depend on a large number of part-time accounting teachers who served as visiting lecturers. Most of them were not as qualified as full-time academics. According to Slocum (1969: 81 and 82), the IIAA had only 4 full-time staff compared to 38 part-time in 1969, and the NIOC School of Accounting did not have a single full-time staff but managed with only 15 part-time teachers in the same year.

Obviously, part-time lecturers paid less attention to class preparation and research due to their busy schedules involving activities of other organisations (Khodadoust, 1981: 192). She further reported that in tutorial classes the technical aspects of accounting were discussed with no sufficient attention being paid to the theoretical aspects. Even among full-time academics research interest was extremely low. The other problem was that the full-time accounting academics had been accustomed to a system of compensating their salaries through the acceptance of professional accounting

positions outside the university thus devoting less time to improve the quality of their academic career.

Students' learning was most severely hampered by the lack of suitable textbooks particularly in their mother tongue. There have been just a few accounting textbooks in Farsi, which were written or translated by a few accounting professors. Although some academics of the two major colleges of accounting (i.e. IIAA and NIOC School of Accounting) have published several accounting books prior to the 1979 Revolution, each of them was nothing more than a set of class notes based on their lectures. These books mostly explained the mechanics or techniques of accounting rather than theoretical concepts underlying each subjects (Khodadoust, 1981: 193). Moreover, the approach taken and the subject matter covered in most of them are same as those of the American or British systems of accounting. The subject matter in these books has not been presented to suit the Iranian accounting and economic environment. For example, when dealing with company accounting in Iran the authors have assumed a developed capital market which is usually found in industrialised countries. Unfortunately, Iran as a developing country has never had such a developed capital market and a high degree of economic advancement. As such, many academics view them as irrelevant and out-dated. In commenting on the quality of the few accounting books published in Farsi, Khodadoust made the following remarks:

Until 1979, only a handful (about six) of accounting and accounting-related textbooks existed in Farsi, almost all of which had been written in the span of Iran's rapid industrialization. With few exceptions, most of this literature tended to make hard and fast rules of some points and concepts which are not accepted everywhere in the world. Furthermore, these books were primarily technically oriented rather than concept-oriented (1981: 193).

Despite the above limitations, it must be acknowledged that these books have contributed to accounting education and practice in Iran. However, the few textbooks published in Farsi cover the subject matter applicable to only first two years of study.

Therefore, students have had to depend almost entirely on their class notes in the final years. Because of the inadequate knowledge of English students were not able to make use of imported textbooks effectively. Furthermore, even the imported textbooks and periodicals were rarely available in libraries. Not a single accounting related periodical was published in Farsi. The IIAA library which was the largest accounting library in the country had only about 500 books in 1969 (Slocum, 1969: 81).

Another notable shortcoming of the accounting education system existed up to the 1979 Islamic Revolution centred around some deficiencies of the accounting curriculum. One major deficiency was that the majority of curricula did not include some subjects that were considered to be crucial in the context of the purpose of higher education and the development needs of the country. This is evident from the following statement:

However, in some instances shortcomings included the lack of essential courses such as economic development theory, Iranian economic development, accounting philosophy and theory, the role of accounting in economic development, the social and behavioural aspects of accounting in advanced countries, research methodology, and accounting concepts. As a consequence of this technical and specialised approach, students were often prepared for an immediate desk job rather than for futuristic citizen life (Khodadoust, 1981: 192).

Another study of Khodadoust (1975) reveals that in an overall comparison of the domestic and foreign accounting graduates, “the foreign accounting graduates are better as far as systems and principles are concerned, whereas the locally educated accountants are better as far as Iranian laws and regulations are concerned”.

4.3 ACCOUNTING EDUCATION AFTER THE ISLAMIC REVOLUTION

After the Islamic Revolution in 1979, the country’s education system including accounting education has undergone a complete transformation particularly in the

areas of educational policy making and curriculum development. The major purpose of this transformation was to give a strong Islamic orientation to the entire education system in the country. A special government organisation under the title of the Cultural Revolution Council (CRC) was set up in 1980 by the leader of the 1979 Islamic Revolution to oversee the activities relating to general education and university education in the country. In 1985, the CRC was replaced by the High Council of Cultural Revolution (HCCR) which was entrusted with increased responsibilities to continue with the transformation process particularly in the area of curriculum development for higher education.

4.3.1 Curriculum development

The HCCR established seven divisions for carrying out the various activities assigned by the leader of the revolution. One of these divisions was the Council for Higher Education Planning (CHEP) which, in turn, set up eight groups or sub-divisions in respect of main disciplinary areas. One of them was the Social Science Group. It became responsible for policy making and curriculum development in the social science area. Fifteen committees and twenty sub-committees were set up by the Social Science Group for distributing the work among them on the subject area basis. The Accounting Sub-committee set up under this arrangement and organised under the supervision of the Administrative Science Committee was entrusted with the responsibility of designing a suitable undergraduate accounting curriculum which could be adopted by all universities on a national basis. Most of the members of this sub-committee were drawn from the senior accounting academics in universities. The organisation chart of the Social Science Group is presented in Table 4-5.

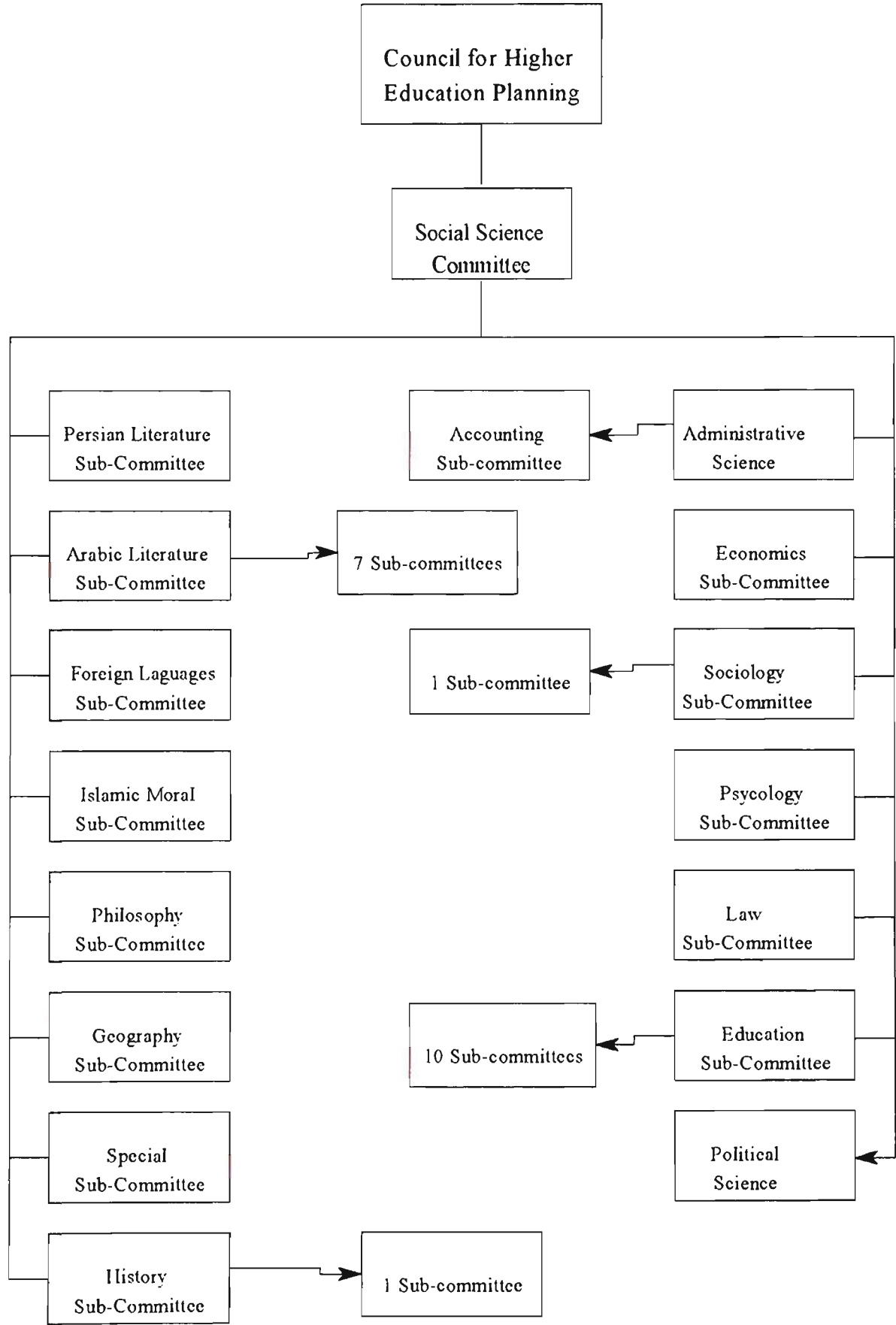
All universities were in recess for two years from 1980 to 1982 due to the cultural revolution and during this period the accounting curriculum sub-committee along with other committees was busy with developing a new curriculum. After a careful review of the pre-revolution accounting curricula of both the IIAA and the Tehran

University, the sub-committee designed a new accounting curriculum for approval of the CRC. This new curriculum included a variety of general education subjects based on Islamic principles and concepts. However, due to the time limitations, the sub-committee failed to conduct research on the suitability and need of each subject in terms of its importance for economic development of the country. Therefore, when the universities were re-opened in 1982 they were asked to adopt the new accounting curriculum on a provisional basis so that it would be revised later.

4.3.2 The nature of the current accounting curriculum

The undergraduate accounting curriculum approved by the Cultural Revolution Council has been in operation since 1982 in all universities offering undergraduate degree programmes in accounting. This curriculum includes three categories of subjects –general subjects, basic subjects, and accounting subjects. The general subjects include Persian and English languages, physical education, and a group of subjects based on Islamic morals, ethics, history, texts and revolution. These subjects are compulsory to all students regardless of their field of study. The basic subjects which are also compulsory for all accounting majors include a variety of subjects in economics, mathematics, management and statistics, social sciences and research methods. The subjects in economics comprise micro and macro economics, economic development, money and banking and a subject in public finance. The mathematics and statistics group includes application of mathematics and statistics in business and economics as well as other operation research subjects. Principles of management, production management, psychology and sociology are also offered as basic subjects. Business law (Commercial Code) is the only law subject offered under the basic subjects. Application of computers in business is also included in the category of basic subjects.

Table 4-5
The organisational chart of the social science group



Source: Naeini. S. M. K., (197) 'Familiarity with Council for Higher Education Planning (Ashenaei ba Shorayali Barnamchrizi)' Ministry of Culture and Higher Education, Council for Higher Education Planning (CHEP) No. 5 (Farsi).

The Accounting subjects include financial, cost, tax, government accounting subjects as well as auditing and finance. These subjects also incorporate case studies in accounting and finance, and few accounting studies (accounting terminology in English). The only computer-based accounting subject included in this group of subjects is COBOL programming in accounting, which is regarded as quite out-dated.

The subject combinations included in the original curriculum in 1982 were slightly changed in later years and the currently used combinations are presented in Table 4-6. The current undergraduate curriculum, after all changes have been incorporated, requires that students enrol for 8 General Subjects equal to 20 semester hours, 17 Basic Subjects equal to 53 semester hours and 22 Accounting Subjects equal to 69 semester hours. All the subjects in the accounting curriculum are compulsory.

The current undergraduate degree programme based on the above curriculum consists of 142 semester hours of course work which is to be covered in eight sessions (CRC, 1983: 5). Table 4-6 shows the number and percentage of required semester hours in each of the three areas of course work within the current undergraduate curriculum in accounting.

Table 4-6
Number and percentage of required semester hours for each field of study in the current accounting curriculum

	Semester Hours	Percentage
General Subjects	20	14.1
Basic Subjects	53	37.3
Accounting Subjects	69	48.6
Total	142	100

Source: The Cultural Revolution Council. Social Science Group. The Administrative Science Committee. (1983) The Undergraduate Accounting Subjects Description. The Cultural Revolution Council. Tehran. Iran.

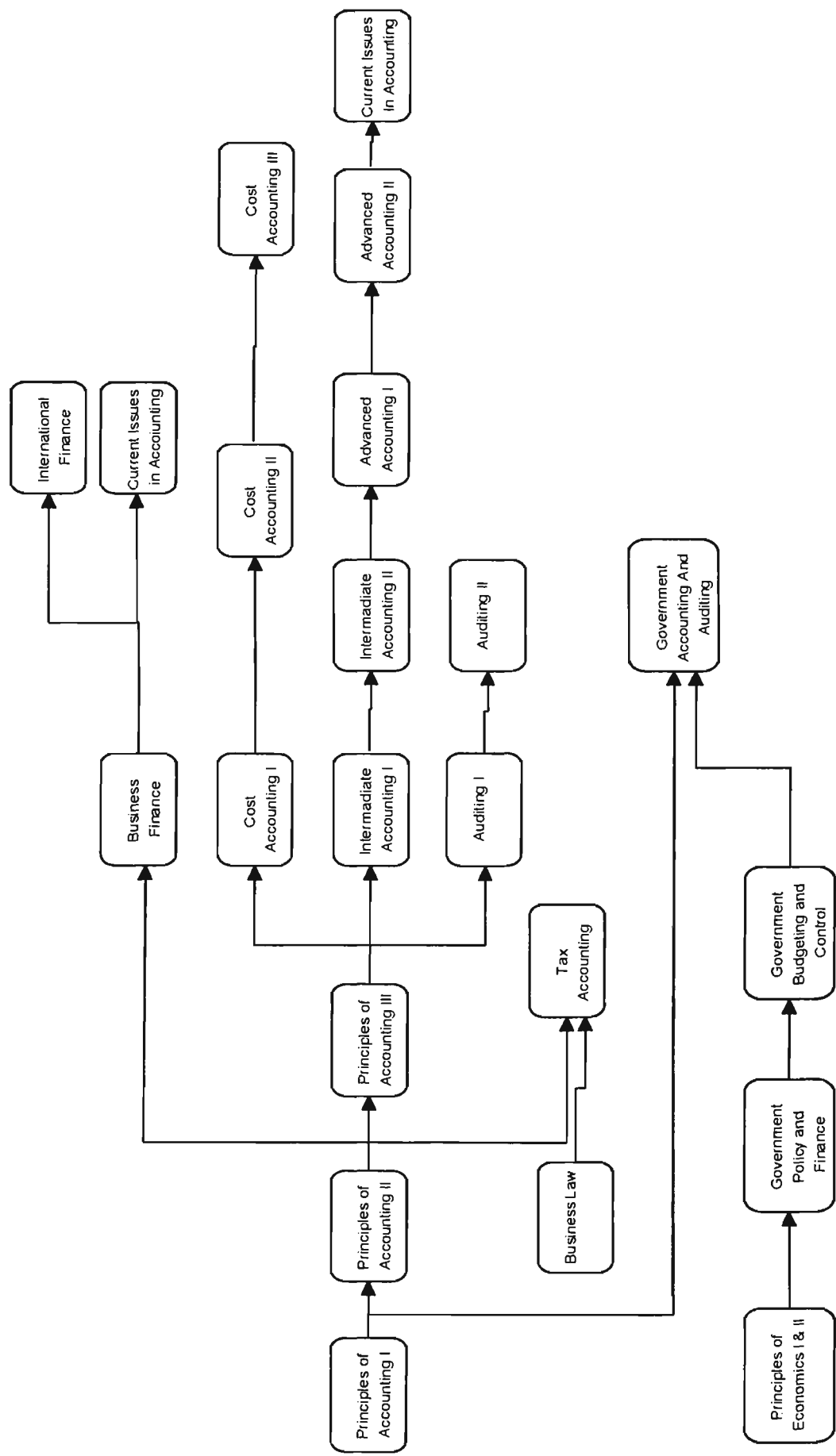
As suggested by the CHEP, the general subjects have to be covered in earlier years of the accounting programme with the basic subjects being offered in the middle years

and the specialised subjects in the later years. The CHEP did not divide the subjects into years and sessions, but the prerequisites were specified in the subject description pamphlet. Therefore, the practice of individual accounting schools or departments of universities has been to divide the prescribed subjects into years and sessions by themselves according to the CHEP guidelines and publish them in their programme brochures and university calendars. As such, the subject combinations for each semester vary slightly from university to university. The prerequisites for accounting subjects are shown in Table 4-7.

The longest chain of prerequisites is in the financial accounting subjects. These subjects have to be completed in eight consecutive sessions during the four-year period of study. According to the order of prerequisites, Principles of Accounting III is the key subject which should be completed before a student enrolls for some subjects in major areas such as Cost Accounting, Auditing and Intermediate Accounting.

After introducing the new curriculum in 1982, only a few changes have been made in the combination of subjects. The most significant change was the dropping of certain subjects from the curriculum. Table 4-8 shows the combination of subjects and semester hours in the latest undergraduate accounting programme.

Table 4-7
Prerequisites for accounting subjects in the current accounting curriculum



Source: *The Undergraduate Accounting Subjects Description*, (1989), The Cultural Revolution Council, Social Science Group, The Administrative Science Committee, (1989) Tehran Iran.

Table 4-8

Number of semester hours of teaching in the current accounting curriculum of Iran

	Semester Hours	Total
General Subjects (8 compulsory subjects):		
Persian Language	3	
English Language	3	
Physical Education	2	
Islamic Morals	4	
Islamic Ethics	2	
Islamic History	2	
Islamic Texts	2	
Islamic Revolution	2	20
Basic Subjects (17 compulsory subjects):		
Psychology	3	
Sociology	3	
Principles of Economics I	3	
Principles of Economics II	3	
Economic Development and Planning	3	
Money and Banking	3	
Government Policy and Finance	3	
Fundamental of Mathematics and Introduction to Statistics	3	
Application of Mathematics in Business	3	
Application of Statistics in Business	4	
Operation Research I	3	
Operation Research II	3	
Application of Computers in Business	4	
Business Law	3	
Production Management	3	
Principles of Management	3	
Research Methods	3	53
Accounting Subjects (22 compulsory subjects):		
Principles of Accounting I	4	
Principles of Accounting II	4	
Principles of Accounting III	4	
Intermediate Accounting I	4	
Intermediate Accounting II	4	
Advanced Accounting I	3	
Advanced Accounting II	3	
Cost Accounting I	3	
Cost Accounting II	3	
Cost Accounting III	3	
Auditing I	3	
Auditing II	3	
Principles of Government Budgeting and Control	3	
Government Accounting and Auditing	4	
Tax Accounting	2	
Application of COBOL programming in Accounting	3	
Current Issues in Accounting	2	
Current Issues in Managerial Finance	3	
Managerial Finance	4	
International Finance	3	
Accounting Studies (in English) III	2	
Accounting Studies (in English) IV	2	69
Total		142

Source: *The Undergraduate Accounting Subjects Description*, (1989). The Cultural Revolution Council, Social Science Group, The Administrative and Management Science Committee, Tehran, Iran.

In addition to the undergraduate accounting curriculum, the CRC also designed a curriculum for a master degree programme in accounting in 1985. The number of semester hours including research projects for this programme was 45, which was later reduced to 38 semester hours. The master degree curriculum included 23 semester hours of compulsory accounting subjects, 2 semester hours of seminars and 4 semester hours of a research project. The duration of graduate programme is 2.5 years for full-time and 4.5 years for part-time students (CRC, 1985: 3-7). Appendix (4-1) presents the structure of the graduate curriculum in accounting.

4.3.3 Expansion of higher education in accounting

After the Islamic Revolution, the expansion of higher education became one of the priorities of the government. This policy had a significant positive effect on accounting education as well. Consequently, the number of universities and higher education institutions offering accounting programmes increased sharply during 1979-1994. In addition to the Ministry of Culture and Higher Education, a few other government bodies contributed towards the establishment of new universities and other higher education institutions.

In the 1979-1980 academic year, the MCHE had under its supervision only six universities and one higher education institution offering accounting courses at undergraduate level. The number of such universities increased to 13 by the end of 1994. In this process, some of the non-university institutions with accounting in their curriculum were amalgamated and elevated to the university level while some universities and institutes were given new names. For example, the University of Allameh Tabatabaei was set up by amalgamating the Iranian Institute of Advanced Accounting and College of Business with 23 other higher education institutes (UAT, 1993-94: 11).

During 1979-1994, six new universities and higher education institutes with accounting in their curricula have been established by the Ministry of Finance, the Ministry of Power, the Ministry of Defence, and the Banking System of the country. Most of them offer a four-year degree programme in accounting. In addition, there are eight junior colleges offering two-year diploma programmes in accounting.

In recent years, the MCHE has also attempted to expand post graduate courses in accounting. As a result, at present there are four universities offering master degree programmes in accounting and three of them offer PhD programmes as well. Table 4-9 shows the number of accounting students who pursued different programmes of study in universities and junior colleges in Iran during the period from 1979 to 1993. This table indicates that the number of accounting students in higher education has increased more rapidly after 1990.

Table 4-9
Number of accounting students in government universities and junior colleges in Iran during 1979-1993, by programs of studies

	Higher diploma [*]	BS	MS	PhD	Total
1979-80	1511	2214	357	-	4082
1982-83 ^{**}	1082	1629	208	-	2919
1983-84	1070	2109	161	-	3340
1984-85	304	2576	262	-	3142
1985-86	67	2729	179	-	2975
1986-87	-	2344	53	-	2397
1987-88	17	2929	155	-	3101
1988-89	170	3465	116	-	3751
1989-90	510	4113	101	2	4726
1990-91	816	4766	88	4	5674
1991-92	895	5918	119	3	6935
1992-93	808	8464	199	10	9481
1993-94	1403	12668	248	11	14330

Source: The Ministry of Culture and Higher Education Statistics Bureau.

* The two-year Higher Diploma in Accounting awarded by junior colleges.

** The universities were in recess between 1980 and 1982 due to the cultural revolution.

As one of the strategies for increasing the supply of qualified accounting personnel in the country, a policy of encouraging the setting up of private higher education

institutions was also pursued by the government in recent years. To this end, a few private higher education institutions have been authorised by the MCHE. Among them is the Islamic Azad University which was established in 1982. Most of the private higher education institutions include accounting in their curricula. However, except in the case of the Islamic Azad University, official statistics on the number of accounting students in private institutions are not available. The Islamic Azad University admitted students in its 35 branches through the country for a four-year course of study in accounting. In addition, one of the branches offers a master degree programme with three other branches offering a two-year diploma programme in accounting.

4.3.4 Teaching and assessment

Teaching in accounting is confined almost entirely to the lecturing method. No separate tutorial classes, workshops or laboratory sessions are held. However, most lecturers use the lecture time as a combined lecture and problem solving session by utilising part of the lecture time to discuss a few practical accounting problems. Since the maximum number of students for a lecture on any subject does not normally exceed 50, this type of arrangement has been possible. If the number of students enrolled in a subject is significantly greater than 50, they are divided into two or more groups and the lecture is repeated accordingly. Occasionally, some lecturers also provide students with additional accounting problems and cases as home work.

The teaching programme is based on the course unit system. Each hour of teaching in a week for a subject is equal to 1 unit of course work. The number of units or semester hours attached to a subject varies from 2 to 4. For a 2-semester hour subject, for example, the number of teaching hours provided for a week is 2. Similarly, a 4-semester hour subject requires 4 hours of teaching per week over a period of 16 weeks during the semester. Although every semester has 18 weeks the last two weeks are devoted to examination and assessment. A limited number of

subjects are offered in the summer session which consists of 8 weeks. Student performance is usually based on mid-semester and final examinations.

Visual aids and other supporting teaching material are rarely used in lectures. Class discussions are not generally encouraged. This is mainly due to the fact the time allocated to a lecture is hardly sufficient because the lecture has to cover the subject matter entirely through the lecture while giving adequate time for students to take down notes. Such a system is unavoidable because of the lack of textbooks in most subjects, particularly in Farsi.

4.3.5 Teaching staff

The number of teachers with adequate academic or professional qualifications has been relatively low in the accounting departments of universities in Iran even after the 1979 revolution. Table 4-10 presents some data relating to the academic qualifications of accounting teachers in two selected academic years, 1985-86 and 1992-93.

Table 4-10
Number of full-time accounting teachers in Iranian universities and their academic qualifications

Academic Year	Bachelor	Master	PhD	Total
1985-86	-	18	1	19
1992-93	2	58	2	62

Source: 1) Statistics Bureau of the Ministry of Culture and Higher Education, 1993 (Humanities edition).

2) Statistics Bureau of the Ministry of Culture and Higher Education, 1986 (Humanities edition).

This table indicates that the total number of full-time accounting educators was limited to only 19 in the academic year of 1985-86. This has increased to 62 by the end of 1992-93, with an average annual increase of 46.6 per cent during the seven-year period. However, the number of academics with PhD qualifications has been

alarmingly low even in 1993. In terms of academic status, only two of the 62 staff members held the positions as Associate Professor and Assistant Professor with 58 of them serving as Instructors and two as Assistant Instructors during 1992-93 (MCHE, 1993).

As an attempt to increase the number of qualified staff in accounting departments of universities, the MCHE in recent years adopted a policy of awarding scholarships to a selected group of Iranian students for doctoral study abroad. In 1994, the number of such students was about ten according to the head of the Department of Scholarships of the MCHE. In addition, a few local universities (i.e. the Tarbiat Modaress University and the University of Alameh Tabatabaei) started doctoral degree programmes in accounting in recent years. However, none of these universities have still produced any accounting graduates at the doctoral level.

The authorities also made an attempt to increase the number of competent accounting educators by inviting the qualified and experienced Iranian accounting professors who serve in foreign countries to teach in graduate level programmes in Iranian universities as visiting staff during their summer vacations. The University of Tehran, the Tarbiat Modaress University and few other universities sought their assistance particularly in the supervision of PhD and master students.

One of the main reasons for the low level of accounting teachers both in quality and quantity is the low salaries paid to academics. Their salaries when compared with those of practising accountants in Iran are considerably lower. This causes two bottlenecks in accounting education. The first bottleneck is that the qualified graduates are reluctant to work as accounting academics. Partly for this reason, most of the Iranians who obtained doctoral degrees from foreign universities did not return to the country but have accepted well-paid teaching positions overseas. Novin and Saghafi (1994: 136) reported that there were at least 25 Iranian accounting educators

with PhDs who were teaching in the United States and Canada in 1994. The other bottleneck is that since many local accounting educators are busily occupied in external consulting activities to supplement their salary income, they have less time for devoting to planning and preparation of teaching material, research, and continuing education for professional development. This situation has forced the accounting departments of universities to depend too heavily on professional accountants who serve as part-time instructors. Unfortunately, these part-time instructors devote less time to class preparation and have a tendency to present more practical accounting issues in classes, ignoring the conceptual and theoretical aspects of a subject.

4.3.6 Students

The quality of students who enrol in an undergraduate programme in accounting has been reported to be lower than that of students entering programmes of study in medical sciences or engineering which are recognised in the society as more prestigious courses (Ramzani, 1991: 11). The main reason for this is said to be the fact that students who score high marks at the university entrance examination prefer to enter these prestigious courses and those who score relatively lower marks seek admission to accounting courses. Furthermore, the accounting programmes in universities have two types of students. One of them includes students who have studied basic accounting in their high schools. The rest are students who are completely new to the subject (Ramzani, 1991: 11). This situation creates a difficulty for teachers when both types of students are sitting in the same class.

4.3.7 Textbooks

After the Islamic Revolution an attempt was made to encourage the writing of university-level textbooks. The CHEP founded the Organisation for Preparation of Social Sciences Textbooks (OPSST) to revitalise this process in 1984. Due to the

heavy teaching load and the lack of motivation, only a few university accounting textbooks have been written under the supervision of the OPSST. These books are mostly in financial accounting and government accounting. In recent years, the Accounting Committee of the OPSST has been activated to sign more contracts with accounting qualified educators and qualified accounting practitioners to write accounting books.

Another attempt for increasing the number of accounting books and encouraging accounting research was made by the Iranian Auditing Organisation (IAO). The IAO established a centre exclusively for research and publication of accounting books. The IAO has published about 100 books since 1980. Many of these books are used as accounting textbooks in the country. However, a considerably large number of IAO books are translations of well known Western textbooks. Although a few IAO books have been written by Iranian accounting academics some of them are not based on the Iranian accounting environment. The IAO should be honoured for its efforts in financing and encouraging publication of accounting texts in the native language after 1980. In addition to the IAO, some private publishers have also produced a limited number of accounting books. Unfortunately, most of them are mere translations of foreign texts.

4.3.8 Research

After the Islamic Revolution, many efforts were made to encourage Iranian oriented research projects. Even though some noticeable results are seen in the engineering and science areas, the field of accounting is still lagging behind in terms of research. However, in recent years as the number of accounting lecturers who graduated mainly from foreign universities has increased, the amount of their research too has been on the increase.

The non availability of locally published journals which could be used for publishing research papers written in Farsi was a considerable problem for academics who were not proficient in English. In recent years, some steps have been taken by the accounting profession along with a few universities as an attempt to improve this situation. The Iranian Institute of Certified Accountants (IICA) launched its journal *Hesabdar* (The Accountant) in 1982. Although the contents of this journal in the first few years were confined to professional news and a few articles aimed at practical aspects of accounting rather than research results, the recent issues have carried several research-based articles. The other specialised accounting periodical published in Iran is the Iranian Accounting Review (*Barrasyhay Hesabdari*) which is a publication of the University of Tehran Faculty of Public and Business Administration. The first issue of this journal appeared in early 1992. The Iranian Accounting Review normally publishes results of Iranian educators' research in accounting and a few translations of articles written in English. The abstract of all articles are provided in English in the last pages of the journal. Two accounting related periodicals, *Faslnameh Elmi va Tahghighi Motaleate Modiriate* and *Tahghighate Mal* published by the University of Allameh Tabatabaei and the University of Tehran also carry accounting-based articles occasionally.

Academic conferences and seminars can also contribute significantly to the development of accounting education and research of a the country. In this regard, several universities and organisations in Iran have taken some positive steps since 1976. The first Accounting conference was held in 1976 and was organised by the Tehran College of Business. The second conference which was the first after the Islamic Revolution was held in 1988 under the sponsorship of the University of Shahid Chamran, Faculty of Economic and Social Sciences. The third in the chain of accounting conferences was held in 1990 by the Islamic Azad University in Zanjan. The fourth conference was held in 1993 under the joint sponsorship of the University of Shahid Beheshty, the Iranian Institute of Certified Accountants and the Bank of

Saderat Iran. At the beginning, general aspects of accounting were the main concerns of these conferences, which were usually attended by accounting academics and practitioners operating in the capital city. Subsequently, as the number of qualified accounting academics and accounting practitioners increased in recent years these conferences expanded the coverage of topics and extended the participation beyond the capital city. For example, the 1990 accounting conference covered a variety of topics including the development of national accounting and auditing standards.

4.4 SUMMARY

This chapter examined the evolution of accounting education in Iran before and after the 1979 Islamic Revolution. Although bookkeeping was taught in several educational institutions from about the beginning of this century, accounting as a complete discipline entered the higher education curriculum only after the World War II. After the 1979 Islamic Revolution, the entire education system including accounting education in the country was drastically changed. This change has been effective particularly in the area of curriculum development. The main purpose of the change was to give the entire education system a greater degree of Islamic orientation. Accordingly, a new undergraduate accounting curriculum designed by a special committee was introduced in 1982 as a common curriculum for all universities offering undergraduate degree programmes in accounting. However, problems and shortcomings of several areas such as accounting curriculum, instruction and assessment, teaching staff, research and publications, and textbooks continue to exist.

CHAPTER FIVE

RESEARCH METHODOLOGY

5.1 INTRODUCTION

The purpose of this chapter is to describe the methods and procedures adopted for collecting and analysing data for the study. Since a questionnaire survey has been used as the principal method of data collection, the chapter is primarily devoted to a description of the procedure followed in designing and conducting the survey. It also provides a brief introduction to the statistical techniques used for analysing the survey data.

5.2 SOURCES OF INFORMATION AND DATA

At the initial stage of this study, the review of literature provided a useful insight into the nature, importance and problems of accounting education in developing countries, including Iran. This insight coupled with the researcher's own experience as an accounting lecturer for thirteen years at Shiraz University in Iran was useful in identifying the problem to be investigated in the study. The review of previous studies on accounting curriculum issues in other countries was particularly beneficial to the researcher in designing the survey instruments.

In addition, handbooks, catalogues and course outlines of universities and other higher education institutions as well as publications of several government ministries and departments in Iran provided the information necessary for gaining an understanding of the nature of accounting education, in general, and the structure of undergraduate accounting curriculum, in particular.

As the study was based primarily on the perceptions of accounting educators and practitioners, the required data were gathered through a comprehensive questionnaire survey. The data collected were further clarified where necessary by consulting the respondents personally. Interviews were also conducted on a selected group of accounting educators and practitioners for obtaining more extensive and independent views on the main issues addressed in the questionnaire survey. The researcher returned to Iran for this purpose and completed the survey during December 1994 and February 1995.

5.3 POPULATION AND SAMPLE

Since the objective of the questionnaire survey was to obtain perceptions of both accounting educators and practitioners, an attempt was made at the outset to select the sample in such a way that it would have a reasonable balance between the two groups.

According to the *MCHE Higher Education Statistics (Humanities Edition)* of 1992 which was the latest issue available in 1994, the total number of full-time accounting academics in Iranian universities and similar institutions amounted to only 61. However, when those institutions were personally contacted by the researcher it was revealed that the above number had increased to about 75 by the middle of 1994. Since this number was not too high, the entire population of accounting educators was used for the survey.

In the case of accounting practitioners, of course, the population was very much higher. However, neither the government nor any other organisation had any record of the actual number of accounting practitioners operating in the country. Nevertheless, two professional accounting bodies have been in existence: the Iranian

Auditing Organisation (IAO) and the Iranian Institute of Certified Accountants (IICA). Even though there were many accounting practitioners who did not belong to any of these professional organisations, for pragmatic reasons the selection of the sample for this survey was based on the IAO and IICA members. The number of accountants employed by IAO in 1994 was 1,722. Of this total, 1,526 accountants held a bachelor degree as their minimum academic qualification. Although the actual number of IICA members was not on record it was estimated to be around 1,200. The minimum qualification for IICA membership was a bachelor degree in accounting or related area. Since the respondents in this survey were expected to give their expert opinions on various aspects of the undergraduate accounting curriculum, it was considered essential that they should be individuals with sufficient knowledge and experience in university education at the undergraduate level. One of the criteria adopted for selecting the sample of accounting practitioners, therefore, was that they should have a minimum of bachelor degree qualification in accounting. Finally, from among the IAO and IICA members who satisfied this criterion, 95 practitioners were randomly selected as the sample of accounting practitioners for the survey. Thus, the total number of accounting educators and practitioners for the survey was determined as 75 and 95 respectively.

5.4 QUESTIONNAIRE SURVEY

Since the primary objective of this study is to identify major shortcomings in the existing undergraduate accounting curriculum and recommend suitable remedial measures, obtaining expert opinion on these two aspects was considered essential. Questionnaire survey is the most popular research method used for studies requiring this type of information. For example, Solomon (1972) and Flaherty (1979) in the USA, Flanagan and Juchau in Australia, and Quaishat (1982) in Jordan have conducted this type of surveys for obtaining expert opinion on various aspects of curriculum issues in accounting. Since the present study sought the perceptions of

170 accounting educators and practitioners located in different parts of the country, the questionnaire survey method was considered appropriate for the purpose.

The questionnaire survey included four data collection instruments, namely, two sets of questionnaire and two sets of interview guides for the two groups of potential respondents. Both sets of the questionnaire were designed to include basically similar questions except for those dealing with demographic data of the two groups. The two sets of interview guides also adopted a similar pattern. Each copy of the questionnaire was accompanied by a letter of request from the researcher. The questionnaire, interview guidelines and letter of request were developed originally in English and then translated into Farsi, the language of the respondents. The English and Farsi versions of the questionnaires are given in Appendix 5-1.

Since all the accounting educators belonged to only ten institutions located in Tehran and four other major cities, it was possible for the researcher to visit those institutions and hand in the copies of the questionnaire personally by himself. Similarly, as all the IAO members selected for the survey were attached to their head office situated in Tehran, they could also be provided with the questionnaire personally by the researcher. In the case of IICA members, the President of the IICA, recognising the value of this research, volunteered to distribute the questionnaire through the institute's mail service. Only for a small number of IICA members who did not respond to the original request, a second copy of the questionnaire was sent directly by the researcher through private mail. A stamped envelope was also sent to such participants for returning the completed questionnaire direct to the researcher.

5.4.1 Design of the questionnaire

The questionnaire was prepared in three sections with an additional section included for the accounting practitioners. The first section was devoted to a set of questions seeking information on the demographic data of respondents. These questions were slightly different for the two groups of respondents.

Section Two of the questionnaire aimed at the respondent's opinion on the importance of each of the subjects listed under the three groups of Accounting Specialised Subjects, Basic Subjects and General Subjects as specified by the CHEP. In addition, the respondent was asked to list in the space provided the subjects and topics to be added to or be dropped from the existing curriculum to make it more effective and relevant to the needs of the country. In order to assist respondents in answering this type of questions, a list of topics which has to be covered in each Accounting and Basic subjects were provided within the questionnaire. Three accounting core subjects which are usually offered in undergraduate accounting programmes in other countries but are not included in the Iranian curriculum were also listed in Section Two, with a request for indicating the respondent's opinion on their suitability or otherwise for adoption in Iran.

For indicating the degree of importance in respect of each of the above subjects, the respondent was provided with the Likert five-point measurement scale, which has been recommended by Oppenheim (1982: 133) for this type of attitude measurements.

Section Three of the questionnaire addressed a number of important general issues related to accounting education in Iran. Accordingly, the questions sought the respondent's perceptions on (1) the objectives of an undergraduate accounting

programme, (2) the importance to be attached to theory and practice, (3) the proper duration for the undergraduate accounting programme, (4) the importance of various areas of accounting, and (5) other suggestions for improving the existing undergraduate accounting curriculum. In addition to the Likert point-scale type questions, several multiple choice questions were also included in this section.

The questionnaire designed for the accounting practitioners included an additional section, Section Four. It was devoted to a set of questions seeking perceptions of the respondent on the performance of recent accounting graduates and the desirable characteristics for a competent accounting graduate. The practitioners were also asked to evaluate, using a three-point measurement scale, whether or not the recent graduates who were working with them had acquired the necessary knowledge and skills needed for starting an accounting career.

5.4.2 Pilot Study and revision of questionnaire

For the purpose of gaining a better understanding of what should be included in the final questionnaire, the draft questionnaire was mailed as a pilot study to 60 Iranian accounting educators and practitioners in early 1994. A stamped envelope was also sent with the questionnaire. The completed draft questionnaire was received from 27 respondents. Responses to the pilot study revealed several deficiencies in the existing undergraduate accounting curriculum and indicated a number of possible remedial measures.

On the basis of responses to the pilot study, the draft questionnaire was considerably revised. In addition, the Farsi version of the revised questionnaire was further improved after being reviewed by a group of Iranian PhD students attached to the University of Wollongong and the University of New South Wales.

5.4.3 Interviews

For the purpose of obtaining more independent and comprehensive views on the main items covered in the questionnaire, face-to-face interviews were conducted personally by the researcher with a selected group of experts in the field. As suggested by Cohen and Manion (1989) and Kerlinger (1970), interviews were considered useful for this type of study as a supplementary research technique for going deeper into the motivations of respondents and their reasons for responding as they do.

The interviewees were selected from among the accounting educators and practitioners included in the survey. The criterion adopted for selecting the educators was that they should have: (1) substantial experience in teaching accounting at the university level, (2) considerable experience in educational administration, (3) some professional experience in accounting, and (4) hold at least a master degree in accounting or related area. The criterion used for the practitioners' group was that they should have: (1) substantial professional experience in accounting, (2) some experience in teaching accounting at the university level or be familiar with the existing undergraduate accounting curriculum, and (3) hold a master degree in accounting or related area. The researcher believed that accounting educators and practitioners with the above qualifications and experience would be able to make a more accurate assessment of the strengths and weaknesses of the accounting curriculum and provide more valuable suggestions for its improvement. On the basis of random sampling, 14 accounting educators and 14 practitioners were finally selected as potential interviewees.

Since one educator and three practitioners were reluctant to participate, 13 educators and 11 practitioners were individually interviewed by the researcher. Each interview was based on a comprehensive interview guide which had been prepared in accordance with main items covered in the questionnaire. The questions included in

the interview guide were open-ended, and thus, permitted flexibility and depth of answers. All interviews were recorded on a handy tape recorder for subsequent use by the researcher.

5.5 STATISTICAL TECHNIQUES

Fifty one accounting educators and sixty practitioners responded to the questionnaire, giving a total of 111 responses. Of this total, 104 responses representing 48 educators and 56 practitioners were usable. Seven responses were rejected for the reason of incomplete data. The usable responses were first coded according to the status of respondents. Then, they were extracted into a number of Excel spreadsheets to be used subsequently for statistical computations.

The statistical techniques used for computation and analysis of the survey data were descriptive statistics and *F*-Test. For example, the data from Section Two of the questionnaire were utilised for computing the mean, standard deviation, and variance in respect of each subject in the curriculum separately for educators, practitioners and both groups. The mean of importance for each subject was computed as follows:

$$\bar{X}_j = \frac{\sum_{i=1}^n X_{ij}}{n}$$

which: \bar{X}_j = the means of importance for a subject within the current curriculum.

j = the different level of importance ranging from 1 for “the least important” to 5 for “the extremely important”.

n = 48 for educators.

n = 56 for practitioners.

n = 104 for both groups.

The relative importance ranking of various means for each of the subjects in the categories of Accounting, Basic and General subjects was based on the Coefficient of Variation. The Coefficient Variation for each subject is the standard deviation of that subject divided by the related mean. Korien (1975) described the CV as a useful statistical tool in comparing variables between different sets of data.

T-Test, *Z*-Test and *F*-Test have been recommended by statisticians for comparing the means of two groups of data. Of these, the *F*-Test is preferable when the means tend to be skewed to one side (Moore and McCabe, 1993: Ch. 6 and 7). Accordingly, since the means of perceptions in this study were skewed to one side, the *F*-Test was used to examine whether any significant statistical difference (at the 0.05 level) would exist between educators and practitioners in terms of their views on the importance of various subjects in the curriculum. Similarly, on the basis of these statistical techniques the data obtained through other sections of the questionnaire were also analysed.

5.6 SUMMARY

This chapter describes the methods and procedures adopted for collecting and analysing information and data for the study. The questionnaire survey was the main technique used for data collection. The primary objective of this survey was to obtain the perceptions of accounting educators and practitioners on the shortcomings of the existing undergraduate accounting curriculum and possible remedial measures. The questionnaire was provided to 75 educators and 95 practitioners, and the total responses received amounted 48 and 56 respectively. Simple statistical techniques were used for processing and analysis the survey data.

CHAPTER SIX

RESULTS AND ANALYSIS

6.1 INTRODUCTION

In the previous chapter, the methods and procedures of data collection were described. A statistical analysis of the collected data and the results is presented in this chapter to serve the main objective of the study. The analysis is divided into two sections. The first section provides a demographic description of the accounting educators and practitioners who participated in the questionnaire and interview survey. A statistical analysis of their responses to the questions is presented in the second section.

6.2 DEMOGRAPHIC DATA OF RESPONDENTS TO THE QUESTIONNAIRE

Of the 170 accounting educators and practitioners selected for the survey, 111 responded to the questionnaire. Seven responses were unusable due to incomplete data and the remaining 104 with a response rate of 65.3% were used in the study. Table 6-1 shows the breakdown of the sample and responses.

Table 6-1
Sample and responses to the questionnaire

	Sample	Total Responses		Usable Responses	
	No	No	%	No	%
Educators	75	51	68	48	64
Practitioners	95	59	62	56	59
All	170	111	65.3	104	61.2

6.2.1 Academic qualifications of respondents

This section provides an analysis of the academic qualifications, fields of study, country of last degree obtained, and experience of the accounting educators and practitioners who responded to the questionnaire. The titles used for bachelor's and master's degree qualifications in Iran are usually based on the American system. Accordingly, 'BS' and 'MS' (bachelor of science and master of science) are used as the titles of bachelor's and master's degrees even in the area of accounting.

Table 6-2
Academic qualifications of accounting educators by field of study

Field of Study:	BS		MS		PhD		PhD Student	
	No.	%	No.	%	No.	%	No.	%
Accounting	45	94	40	83	2	100	7	100
Non Accounting	3	6	8	17	0	0	0	0
Total	48	100	48	100	2	100	7	100

Table 6-2 shows that all the 48 educators who provided usable responses to the questionnaire hold both bachelor's and master's degree qualifications. Two of them also possess PhD degrees in accounting and seven others have enrolled in PhD degree programmes in accounting. Ninety four per cent of educators hold a bachelor's degree in accounting and the rest have their qualification in related areas. Eighty-three per cent of educators have obtained their master's degrees in accounting. However, it is important to note that the number of accounting academics with PhD qualifications is at a very low level.

Table 6-3
Academic qualifications of accounting practitioners by field of study

Field of Study:	BS		MS		PhD	
	No	%	No	%	No	%
Accounting	53	95	49	87.5	1	33
Non Accounting	3	5	7	12.5	2	67
Total	56	100	56	100	3	100

Interestingly, Table 6-3 shows that academic qualifications of the practitioners who responded to the questionnaire are almost similar to those of the educators. Like the educators, all the 56 practitioners hold both bachelor's and master's degree qualifications in accounting or related fields. Ninety-five per cent of them hold bachelor's degrees in accounting. Eighty-seven and a half per cent of them hold master's degrees in accounting. Three of them also hold PhD degrees; one in accounting and two in related areas.

Since some argue that both accounting educators and practitioners who have been educated abroad tend to adopt Western practices in carrying out their duties, it is important to analyse the respondents by country of their education. This information is provided in Tables 6-4 and 6-5.

Table 6-4
Academic qualifications of accounting educators by country of award

Country of Award:	BS		MS		PhD	
	No	%	No	%	No	%
IRAN	46	96	30	63	1*	89
USA	2	4	14	29	1	11
UK	0	0	2	4	0	0
Other	0	0	2	4	0	0
Total	48	100	48	100	9	100

* Seven more educators had enrolled in PhD programmes in Iranian universities at the time of this survey as per Table 6-1.

Table 6-4 reveals that 96 per cent of educators have obtained their undergraduate education from universities in Iran. Thirty seven per cent of them hold their master's degrees from foreign universities. Most of the foreign postgraduate qualifications are those obtained from American universities. The recent enrolment of seven accounting academics in PhD programmes of Iranian universities indicates the possibility of a significant increase in the number of local PhDs in accounting in the near future.

Table 6-5
Academic qualifications of accounting practitioners by country of award

Country of Award:	BS		MS		PhD	
	No	%	No	%	No	%
IRAN	56	100	46	82	0	0
USA	0	0	9	16	3	100
UK	0	0	1	2	0	0
Others	0	0	0	0	0	0
Total	56	100	56	100	3	100

As shown in Table 6-5, all practitioners who participated in the questionnaire survey have obtained their undergraduate education from local universities. Only 18 per cent of them possess master's degrees of foreign universities in comparison to 37 per cent of such qualifications for accounting educators. Following the foot steps of educators, accounting practitioners have also obtained their foreign qualifications almost entirely from American universities.

In the demographic data section of the questionnaires, the teaching and professional accounting experiences of respondents were also sought. The details of this information are presented in Table 6-6.

Table 6-6
Years of teaching and professional accounting experience of educators and practitioners

Experience:	Educators				Practitioners			
	Teaching		Professional		Teaching		Professional	
	No.	%	No.	%	No.	%	No.	%
0	0	0	3	6.3	29	51.8	0	0
Up to 10	29	60.4	25	52.0	15	26.8	33	58.9
Over 10	19	39.6	20	41.7	12	21.4	23	41.1

Experience:	Mean			Maximum		Minimum	
	Edu	Prac	Total	Edu	Prac	Edu	Prac
Teaching	8.11	4.2	6.2	21	24	1	0
Professional	9.99	11.6	10.8	27	35	0	1

* Edu = Educators

** Prac = Practitioners

One striking item of information presented in Table 6-6 is that about 48 per cent of accounting practitioners who responded to the questionnaire are those with teaching experience at the university level. Because of the shortage of adequately qualified full-time accounting academics in Iranian universities it is very common that many professional accountants are employed as visiting lecturers on part-time basis. Thus, it is important to note that not only the accounting academics but also a large number of practitioners who participated in this survey were familiar with the current accounting curriculum of Iran.

Another important feature emanating from the above table is that nearly 94 per cent of educators have gained a considerable amount of professional accounting experience prior to their appointment as full-time academics at universities. The professional accounting experience of educators is about 10 years on average. Thus, it is reasonable to assert that almost all accounting educators who participated in the survey had a considerable knowledge of professional needs.

When compared with similar academics in other countries, in general, the accounting academics in Iranian universities seem to be a unique group in terms of their academic status. Almost all of them belong to a single category of lecturers. None of the 48 academics holds the academic status of an associate professor or a professor. Only two of them function as assistant professors. The tenure for university academics in Iran is based on the qualification system of American universities. According to this system, normally a person with a Master's degree can become only an instructor but needs to have a PhD or pass a qualification examination in order to be promoted to the level of associate professor. A person with a PhD degree is employed initially as an associate professor and subsequently may be promoted to the levels of associate professor and professor on the basis of his/her performance in teaching and research.

The accounting practitioners who participated in the questionnaire survey are from all three sectors of the economy. As depicted in Table 6-7, the majority of them (55%) are employed in the government and semi-government sectors. Two thirds of practitioners operate as financial and cost accountants, while the others serve as auditors.

Table 6-7
Number of accounting practitioners by their sector of employment

	<u>No</u>	<u>%</u>
Government sector	9	16
Semi-government sector	22	39
Private sector	25	45
Total	56	100

The last two questions in section one of the practitioners' questionnaire were used to obtain information on the usage of computers in their organisations. The respondents were also asked to specify whether their organisations used personal computers or main frame computers for accounting purposes. The responses received are summarised in Table 6-8.

Table 6-8
Use of computers for accounting purposes in organisations where respondents (accounting practitioners) are employed

	<u>PC</u>	<u>Main Frame</u>	<u>Not Using</u>	<u>Total</u>
Government sector	7	2	0	9
Semi-Government sector	8	2	7	17
Private sector	22	0	8	30
Total	37	4	15	56

Table 6-8 shows that about 73 per cent of organisations use computers for accounting purposes. Most of the computers used are personal computers (PCs). A few main frame computers are used only in the government and semi-government organisations.

6.2.2 Demographic data of interviewees

Thirteen accounting educators and eleven practitioners were personally interviewed by the researcher during December 1994 and February 1995. Six of the educators were heads of accounting departments and the rest held university administrative positions in addition to being involved in teaching accounting. The practitioners who participated in interviews included auditors, company accountants, and executive members of the IICA and IAO. They were requested to fill out the personal information section of the interview guidelines at the beginning of the interview. Based on the responses to this request, a profile of demographic data of interviewees on their academic qualifications and countries of award is presented in table 6-9.

Table 6-9
Academic qualifications of interviewees by country of award

Country of Award:	Educators			Practitioners		
	BS	MS	PHD	BS	MS	PhD
IRAN	12	5	1	11	6	0
USA	1	7	1	0	2	2
UK	0	1	0	0	1	0
TOTAL	13	13	2	11	9	2

Accounting is the major area of study of eleven educators and nine practitioners. The rest are qualified in related areas such as economics and management. The average years of experience in teaching and professional accounting practice are higher for interviewees when compared with those of questionnaire participants. These average years for educators and practitioners interviewed are 10.81 and 10.27 respectively. The practitioners have much higher professional accounting experience than the educators while both have almost the same average years of teaching experience. The practitioners' average years of professional and teaching experiences are 9.82 and 21.36 respectively.

6.3 RESULTS AND STATISTICAL ANALYSIS

Two sets of questionnaires in Farsi were personally handed or sent to educators and practitioners during December 1994 and February 1995. All the 104 usable questionnaires were received before the end of March 1995. The results and statistical analysis presented in this chapter are based on the information and data extracted from these 104 responses.

Descriptive statistics form the foundation of the data analysis. Statistics relating to the shape of the distribution of the responses are computed for each of the subjects (for each subject in the accounting curriculum). In particular the mean, standard deviation (STD) and the coefficient of variation (CV) are computed in respect of each subject for educators, practitioners and all respondents. The F-Test for each subject is also computed to explain the statistical difference (at the .05 level) between educators' and practitioners' means of responses. However, the relative importance ranking of various means for each of the Accounting, Basic and General subjects is based on the CV, which the standard deviation of each subject divided by its mean. The mean scores and the rank ordering of means as well as the statistical differences between these means for all subjects in the existing undergraduate accounting curriculum are reported in the following sections.

In order to analyse their similarities and differences, all respondents are first divided into subgroups in terms of their experience in teaching accounting subjects and the country of the last degree awarded. Practitioners are grouped in terms of their sector of employment, area of operation, and the usage of computers in their organisations. Then the perceptions of each subgroup of respondents on the importance of Accounting and Basic subjects are analysed.

6.3.1 The importance of accounting subjects

In section two of the questionnaire, respondents were asked to rate the importance of 24 subjects in the accounting curriculum. These subjects are the 21 accounting subjects included in the current accounting curriculum and three additional subjects proposed by the researcher. A review of the undergraduate accounting curricula of several other countries revealed that Accounting Information Systems, Accounting Theory and Internship in accounting are also offered in their programmes. Thus, it was considered necessary to include them in the questionnaire for the purpose of assessing their importance for the Iranian curriculum.

The degree of importance of each subject was to be rated by respondents on a Likert scale of 1 to 5. Table 6-10 shows the mean, standard deviation and coefficient of variation of the responses in respect of each of the 21 accounting subjects given in the existing curriculum. The subjects are listed in this table in order of their importance as perceived by all respondents. The ranking is based on the CV of each subject. The closer the mean of importance to 5, the higher is the importance of that subject. The separate means and rank ordering of importance, the variances and the F-Value of accounting subjects for educators and practitioners are presented in Appendix 6-1.

The symbol (*) immediately preceding an importance mean in the first column of the table indicates that there is a statistically significant difference (at the 0.05 level) between educators' and practitioners' means of responses for that subject. Eight accounting subjects fall into this category. They are:

1. Cost Accounting I
2. Accounting Studies (in English) I & II
3. Intermediate Accounting II
4. Auditing I
5. Intermediate Accounting I
6. Auditing II
7. Principles of Accounting II

8. International Finance
6. Auditing II

When the means of the respondents are so close but the F-Value of the means is not significant it is denoted by symbol (**) in the second column of Table 6-10. Five such subjects with this symbol are listed below:

1. Principles of Accounting I
2. Tax Accounting
3. Managerial Finance
4. Advanced Accounting I
5. Cost Accounting III

The rest of the accounting subjects belonging to the existing undergraduate curriculum do not show statistically significant difference between the educators' and practitioners' means of responses. All of these subjects except Advanced Accounting II are the least important subjects in the rank ordering of importance. These subjects in their order of importance ranking are given below:

1. Advanced Accounting II
2. Cost Accounting II
3. Principles of Government Budgeting and Control
4. Government Accounting
5. Current Issues in Managerial Finance
6. Current Issues in Accounting
7. Principles of Accounting III
8. Application of COBOL Programming in Accounting

Table 6-10

Importance accounting subjects as perceived by accounting educators and practitioners (ranked by the coefficient of variation of all respondents)

	All Respondents			Educators		Practitioners		
	Mean	STD	CV	Mean	STD	Mean	STD	
Principles of Accounting I	4.951**	0.256	0.051	5	0	4.910	0.345	
Cost Accounting I	4.817*	0.498	0.103	4.77	0.555	4.857	0.443	
Tax Accounting	4.682**	0.526	0.112	4.729	0.536	4.642	0.5200	
Accounting Studies (in English) I & II	4.673*	0.565	0.120	4.791	0.459	4.571	0.628	
Intermediate Accounting II	4.663*	0.617	0.132	4.666	0.695	4.66	0.549	
Auditing I	4.634*	0.624	0.134	4.729	0.449	4.553	0.737	
Managerial Finance	4.586**	0.617	0.134	4.604	0.644	4.571	0.599	
Intermediate Accounting I	4.682*	0.658	0.140	4.541	0.850	4.803	0.401	
Auditing II	4.509*	0.711	0.157	4.562	0.580	4.464	0.808	
Cost Accounting II	4.605	0.756	0.164	4.520	0.799	4.678	0.716	
Principles of Accounting II	4.451*	0.880	0.197	4.270	1.005	4.607	0.731	
Advanced Accounting I	4.163**	0.977	0.234	4.187	1.024	4.142	0.943	
Advanced Accounting II	3.875	1.086	0.280	3.750	1.101	3.982	1.070	
International Finance	3.173*	0.908	0.286	3.145	1.111	3.196	0.699	
Cost Accounting III	3.875**	1.188	0.306	3.812	1.214	3.928	1.173	
Principle of Government Budgeting and Control	3.125	1.077	0.344	3.083	0.986	3.160	1.156	
Government Accounting	3.692	1.330	0.360	3.729	1.250	3.660	1.405	
Current Issues in Managerial Finance	2.894	1.379	0.476	2.270	1.364	3.4280	1.158	
Current Issues in Accounting	3.096	1.517	0.489	2.520	1.530	3.589	1.332	
Principles of Accounting III	3.076	1.575	0.511	2.562	1.570	3.517	1.452	
Application of COBOL programming in Accounting	2.24	1.438	0.641	1.958	1.288	2.482	1.525	

* Significant difference (P< .05) between educators and practitioners.

** Means of the responses are so close, but the F-Value of the means are not significant at P< 0.5.

Table 6-10 shows that all accounting subjects are viewed by most of the respondents as having some degree of importance. The rank order of these subjects remains relatively consistent for all respondents and each subgroup of educators and practitioners. The considerably high level of teaching experience of practitioners, referred to earlier, may explain this consistency. However, the means of importance of educators are slightly wider than those of practitioners. These means for educators and practitioners vary from 5 to 1.958 and from 4.910 to 2.482 respectively.

The rank ordering of subjects in Table 6-10 shows that a considerable number of financial, cost and auditing subjects as well as Tax Accounting and Accounting Studies (in English) are perceived to be within the ten most important subjects. The means of importance of these subjects vary from 4.951 to 4.509 for all respondents, 5 to 4.520 for educators and 4.910 to 4.464 for practitioners. On the other hand, Government Accounting, Current Issues (case studies) in Accounting and Finance, Principles of Accounting III and Application of COBOL Programming in Accounting subjects are among the least five important subjects. Subjects such as Advanced Accounting I and II, Cost Accounting III and International Finance are in the middle of the rank ordering of subjects.

The interview results are in agreement with the questionnaire results. Most of the interviewees held the view that the current accounting curriculum places heavy emphasis on financial accounting and all undergraduate accounting programmes of universities and other higher educational institutions are technically oriented. In other words, the principal objective of accounting programmes has been to equip students with the technical skills needed for the preparation and presentation of financial statements for external reporting purposes. According to the interviewees, financial reporting skills are not so important in Iran because the capital market in the country is rather undeveloped, and the number of large companies is extremely limited. Therefore, they stressed that there is a need for shifting the emphasis from technically

oriented financial accounting to analytical and decision-making oriented cost and management accounting. Furthermore, one of the interviewees suggested to drop the subject of Principles of Accounting III to provide more room for managerial accounting.

The other subject emphasised in the interviews is Auditing. The interviewees conceded that the Iranian accounting practice environment makes Auditing a very important subject for accounting graduates. They pointed out that in both the private and public sectors the accountability to shareholders and to the general public is low. A contributing reason for this is that the accounting profession does not render adequate auditing services to private and state-owned companies. Another subject which has drawn the attention of interviewees is English language. They stressed that the knowledge of English is very important for accounting graduates.

As pointed out earlier, in addition to the 21 subjects taken from the existing accounting curriculum, the three other subjects proposed by the researcher (i.e. Accounting Information Systems, Accounting Theory, and Internship in Accounting) were also included in the questionnaire. How these three additional subjects have been rated by the respondents is illustrated in Table 6-11.

Table 6-11

Importance of the three additional accounting subjects as perceived by accounting educators and practitioners (ranked by the coefficient of variation of all respondents)

	All Respondents		Educators		Practitioners	
	Mean	STD	Mean	STD	Mean	STD
Accounting Information Systems	4.44*	0.87	4.52	0.85	4.38	0.89
Internship in Accounting	4.43*	1.04	4.46	1.07	4.41	1.02
Accounting Theory	3.59	1.10	3.79	1.03	3.41	1.14
Average mean of all accounting subjects	4.02		3.91		4.11	

* Significant difference ($P < .05$) between educators and practitioners.

According to the above table, the means of importance of the three proposed subjects are very close. The F-Value of the means shows that there is no significant difference (at the 0.05 level) between the perceptions of educators and those of practitioners for Accounting Information Systems and Internship in Accounting. These two subjects are denoted in the table by symbol (*). The variances and the F-value of these three subjects are presented in Appendix 6-2.

Table 6-11 also shows that the mean of importance of Accounting Theory is slightly lower than the average means of all accounting subjects. This may explain that the respondents are interested in including the first two subjects (i.e., Accounting Information Systems and Internship in Accounting) in the future accounting curriculum but were not very favourable for inclusion of the last subject (i.e., Accounting Theory).

The above results are compatible with those of the interviews. For example, the importance of adding Accounting Information Systems and Internship in Accounting to the current accounting curriculum was emphasised by the interviewees as well. Most of interviewees believed that Accounting Theory should be taught at the postgraduate level in Iranian universities. However, they reiterated that university teachers must pay a much greater attention and time to theoretical and analytical aspects of the subject matter instead of focusing too narrowly on technical aspects when teaching individual accounting subjects to students. They also pointed out that Iranian firms in the government and private sectors have started using personal computers for accounting data processing. Therefore, new accounting graduates would not be attractive to employers unless they have acquired the necessary computing skills through their accounting courses.

Some of interviewees, from their own experience concluded that accounting graduates who had completed an internship programme as a part of their studies were more

attractive to employers soon after graduation because they could adjust to the environment and needs of the employer's organisation more quickly than those who did not have such training. They added that due to some cultural and administrative difficulties the Internship programme was discontinued by the CHEP a few years ago. They believed that it should be reintroduced as a compulsory part of the accounting curriculum or if it is not possible, due any unavoidable problem, university accounting departments should at least take steps to set up accounting laboratories where students can observe some real-life situations in accounting. It is important to note that 19 out of 24 interviewees emphasised the need for reintroducing the Internship programme. Moreover, 80.8 per cent of all respondents in the questionnaire survey held the same view (Appendix 6-3).

6.3.2 Analysis of similarities and differences of opinion on the importance of accounting subjects

On the basis of their experience in teaching accounting at the university level, all respondents were classified into three groups as 'no experience' (first group), 'up to 10 years' (second group) and 'over 10 years' (third group). Accordingly, for the purpose of comparing their perceptions on the importance of accounting subjects the mean, standard deviation and coefficient of variation for each group were calculated. Since the standard deviation in most cases appeared to be zero, rank ordering of subjects according to CV became impossible. Therefore, they have been ranked according to their means of importance for each group as presented in Table 6-12. It should be noted that both the 21 curriculum subjects and the three proposed subjects are included in this table.

It is interesting to see in Table 6-12 that the means of importance of two subjects, Principles of Accounting I and Cost Accounting I, tend to increase with the increase in the teaching experience of respondents. The table also indicates that the means of importance of eight accounting subjects decrease when the perceptions of the first

group are compared with those of the second group. Means of importance of these subjects, however, show an increase when the same comparison is made with the third group. Among these subjects, Accounting Information Systems has the mostly increasing mean of importance. In this category of subjects, Cost Accounting III has been rated as a moderately important subject by the first and the third groups of respondents. Surprisingly, this subject falls into the category of most important subjects as perceived by the second group. Apart from this, the means of importance of six accounting subjects show a negative relationship with the teaching experience of respondents. Among these subjects, Current Issues in Accounting, Current Issues in Finance, Principles of Accounting III and Application of COBOL Programming carry the lowest degrees of importance.

Table 6-12.

Importance of accounting subjects as perceived by respondents when they are grouped according to their experience in teaching

	No experience		Up to 10 years		Over 10 years	
	Mean	Rank	Mean	Rank	Mean	Rank
Principles of Accounting I	4.86	1	4.98	1	5.00	1
Cost Accounting I	4.79	2	4.82	2	4.84	2
Cost Accounting II	4.72	3	4.68	8	4.39	11
Intermediate Accounting I	4.69	4	4.64	10	4.74	3
Tax Accounting	4.69	5	4.70	6	4.65	5
Accounting Studies (in English)	4.62	6	4.75	4	4.61	6
Managerial Finance	4.59	7	4.66	9	4.48	8
Intermediate Accounting II	4.55	8	4.73	5	4.68	4
Principles of Accounting II	4.55	9	4.55	12	4.23	13
Auditing II	4.52	10	4.59	11	4.39	10
Auditing I	4.48	11	4.80	3	4.55	7
Internship in Accounting	4.38	12	4.52	13	4.35	12
Accounting Information Systems	4.14	13	4.68	7	4.39	9
Advanced Accounting II	4.00	14	4.11	15	3.42	18
Advanced Accounting I	3.97	15	4.36	14	4.06	14
Government Accounting	3.72	16	3.64	18	3.74	16
Current Issues in Accounting	3.69	17	2.98	21	2.71	21
Cost Accounting III	3.66	18	4.11	16	3.74	15
Principles of Accounting III	3.48	19	3.09	19	2.68	22
Accounting Theory	3.45	20	3.73	17	3.52	17
Current Issues in Finance	3.38	21	2.91	23	2.42	23
International Finance	3.31	22	3.02	20	3.26	19
Principle of Government Budgeting and Control	3.28	23	2.95	22	3.23	20
Application of COBOL Programming in Accounting	2.83	24	2.07	24	1.94	24

It is reasonable to hypothesise that both Iranian accounting educators and practitioners who have been educated abroad hold different views with regard to the importance of certain subjects. Therefore, in order to capture any such differences all respondents were divided into two groups as 'indigenous graduates' and 'non-indigenous graduates'. The respondents who have obtained their degree qualifications only from Iranian universities were classified into the indigenous group while the others with foreign university qualifications were included in the non-indigenous group. Table 6-13, shows the mean, standard deviation and coefficient of variation in respect of perceived importance of accounting subjects for these two groups. Rank ordering of subjects in this table is based on the CV of indigenous graduates.

The results of responses presented in Table 6-13 confirm the hypothesis that local and foreign graduates have different attitudes regarding the importance of various accounting subjects. The respondents graduated from foreign universities attach greater importance to managerial and government accounting subjects. More specifically, ranking of four subjects, Cost Accounting I, II and III and Government Accounting is higher for the non-indigenous graduates. This upward drift in the means of importance is repeated for Auditing I and II, Accounting Information Systems and Internship in Accounting. On the other hand, the respondents belonging to the indigenous graduates group place excessive importance on financial accounting subjects. The means of importance of five financial accounting subjects for indigenous graduates are higher than those of the other group. However, among the financial subjects, Principles of Accounting I and Intermediate Accounting I have been given higher ratings of importance by the indigenous group.

Table 6-13

Importance of accounting subjects as perceived by respondents when they are grouped according to country of last degree awarded

	Indigenous Graduates				Non-Indigenous Graduates			
	Mean	STD	CV	Rank	Mean	STD	CV	Rank
Principles of Accounting I	4.93	0.298	0.06	1	5.00	0	0	1
Accounting Studies (in English) I & II	4.71	0.512	0.108	2	4.57	0.690	0.150	10
Tax Accounting	4.70	0.542	0.115	3	4.64	0.488	0.105	4
Cost Accounting I	4.76	0.563	0.118	4	4.96	0.189	0.038	2
Intermediate Accounting II	4.67	0.619	0.132	5	4.64	0.622	0.133	6
Managerial Finance	4.58	0.617	0.134	6	4.61	0.629	0.136	7
Intermediate Accounting I	4.67	0.661	0.141	7	4.71	0.659	0.139	8
Auditing I	4.59	0.677	0.147	8	4.75	0.441	0.092	3
Auditing II	4.49	0.721	0.160	9	4.57	0.690	0.150	9
Principles of Accounting II	4.49	0.739	0.164	10	4.36	1.193	0.273	14
Cost Accounting II	4.55	0.823	0.18	11	4.75	0.518	0.109	5
Accounting Information Systems	4.42	0.913	0.206	12	4.50	0.745	0.165	11
Advanced Accounting I	4.18	0.920	0.219	13	4.11	1.133	0.275	15
Advanced Accounting II	4.04	0.901	0.223	14	3.43	1.399	0.408	20
Internship in Accounting	4.39	1.084	0.246	15	4.54	0.922	0.203	12
International Finance	3.16	0.834	0.264	16	3.21	1.101	0.342	17
Accounting Theory	3.67	1.051	0.286	17	3.36	1.224	0.364	19
Cost Accounting III	3.83	1.237	0.323	18	4.00	1.054	0.263	13
Principle of Government Budgeting and Control	3.08	1.043	0.338	19	3.25	1.175	0.361	18
Government Accounting	3.68	1.407	0.381	20	3.71	1.117	0.300	16
Current Issues in Managerial Finance	3.12	1.296	0.415	21	2.29	1.437	0.628	23
Current Issues in Accounting	3.34	1.447	0.433	22	2.43	1.526	0.628	24
Principles of Accounting III	3.21	1.552	0.483	23	2.71	1.607	0.592	21
Application of COBOL programming in Accounting	2.33	1.500	0.644	24	2.00	1.247	0.623	22

Table 6-13 also indicates that the degree of importance attached to English is higher for indigenous graduates. They have chosen Accounting Studies (in English) as the second most important subject although the rating given to this subject by non-indigenous graduates is much lower. In the same way, the degree of importance attached to Accounting Theory by indigenous graduates is higher than that of their counterparts. Similar results are shown for Current Issues in Managerial Finance and Current Issues in Accounting.

Since it is possible that practitioners who work in different sectors of the economy have different views on the importance or usefulness of certain accounting subjects. In order to discover any such differences all practitioners were divided into three groups according to the economic sectors to which they belong. Table 6-14 shows the descriptive statistics on the perceptions of these three groups. The rank ordering of subjects in this table is based on the coefficient of variation of government sector accountants.

This table shows that the groups of accountants working in the government and semi-government sectors place greater emphasis on managerial accounting subjects than those in the private sector. The same observation is true for government accounting subjects. Perceptions of the above mentioned subgroups of practitioners are different for auditing subjects. Means of importance of government and private sector accountants are much higher than the mean of importance obtained from semi-government sector accountants for Auditing I. Means of importance of all three groups remain relatively constant for Auditing II.

The attitudes of these three sectors' accountants toward the level of the importance of financial accounting subjects are also differed. The mean of importance of upper level of financial accounting subjects such as Intermediate Accounting I and II and Advanced Accounting I and II are decreased as considering means of importance of

subjects for government to private and semi-government sector accountants. An opposite result was obtained for Principal of Accounting I, II and III which are the lower level of financial accountants. Mean of important of Tax Accounting by semi-government sector accountants is much higher than the other two subgroups of respondents. An opposite result was obtained for Accounting Information Systems.

Table 6-14

Importance of accounting subjects as perceived by accounting practitioners when they are grouped according to economic sectors

	Government Sector			Private Sector			Semi-Government Sector		
	Mean	STD	CV	Rank	Mean	STD	CV	Rank	Rank
Cost Accounting I	5.00	0	0	1	4.73	0.583	0.123	4	2
Cost Accounting II	5.00	0	0	2	4.40	0.894	0.203	13	3
Intermediate Accounting I	4.89	0.333	0.068	3	4.80	0.407	0.084	2	4
Intermediate Accounting II	4.89	0.333	0.068	4	4.67	0.607	0.129	5	8
Accounting Studies (in English)	4.89	0.333	0.068	5	4.43	0.728	0.164	9	7
Principles of Accounting I	4.78	0.441	0.092	6	4.90	0.403	0.082	1	1
Auditing I	4.78	0.441	0.092	7	4.60	0.675	0.146	7	13
Advanced Accounting I	4.67	0.500	0.107	8	4.00	1.017	0.254	15	15
Managerial Finance	4.67	0.500	0.107	9	4.53	0.629	0.138	6	9
Cost Accounting III	4.67	0.707	0.151	10	3.73	1.363	0.365	19	14
Accounting Information Systems	4.67	0.707	0.151	11	4.37	0.809	0.185	12	18
Tax Accounting	4.56	0.727	0.159	12	4.60	0.498	0.108	3	5
Advanced Accounting II	4.44	0.727	0.163	13	3.83	1.262	0.329	16	11
Auditing II	4.33	0.707	0.163	14	4.50	0.820	0.182	11	10
Principles of Accounting II	4.44	0.882	0.198	15	4.50	0.777	0.172	10	6
International Finance	3.33	0.707	0.212	16	3.03	0.669	0.22	14	12
Governmental Accounting	4.33	1.323	0.305	17	3.47	1.456	0.42	23	22
Principles of Government Budgeting and Control	3.33	1.225	0.367	18	3.10	1.242	0.4	21	20
Current Issues in Finance	3.56	1.333	0.375	19	3.23	1.165	0.36	18	19
Current Issues in Accounting	4.00	1.500	0.375	20	3.33	1.269	0.38	20	21
Accounting Theory	3.78	1.481	0.392	21	3.27	1.173	0.358	17	17
Internship in Accounting	4.00	1.732	0.433	22	4.57	0.728	0.159	8	16
Principles of Accounting III	3.11	1.453	0.467	23	3.63	1.497	0.411	22	23
Application of COBOL Programming in Accounting	2.78	1.642	0.591	24	2.37	1.352	0.571	24	24

Since the degree of importance attached to an accounting subject by some accountants may be influenced by their area of work, all practitioners were classified again into four groups as General Accountants, Cost Accountants, Government Accountants and Auditors. The statistical results based on this classification are presented in Table 6-15. Accounting subjects have been ranked in this table by the CV of government accountants. The table shows that for most of the subjects the level of importance does not vary between groups. Differences are seen only in respect of 13 subjects. Two of these 13 subjects, Internship in Accounting and Managerial Finance, are considered by general accountants as the most important subjects. However, the other three groups do not support this opinion. The importance rating of Auditing I by government accountants is much lower than that of other groups. While Cost Accounting I is given extremely high ratings by government accountants, cost accountants and auditors, it is very poorly rated by the other group. In a similar manner, cost accountants see Accounting Information Systems as a high ranking subject, while the other three groups have a completely opposite view. Similar conflicting ratings of importance have been given by these groups for Cost Accounting II, Accounting Theory, Principles of Government Budgeting and Control, Governmental Accounting, and Current Issues in Finance.

Table 6-15

Importance of accounting subjects as perceived by accounting practitioners when they are grouped according to their area of practice

	General Accountants				Cost Accountants				Government Accountants				Auditors			
	Mean	STD	CV	Rank	Mean	STD	CV	Rank	Mean	STD	CV	Rank	Mean	STD	CV	Rank
Intermediate Accounting I	4.78	0.441	0.092	1	4.75	0.463	0.097	8	4.63	0.518	0.111	6	4.87	0.341	0.069	2
Internship in Accounting	4.78	0.441	0.092	2	3.88	1.458	0.376	20	4.25	1.389	0.326	21	4.48	0.890	0.198	12
Managerial Finance	4.56	0.527	0.115	3	4.75	0.707	0.148	14	4.63	0.518	0.111	8	4.52	0.626	0.138	6
Tax Accounting	4.56	0.527	0.115	4	5.00	0	0	4	4.63	0.518	0.111	9	4.58	0.564	0.123	5
Principles of Accounting I	4.67	0.707	0.151	5	5.00	0	0	1	4.88	0.354	0.072	3	4.97	0.180	0.036	1
Accounting Studies (in English)	4.56	0.726	0.159	7	5.00	0	0	5	4.75	0.463	0.097	5	4.42	0.672	0.152	7
Intermediate Accounting II	4.56	0.726	0.159	6	4.75	0.463	0.097	9	4.63	0.518	0.111	7	4.68	0.541	0.115	4
Auditing I	4.44	0.726	0.163	8	4.88	0.354	0.072	7	4.50	0.926	0.205	16	4.52	0.769	0.17	9
Auditing II	4.44	0.726	0.163	9	4.50	1.069	0.237	16	4.50	0.756	0.167	14	4.45	0.810	0.181	11
International Finance	3.67	0.707	0.192	10	3.38	0.518	0.153	15	2.75	0.707	0.257	19	3.13	0.670	0.214	13
Cost Accounting I	4.56	0.882	0.193	12	5.00	0	0	2	5.00	1.000	0	1	4.87	0.341	0.069	3
Principles of Accounting II	4.56	0.882	0.193	11	4.75	0.707	0.148	13	4.75	0.707	0.148	12	4.55	0.723	0.158	8
Accounting Information Systems	4.44	0.882	0.198	14	5.00	0	0	6	4.63	0.744	0.16	13	4.13	0.957	0.231	15
Cost Accounting II	4.44	0.882	0.198	13	5.00	0	0	3	5.00	0	0	2	4.58	0.807	0.176	10
Cost Accounting III	4.33	1.118	0.258	15	4.25	1.389	0.326	17	4.38	0.916	0.209	18	3.61	1.1453	0.317	19
Advanced Accounting I	4.00	1.118	0.279	16	4.63	0.518	0.111	11	4.38	0.916	0.209	17	4.00	0.966	0.241	16
Accounting Theory	3.00	1.000	0.333	17	2.13	1.126	0.529	23	4.38	0.518	0.118	11	3.61	0.989	0.273	17
Advanced Accounting II	4.00	1.581	0.395	18	3.75	1.389	0.37	19	4.13	0.835	0.202	15	4.00	0.894	0.223	14
Principles of Government																
Budgeting and Control	3.22	1.30171	0.403	19	4.50	0.535	0.118	12	2.25	0.707	0.314	20	3.03	1.048	0.345	20
Government Accounting	3.56	1.740	0.489	20	4.75	0.463	0.097	10	3.63	1.302	0.359	23	3.42	1.409	0.412	23
Current Issues in Accounting	3.11	1.537	0.493	22	2.75	1.282	0.466	22	4.38	0.518	0.118	10	3.74	1.316	0.351	21
Current Issues in Finance	3.11	1.536	0.493	21	2.88	1.246	0.433	21	3.88	0.354	0.091	4	3.55	1.121	0.315	18
Principles of Accounting III																
Application of COBOL	2.67	1.414	0.53	23	3.50	1.195	0.341	18	3.88	1.356	0.349	22	3.68	1.514	0.411	22
Programming in Accounting	2.00	1.323	0.661	24	2.00	1.512	0.755	24	1.88	1.246	0.664	24	2.90	1.578	0.543	24

An attempt was also made in this analysis to see whether the accounting practitioners who work in organisations where computers are used or not used for accounting purposes differ in their opinion on the importance of individual accounting subjects. Table 6-16 presents a summary of the statistical computations. Except for six subjects, the rank ordering of importance for all the other subjects does not show a significant variation between these two groups. The rank ordering of importance of Auditing I and II, and Cost Accounting III by practitioners using computers in their organisations is much lower than that of the other group. By contrast, the practitioners who do not use computers in their organisations have attached lower levels of importance to Internship in Accounting, Advanced Accounting II, and Principle of Accounting II.

Table 6-16

Importance of accounting subjects as perceived by accounting practitioners when they are grouped according to their use of computers in professional practice

	Users of Computers			Non-users of Computers			
	Mean	STD	CV	Rank	Mean	CV	Rank
Principles of Accounting I	4.88	0.400	0.081	1	5.00	0	1
Intermediate Accounting I	4.78	0.419	0.087	2	4.87	0.352	2
Cost Accounting I	4.90	0.437	0.088	3	4.73	0.458	4
Managerial Finance.	4.68	0.522	0.111	4	4.27	0.704	7
Tax Accounting	4.66	0.530	0.113	5	4.60	0.508	6
Intermediate Accounting II	4.66	0.575	0.123	6	4.67	0.488	5
Accounting Studies (in English)	4.63	0.581	0.125	7	4.40	0.737	9
Auditing I	4.68	0.610	0.13	8	4.20	0.941	14
Cost Accounting II	4.76	0.624	0.131	9	4.47	0.915	13
Auditing II	4.61	0.703	0.152	10	4.07	0.961	15
Principles of Accounting II	4.56	0.808	0.177	11	4.73	0.458	3
Accounting Information Systems	4.34	0.938	0.216	12	4.47	0.743	8
Advanced Accounting I	4.15	0.910	0.219	13	4.13	1.060	16
International Finance	3.12	0.714	0.228	14	3.40	0.632	11
Internship in Accounting	4.41	1.117	0.253	15	4.40	0.737	10
Cost Accounting III	4.17	1.070	0.256	16	3.27	1.223	21
Advanced Accounting II	3.98	1.172	0.294	17	4.00	0.756	12
Current Issues in Finance	3.54	1.164	0.329	18	3.13	1.125	20
Current Issues in Accounting	3.76	1.261	0.335	19	3.13	1.457	22
Accounting Theory	3.22	1.107	0.343	20	3.93	1.100	17
Principles of Government Budgeting and Control	3.27	1.245	0.381	21	2.87	0.834	18
Principles of Accounting III	3.59	1.378	0.384	22	3.33	1.676	23
Government Accounting	3.83	1.498	0.391	23	3.20	1.014	19
Application of COBOL Programming in Accounting	2.44	1.582	0.648	24	2.60	1.404	24

6.3.3 Deficiencies and overlaps of topics in accounting subjects

Through the next section of the questionnaire, an attempt was made to obtain the views of respondents on the deficiencies and overlaps of topics in the subjects of the existing curriculum. The respondents were asked to consider the syllabuses of the existing curriculum carefully and suggest any necessary topics to be added and unnecessary topics to be dropped. A list of topics included in the existing curriculum was made available to each respondent for this purpose. The results show that most respondents hold the view that the existing accounting curriculum does not include several modern topics in managerial accounting. They also asserted that the present curriculum is deficient in the area of government auditing. The additional topics suggested by most respondents for inclusion in the curriculum are as follows:

For Cost Accounting subjects:

- Activity based costing (ABC)
- Just in time technique (JIT)
- Total Quality Management (TQM)
- An introduction to work measurement and time study

For Auditing subjects:

- An introduction to government auditing
- Foreign exchange auditing

For Advanced Accounting subjects:

- Accounting for construction

On the other hand, the questionnaire respondents believed that some topics are unnecessarily repeated in two or three subjects. They pointed out for example that Cost-Benefit Analysis (the break-even point analysis) is repeated in Principles of Accounting III, Cost Accounting II and Managerial Finance. In the interviews the participants added that break-even point analysis is again discussed in Production Management subjects. Another example of repeated topics is Accounting for

Branches and Departments, which is repeated in Principles of Accounting III and Advanced Accounting I.

There are also many suggestions from respondents for moving topics between subjects. The reason for this, according to them, is to maintain a more logical sequence of topics particularly in the context of prerequisite requirements. For example, the respondents suggested to move some topics between Advanced Accounting II and Intermediate Accounting II and between Principle of Accounting II and Intermediate Accounting I.

Similar ideas on the overlapped topics and deficiencies in the content of accounting subjects were expressed by the interviewees. Furthermore, they pointed out that in teaching accounting subjects the suggested topics are not fully covered by lecturers due to the lack of textbooks in Farsi and the inadequate time available for classes. Several topics in the management accounting area were specifically mentioned by some interviewees to highlight this deficiency.

6.3.4 Dropping and adding of accounting subjects

Several subjects, due to their unnecessary repetition or unsuitability of the subject matter, were suggested to be dropped from the curriculum. According to most respondents, such subjects included the following:

- Application of COBOL Programming in Accounting
- Principles of Accounting III
- Principles of Government Budgeting and Control

- Internship in Accounting
- Report Writing in Accounting
- Accounting Software
- Use of Personal Computers in Accounting
- Real World Project

Most of the interviewees also supported the above suggestions. At the interviews, both educators and practitioners recommended that Application of COBOL Programming in Accounting and Principles of Accounting III be excluded from the accounting curriculum. They pointed out, for example, that the topics and the subject matter of Principles of Accounting III are repeated at the same level and coverage in the subject of Advanced Accounting II. They believed that Application of COBOL Programming in Accounting should be replaced by a modern accounting software package. The interviewees also emphasised the importance of report writing skills and project work for accounting students.

6.3.5 The importance of basic subjects

Sixteen basic subjects specified by the CHEP were presented in Section Two of the questionnaire. The respondents were asked to rate the importance of these subjects as a part of the undergraduate accounting curriculum of Iran. Table 6-17 shows the means and related rank ordering of basic subjects for all respondents. The closer the mean of importance to 5, the higher is the importance of the subject. Columns two, five and seven show the mean of importance for all respondents, educators and practitioners respectively. The relative rank ordering of various means given in column four is based on the CV for all respondents.

The symbol (*) immediately preceding an importance mean in the third column of the table indicates that there is a statistically significant difference (at .05 level) between educators' and practitioners' means of importance for that basic subject.

Although the variation in the means of importance between the two groups for basic subjects is rather narrow, the means of importance move within a slightly wider range for practitioners. The practitioners' means of importance for these subjects range between 2.54 and 4.25 while they range between 3.27 and 4.69 for educators. However, the basic subjects such as Application of Statistics in Business, Application of Computers in Business, and Application of Mathematics in Business have been perceived by educators as the most important subjects. On the other hand, practitioners seem to have believed that subjects such as Application of Mathematics in Business, Macro Economics and Research Methods are the most important basic subjects for accounting students. The separate means and rank ordering of importance as well as the variances and F-Values of the basic subjects for educators and practitioners are presented in Appendix 6-4.

Table 6-17

Importance of basic subjects as perceived by accounting educators and practitioners (ranked by the coefficient of variation of all respondents)

	All respondents			Educators		Practitioners	
	Mean	STD	CV	Mean	STD	Mean	STD
Application of Mathematics in Business	4.326	0.743	0.171	4.416	0.710	4.25	0.769
Application of Statistics in Business	4.413*	0.771	0.174	4.645	0.565	4.214	0.868
Micro Economics (Principles of Economics I)	3.99	0.731	0.183	4.125	0.672	3.875	0.764
Research Methods	4.298	0.799	0.185	4.375	0.761	4.232	0.831
Macro Economics (Principles of Economics II)	4.125	0.772	0.187	4.25	0.758	4.017	0.774
Application of Computer in Business	4.403*	0.909	0.206	4.687	0.589	4.16	1.058
Business Law	4.153	0.890	0.214	4.125	0.959	4.178	0.834
Principles of Management	3.711	0.844	0.227	3.625	0.914	3.785	0.780
Money and Banking	3.913	0.904	0.231	4.25	0.758	3.625	0.926
Mathematics	4.269*	0.997	0.233	4.5	0.772	4.071	1.126
Operations Research I & II	4.028*	0.940	0.233	4.229	0.778	3.857	1.035
Public Finance	3.336	0.991	0.297	3.729	0.917	3.0	0.934
Production Management	3.048*	0.989	0.324	3.27	0.818	2.857	1.086
Economic Development	3.355*	1.148	0.342	3.541	0.988	3.196	1.257
Psychology	3.028*	1.075	0.354	3.437	0.823	2.678	1.146
Sociology	2.923*	1.103	0.377	3.375	0.733	2.535	1.221

* Significant difference ($P < .05$) between educators and practitioners

6.3.6 Analysis of similarities and differences of opinion on the importance of basic subjects

In order to see whether there exist any differences between the various groups of respondents on the importance of subjects, the method used previously for the accounting subjects is repeated in this section for the basic subjects. As done in the previous section, since the CV of some basic subjected amounted to zero, the rank ordering of subjects was based on their means of importance. Table 6-18 shows the means of importance of basic subjects as perceived by the respondents according to their teaching experience.

Table 6-18

Importance of basic subjects as perceived by respondents when they are grouped according to their experience in teaching

	No Experience	Up to 10 Years	Over 10 Years
Application of Statistics in Business	4.24	4.39	4.61
Business Law	4.21	4.02	4.29
Application of Mathematics in Business	4.21	4.20	4.61
Mathematics	4.10	4.11	4.65
Research Methods	4.10	4.50	4.19
Operations Research I & II	4.07	4.18	3.77
Application of Computer in Business	4.00	4.61	4.48
Macro Economics (Principles of Economics II)	3.90	4.00	4.52
Micro Economics (Principles of Economics I)	3.79	4.02	4.13
Principles of Management	3.66	3.70	3.77
Money and Banking	3.48	4.00	4.19
Economic Development	3.07	3.48	3.45
Production Management	3.07	3.09	2.97
Public Finance	2.93	3.36	3.68
Psychology	2.59	3.11	3.32
Sociology	2.31	2.95	3.45

Table 6-18 reveals that except for Production Management, Economic Development, Operations Research I & II, and Research Methods, the means of importance of all the other subjects increase with the years of teaching experience of respondents. However, the degree of increase is not significantly high. Overall, the table indicates

that statistics-based subjects have been rated as the most important subjects by both groups of respondents.

Respondents were also divided by their country of the last degree awarded, to see whether there exist any differences between their perceptions. Based on the same reason given in the previous section (i.e., section 6.3.2), all respondents were divided into two groups as indigenous and non-indigenous graduates. Table 6-19 shows the results of perceptions of these two groups on the importance of basic subjects. The Rank ordering of subjects in this table is based on the CV for indigenous graduates.

This table depicts that non-indigenous graduates attach slightly higher degrees of importance to a number of basic subjects. However, both groups have rated subjects such as Application of Mathematics in Business, Application of Statistics in Business, Application of Computers in Business, Research Methods, Business Law, and Macro and Micro Economics as highly important subjects for an accounting curriculum.

Table 6-19

Importance of basic subjects as perceived by respondents when they are grouped according to the country of the last degree awarded

	Indigenous graduates			Non-indigenous graduates		
	Mean	STD	CV	Mean	STD	CV
Application of Mathematics in Business	4.28	0.74	0.173	4.46	0.74	0.166
Micro Economics (Principles of Economics I)	4.01	0.70	0.174	3.93	0.81	0.207
Macro economics (Principles of Economics II)	4.13	0.74	0.178	4.11	0.88	0.213
Research Methods	4.28	0.78	0.181	4.36	0.87	0.199
Application of Statistics in Business	4.38	0.82	0.186	4.50	0.64	0.141
Operations Research I & II	4.20	0.85	0.202	3.57	1.03	0.289
Application of Computer in Business	4.37	0.92	0.21	4.50	0.88	0.195
Principles of Management	3.59	0.79	0.218	4.04	0.92	0.228
Business Law	4.11	0.92	0.223	4.29	0.81	0.189
Money and Banking	3.88	0.92	0.237	4.00	0.86	0.215
Mathematics	4.25	1.03	0.243	4.32	0.90	0.209
Production Management	3.08	0.96	0.312	2.96	1.07	0.361
Economic Development	3.29	1.056	0.321	3.54	1.37	0.388
Public Finance	3.24	1.04	0.322	3.61	0.79	0.217
Psychology	2.91	1.04	0.36	3.36	1.10	0.326
Sociology	2.79	1.12	0.402	3.29	0.98	0.297

Practitioners respondents were again divided into three groups in accordance with the economic sectors in which they operate. Mean, standard deviation and coefficient of variation of basic subjects on the perceptions of these respondents were calculated separately for the Government, Private and Semi-Government sectors. The results ranked according to the CV for the Government sector accountants are presented in Table 6-20.

As shown in Table 6-20, eight basic subjects have been perceived to be highly important by all accounting practitioners regardless of their sectors of employment. The degrees of importance of these subjects do not vary significantly between groups of respondents, indicating that all groups of respondents are in agreement with each other with regard to the importance of these subjects. The subjects which are not perceived to be highly important fall into a wider range of variation.

Like in the previous section, practitioners' area of practice was also used as a basis for analysing the importance of basic subjects. The results are show in Table 6-21. The ranking order of importance in this table is based on the CV of the general accountants group.

Table 6-21 shows that the means of importance remain quite close to each other for most of the subjects. Nevertheless, it is also seen that cost accountants attach greater importance to Mathematics and Application of Statistics in Business when compared with the ratings of other groups. It is also interesting to see that Sociology, Production Management, Psychology and Economic Development are rated by almost all respondents as the least important subjects.

Table 6-20

Importance of basic subjects as perceived by respondents when they are grouped according to economic sectors

	Government Sector			Private Sector			Semi-Government Sector		
	Mean	STD	CV	Mean	STD	CV	Mean	STD	CV
Application of Computer in Business	4.78	0.44	0.092	4.03	0.93	0.23	4.06	1.39	0.342
Application of Statistics in Business	4.22	0.67	0.157	4.27	0.83	0.194	4.12	1.05	0.255
Research Methods	4.44	0.73	0.163	4.20	0.89	0.211	4.18	0.81	0.193
Application of Mathematics in Business	4.00	0.71	0.176	4.23	0.77	0.182	4.41	0.80	0.18
Micro Economics (Principles of Economics I)	3.67	0.71	0.192	3.87	0.78	0.2	4.00	0.79	0.197
Principles of Management	3.67	0.71	0.192	3.73	0.83	0.221	3.94	0.75	0.189
Macro Economics (Principles of Economics II)	3.89	0.78	0.201	4.03	0.81	0.2	4.06	0.75	0.184
Business Law	4.11	0.93	0.225	3.93	0.87	0.22	4.65	0.49	0.106
Operations Research I & II	3.67	1.19	0.304	3.83	1.05	0.274	4.00	1.00	0.25
Money and Banking	3.56	1.13	0.317	3.57	0.97	0.272	3.76	0.75	0.199
Production Management	2.67	0.87	0.324	2.87	0.94	0.326	2.94	1.43	0.487
Mathematics	3.89	1.27	0.326	4.23	0.94	0.22	3.88	1.36	0.351
Public Finance	2.89	1.17	0.403	3.30	0.87	0.265	2.53	0.72	0.283
Psychology	2.56	1.13	0.442	2.93	1.14	0.389	2.29	1.10	0.481
Economic Development	2.89	1.45	0.503	3.20	1.16	0.361	3.35	1.37	0.407
Sociology	2.11	1.27	0.601	2.93	1.14	0.389	2.06	1.14	0.555

Table 6-21

Importance of basic subjects as perceived by practitioners when they are grouped according to their area of practice

	General Accountants				Cost Accountants				Government Accountants				Auditors			
	Mean	STD	CV	Rank	Mean	STD	CV	Rank	Mean	STD	CV	Rank	Mean	STD	CV	Rank
Micro Economics (Principles of economics I)	3.56	0.53	0.148	1	4.38	0.92	0.209	8	3.13	0.35	0.113	3	4.03	0.71	0.175	2
Macro Economics (Principles of economics II)	4.00	0.71	0.176	2	4.25	0.89	0.208	7	3.13	0.35	0.113	2	4.19	0.70	0.167	1
Application of Mathematics in Business	4.22	0.83	0.197	3	4.38	0.92	0.209	9	4.25	0.71	0.166	6	4.23	0.76	0.18	3
Application of Statistics in Business	4.44	0.88	0.198	4	4.50	0.53	0.118	1	4.00	0.96	0.231	10	4.13	0.92	0.223	8
Research Methods	4.33	0.87	0.199	5	4.25	1.16	0.274	11	4.25	0.71	0.166	7	4.19	0.79	0.188	5
Business Law	4.11	0.93	0.225	6	3.63	0.52	0.142	3	4.38	0.92	0.209	9	4.29	0.82	0.192	6
Public Finance	3.44	0.88	0.256	7	3.63	0.52	0.142	2	1.75	0.89	0.506	15	3.03	0.75	0.248	10
Principles of Management	3.89	1.05	0.271	8	3.25	0.71	0.217	10	3.63	0.52	0.142	4	3.94	0.73	0.184	4
Application of Computers in Business	3.67	1.12	0.304	9	4.50	0.93	0.205	6	4.75	0.46	0.097	1	4.06	1.12	0.276	11
Mathematics	4.00	1.22	0.306	10	4.50	0.93	0.205	5	4.00	1.31	0.327	12	4.00	1.13	0.281	12
Operations Research I & II	4.22	1.30	0.308	11	3.00	0.93	0.308	12	4.623	0.74	0.16	5	3.77	0.88	0.234	9
Money and banking	3.33	1.12	0.335	12	4.00	0.76	0.188	4	3.00	0.93	0.308	11	3.77	0.84	0.223	7
Sociology	2.56	0.88	0.345	13	3.13	1.46	0.466	16	2.00	1.31	0.654	16	2.52	1.21	0.479	16
Production Management	2.89	1.17	0.403	14	2.13	0.83	0.392	14	3.13	0.64	0.205	8	2.97	1.17	0.393	15
Psychology	3.00	1.42	0.471	15	3.13	1.46	0.466	15	2.50	1.20	0.478	14	2.52	0.96	0.382	14
Economic Development	2.89	1.54	0.531	16	4.00	1.41	0.353	13	2.13	0.83	0.392	13	3.35	1.05	0.313	13

The respondents were divided into two groups again on the basis of whether their organisations have been using or not using computers for accounting purposes. The statistical results of this break-down of analysis is presented in Table 6-22. The table reveals that these two groups of practitioners hold quite the same views on the importance of most of the basic subjects. It is interesting to see that Application of Computers in Business occupies only the tenth place in the ranking order of importance according to the perceptions of accountants who work in organisations where computers are used for accounting practice whereas it is given the fifth highest place by the non-users' group.

Table 6-22

Importance of basic subjects as perceived by practitioners when they are grouped according to their use of computers in professional practice

	Users of Computer				Non-users of Computers			
	Mean	STD	CV	Rank	Mean	STD	CV	Rank
Business Law	4.12	0.81	0.197	1	4.33	0.90	0.207	6
Macro Economics (Principles of Economics II)	3.93	0.79	0.2	2	4.27	0.70	0.164	3
Principles of Management	3.88	0.78	0.201	3	3.53	0.74	0.21	8
Application of Mathematics in Business	4.24	0.86	0.202	4	4.27	0.46	0.107	1
Research Methods	4.24	0.86	0.202	5	4.20	0.77	0.184	4
Application of Statistics in Business	4.27	0.87	0.203	6	4.07	0.88	0.217	10
Micro Economics (Principles of Economics I)	3.78	0.79	0.209	7	4.13	0.64	0.154	2
Money and Banking	3.61	0.83	0.23	8	3.67	1.18	0.32	11
Mathematics	4.15	1.09	0.261	9	3.87	1.25	0.322	12
Application of Computers in Business	4.10	1.14	0.277	10	4.33	0.82	0.188	5
Operations Research I & II	3.98	1.11	0.278	11	3.53	0.74	0.21	7
Public Finance	3.00	0.89	0.298	12	3.00	1.07	0.356	14
Production Management	2.83	1.16	0.394	13	2.93	1.03	0.352	13
Psychology	2.71	1.15	0.423	14	2.60	1.18	0.455	15
Economic Development	3.12	1.40	0.448	15	3.40	0.74	0.216	9
Sociology	2.56	1.21	0.47	16	2.47	1.30	0.527	16

6.3.7 Deficiencies in basic subjects

In the spaces that were provided for respondents' comments on the basic subjects they made some suggestions regarding adding or dropping some certain such subjects. The most repeated subjects that were suggested to be included in basic subjects when designing a new curriculum are as follows:

- An Introduction to Constitution, Civil, Labour and Social Security Law of Iran
- An Introduction to Stock Exchange Transactions.

They also suggested that the number of semester hours of some basic subjects should be changed. They recommended that the number of semester hours of Application of Statistics in Business should be increased from 4 to 6 semester hours. On the contrary, they recommended that the number of semester hours of some other basic subjects such as Production Management should be decrease from 3 to 2 semester hours. The same recommendations for increasing and decreasing the number of semester hours of the basic subjects of current accounting curriculum were suggested in interviews.

6.3.8 The importance of general subjects

The general subjects specified by the CHEP accounting curriculum were also presented in section two of the questionnaire. Although there were four separate religion-based subjects under the titles of Islamic Moral, Islamic History, Islamic Revolution Roots and Islamic Ethics, in order to save space and minimise complexity they were presented in the questionnaire as one unit with necessary explanations. The respondents were asked to rate the importance of all general subjects as a component of the undergraduate accounting curriculum in the context of cultural, religious and economic needs of Iran. Table 6-23 shows the means and related rank ordering of these subjects.

Table 6-23

Importance of general subjects as perceived by accounting educators and practitioners

	All respondents			Educators		Practitioners	
	Mean	STD	CV	Mean	STD	Mean	STD
English Language	4.759*	0.472	0.099	4.833	0.377	4.696	0.537
Persian Language	4.115*	1.160	0.281	4.291	0.850	3.964	1.361
Islamic Moral	3.567*	1.378	0.386	4.166	1.059	3.053	1.420
Physical Education	2.98	1.400	0.469	3.083	1.412	2.892	1.397

* Significant difference ($P < .05$) between educators and practitioners

The above table presents the statistical results of the respondents' perceptions on the importance of general subjects. The closer the mean of importance to 5, the higher is the importance of each general subject. Columns two, five and seven show the mean of importance for all respondents, educators and practitioners respectively. The relative importance rank ordering of various means given in column four is based on the CV for all respondents. The symbol (*) immediately preceding an importance mean in the second column of the table indicates that there is a statistically significant difference (at the .05 level) between the mean responses of educators and practitioners for that general subject.

Table 6-23 shows that the means of importance of general subjects range very narrowly between educators and practitioners. They also carry relatively high degrees of importance. One explanation for this situation may be that both educators and practitioners perceive general subjects as an important component of the accounting curriculum.

The rank ordering of importance for most of the general subjects remains the same for both groups of respondents. For example, English Language and Physical Education have been assessed by both groups as the most important and least important general subjects respectively. The separate means and rank ordering of importance, the variances and the F-Values of the general subjects for educators and practitioners are presented in Appendix 6-5. The respondents who were interviewed

by the researcher also supported the inclusion of Islamic moral and ethical subjects in the accounting programme. They believe that since such are subjects useful in developing the ethical reasoning ability of accounting students, they are absolutely necessary.

6.3.9 Aims and objectives of undergraduate accounting education

After reviewing the relevant literature on accounting education objectives of different countries and considering the economic conditions and educational facilities of Iran, four objectives were formulated to be included in the questionnaire. In filling the questionnaire, the respondents were asked to rank the priorities of these four objectives on the basis of their appropriateness. The averages of all priority numbers and the resulting ranking of objectives are presented in Table 6-24.

The analysis of responses shows that the perceptions of accounting educators and practitioners on the priority ranking of accounting education objectives are identical. This may mean, for example, that both groups agree that the first important objective of accounting education in Iran should be to enable students to analyse financial data and present professional opinion. Similarly, both groups have given the last priority to the objective of enabling students to do research in accounting.

The above objectives were considered at the interviews in more detail. While being consistent with the questionnaire respondents in priority ranking of the given objectives, the interviewees emphasised the importance of enhancing the analytical and problem solving skills of accounting students. For example, one of the interviewees made the following remark:

We have to teach accounting students logical thinking, problem solving ability and creative thinking. This is the mission of higher education. The future accountants should be able to work in critical conditions as the business environment is changing, locally and internationally. We,

as accounting educators, have to be confident that the students are competent.

The respondents' perceptions on the objectives of accounting education were further analysed in relation to (a) their experience in teaching, (b) the country of last degree awarded, (c) the economic sectors, (d) the area of practice, and (e) the use of computers. Interestingly, this analysis showed that the priority ranking of the four selected objectives was identical in all situations.

Table 6-24
Priorities of accounting curriculum objectives as perceived by accounting educators and practitioners

	All Respondents		Educators		Practitioners	
	Average	Priority	Average	Priority	Average	Priority
To enable students to analyse financial data and present professional opinion	3.33	1	3.38	1	3.29	1
To enable students to know the accounting concepts and principles and use them in various business situations	2.83	2	2.67	2	2.96	2
To prepare students for professional accounting jobs and business leadership.	2.28	3	2.19	3	2.36	3
To enable students to do research in accounting.	1.57	4	1.77	4	1.39	4

6.3.10 Duration of the undergraduate accounting programme

In section three of the questionnaire, an attempt was also made to obtain the views of respondents on the most appropriate duration for the undergraduate accounting degree programme in Iran. The respondents were asked to indicate whether the most appropriate duration is three, four or five years of study. Table 6-25 presents the results. This table also shows the additional time recommended by respondents to include an internship scheme as an integral part of the degree programme. This additional period of time is indicated in the table as the mean of months.

Table 6-25 depicts that 73 per cent of educators and 43 per cent of practitioners have chosen four years of study as the most appropriate duration for the Iranian accounting degree programme. This percentage for all respondents is 57. However, the respondents believe that there should be an additional period of time to complete an internship scheme. Mean of the additional time recommended by educators for this purpose is 2.8 months, whereas it is as high as 8.1 months according to practitioners.

As perceived by 50 per cent of practitioners and 27 per cent of educators, the most appropriate duration for the undergraduate accounting programme is three years. The means of months for the internship scheme as recommended by educators and practitioners are 2.6 and 9.6 months respectively. Even though the four-year duration has been preferred by 73 per cent of educators, only 43 per cent of practitioners seem to agree with it. However, no educator has recommended a period longer than 4 years for the degree. Only 7 per cent of practitioners have supported a 5-year duration.

As done in other sections, for the purpose of comparing perceptions on the duration of the accounting programme all respondents were divided into three groups according to their teaching experience. Table 6-26 shows the results in this form. The table depicts that most of the respondents with experience in teaching believe that the duration of undergraduate accounting programme should be four years. The percentages of respondents carrying this belief are 57 and 72 for the last two groups respectively. Although the majority of respondents with no experience in teaching support a 3-year duration, a considerable number of them (39%) are in favour of four years.

Table 6-26

Perceptions of respondents on the most appropriate duration of undergraduate accounting programme when the respondents are grouped according to their teaching experience

Most appropriate duration:	No Experience		Up to 10 Years		Over 10 Years	
	No.	%	No.	%	No.	%
3 years		54%	17	39%	9	28%
4 years	11	39%	25	57%	23	72%
5 years	2	7%	2	5%	0	0%
Total	28	100%	44	100%	32	100%

The same results were also obtained when all respondents were divided by the country of last degree awarded. Eighty-two per cent of non-indigenous and 47 per cent of indigenous graduates are in favour of the four-year duration. These results are shown in Table 6-27.

Table 6-27
Perceptions of respondents on the most appropriate duration of undergraduate accounting programme when the respondents are grouped according to country of last degree awarded

Most appropriate duration:	Indigenous Graduates		Non-Indigenous Graduates	
	No.	%	No.	%
3 years	36	47%	5	18%
4 years	36	47%	23	82%
5 years	4	5%	0	0%
Total	76	100%	28	100%

Sub-grouping of practitioners by their area of practice showed significantly different results. The auditors' group, for example, supported a three-year degree while other three groups indicated that a 4-year programme would be better suited for Iran. In the same way, the practitioners who work in organisations in which computers are not used for accounting purposes have chosen a three-year duration for the accounting degree programme. Forty-three practitioners belonging to the other group (users of computers) were also in favour of a three-year degree. Similarly, the majority of semi-government accountants, 47 per cent of private-sector accountants, and 44 per cent of general accountants preferred the 3-year duration. Thus, the overall results of this analysis show that the most preferred duration for the undergraduate accounting degree programme is 4 years. These results are presented in Table 6-28.

Table 6-28

Perceptions of various subgroups of practitioners on the duration of undergraduate accounting programme

	3 years		4 years		5 years	
	No	%	No	%	No	%
By Area of Practice:						
General Accountants	4	44	5	56	0	0
Cost Accountants	2	25	6	75	0	0
Government Accountants	3	38	3	38	2	24
Auditors	19	61	10	32	2	6
By Economic Sectors:						
Government Sector Accountants	4	44	3	33	2	22
Private Sector Accountants	14	47	16	53	0	0
Semi-Government Sector Accountants	10	59	5	29	2	12
By Use of Computers:						
Users of Computers	16	43	17	46	4	11
Non-users of Computers	12	63	7	37	0	0

6.3.11 Supplementary activities for improving the quality of accounting education

After reviewing the relevant literature and in consultation with a number of senior accounting academics and practitioners, eight statements indicating possible supplementary activities that could improve the quality of accounting education in Iran were formulated. These statements were included in the questionnaire with a request from respondents to rank them in their order of importance. The results are shown in Table 6-29. The symbol (*) immediately preceding an importance mean in the second column of the table indicates that there is a statistically significant difference (at the .05 level) between the means of responses of educators and practitioners.

Generally, all the suggested activities have been viewed by most respondents as having some degree of importance. Yet, the first three activities (i.e., Provide more research facilities for academics and reduce their formal lecturing time, publish more accounting books in Farsi, and increase domestic periodicals in accounting) were perceived to be most important for enhancement of accounting education in Iran. Similarly, providing opportunities for university accounting teachers to acquire some practical experience in industry and commerce was perceived to be the least important.

Except for the first, third and eighth activities the rank ordering of other statements for educators and practitioners is different. For example, educators believe that publishing more books in Farsi should be given the second priority, while the practitioners' second priority is for increasing the number of accounting periodicals in university libraries. Details of these results are presented in Appendix 6-6.

Table 6-29

Perceptions of accounting educators and practitioners on the supplementary activities for improving the quality of accounting education (ranked by the coefficient of variation of all respondents)

		All Respondents			Educators		Practitioners	
		Mean	STD	CV	Mean	STD	Mean	STD
1	Provide more research facilities for academics and reduce their formal lecturing time	4.71*	0.602	0.127	4.79	0.582	4.64	0.616
2	Publish more accounting books in Farsi	4.46*	0.800	0.179	4.63	0.606	4.32	0.917
3	Increase domestic periodicals in accounting	4.37*	0.893	0.204	4.38	1.003	4.36	0.796
4	Increase the number of accounting periodicals subscribed by university libraries	3.91	0.904	0.231	3.73	1.067	4.07	0.710
5	Hold more accounting seminars	3.78	0.903	0.238	3.81	0.915	3.75	0.900
6	Increase the number of foreign textbooks in accounting in university libraries	3.79	0.910	0.24	3.71	0.967	3.86	0.862
7	Invite professionals accountants to lecture in universities (on visiting basis)	3.91*	1.089	0.278	3.63	1.214	4.16	0.910
8	Provide opportunities for university accounting teachers to acquire some practical experience in industry and commerce	3.57	1.420	0.397	3.25	1.422	3.84	1.372

* Significant difference ($P < .05$) between educators and practitioners

6.3.12 Comments and suggestions of respondents

In the space provided in the questionnaire as well as at the interviews, several comments and suggestions were given by the respondents. Some of the most repeatedly given comments and suggestions are listed below:

Comments:

- The curriculum places excessive emphasis on technical aspect of financial accounting and devotes little attention to managerial accounting.
- Curriculum revision is very much overdue.
- The lack of textbooks forces accounting students to rely to heavily on lecture notes.
- Lecture notes and textbooks used by most teachers are based on outdated techniques and concepts of accounting.
- Accounting graduates are weak in their analytical and communication skills.
- When compared with students in areas such as engineering, medicine and science those enrolled in accounting degree programmes are of lower quality.
- Some lecturers do not cover the syllabus fully in each subject.
- Most accounting lecturers pay very little attention to research and devote time only to teaching.
- The lack of facilities such as overhead projectors, computers and visual aids has become a serious impediment to quality teaching.

Suggestions

- Hold workshops and seminars for accounting lecturers
- Enlarge domestic PhD programmes and increase the number of accounting PhD scholarships
- Expand computer facilities in accounting departments
- Establish links with accounting departments in foreign universities
- Enhance English proficiency of accounting students
- Provide a better salary scale for university accounting academics
- Use more project-type problem solving assignments in accounting subjects

- Include more up-to-date concepts and techniques in accounting subjects
- Change the titles of some accounting subjects to make them more relevant to their contents and current usage

6.3.13 The practitioners' views on the performance of recent accounting graduates

The questionnaire given to accounting practitioners included an additional section for obtaining their views on three aspects of the performance of recent accounting graduates. They are (a) the performance of recent accounting graduates, (b) the desirable competencies for accounting graduates, and (c) the reasons for inadequate competencies.

6.3.13.1 Performance of recent accounting graduates

The practitioners were asked to indicate their assessment of the performance of recent accounting graduates who have been working under their supervision. For this purpose, seven competency statements were listed in the questionnaire. An assessment scale consisting of three points designated as 'low', 'moderate' and 'high' was provided for selection by respondents. Table 6-30 presents a summary of their responses. For the purpose of computing an average score for each competency statement, numeric values of 1, 2, and 3 were arbitrarily assigned to the 'low', 'moderate', and 'high' points respectively. Then, the number of respondents in each point was multiplied by its respective value, and the weighted values of all three points were finally divided by the total number of respondents to arrive at an average score for the statement.

The results of the above assessment are shown in Table 6-30. The table reveals that there is a considerable difference between the competency statement number one and the rest. The average score of this statement is 2.13 out of 3 while the others range between 1.80 and 1.16. The reason for scoring a high value by accounting graduates

for “carrying out duties ethically” may be that they have studied religious and ethical aspects of accounting practice thoroughly through a number of subjects on Islamic thoughts in their undergraduate programmes of study.

The lowest score has been assigned to the graduates’ ability to use computers in accounting practice. This shows that their knowledge of computer applications in accounting is extremely low. Similarly, participation in decision-making, and creativity in activities they perform are also at low levels of performance. This may mean that analytical and decision-making skills of students are not adequately developed during their studies.

6.3.13.2 Desirable competencies for accounting graduates

The same competency statements used in the previous section were utilised for the assessment of their desirability. The practitioners were asked to indicate their opinion on the necessity of those competencies for a typical accounting graduate. Table 6-31 presents the details of responses. The average score shown in the last column of this table is based on the same method used in the previous table.

The overall data indicate that all the competencies listed in the questionnaire have been viewed by respondents as desirable attributes of accounting graduates. Scores range between 2.40 and 2.78 with a mean of 2.58, indicating that quality of work, accuracy and speed of work, and creativity in activities performed have been considered to be the most desirable competencies for accounting graduates.

Table 6-30

Practitioners' assessment of the performance of recent accounting graduates

	Low		Moderate		High		Average Score Maximum 3
	No	%	No	%	No	%	
1. Carrying out duties ethically	6	11	36	66	13	24	2.13
2. Accuracy and speed of work	14	26	38	69	3	5	1.80
3. Use of accounting knowledge in actual practice	16	29	36	66	3	5	1.76
4. Quality of work	17	31	38	69	0	0	1.69
5. Participation in decision-making	30	55	21	38	4	7	1.53
6. Creativity in activities performed	36	66	14	25	5	9	1.44
7. Use of computers in accounting	46	84	9	16	0	0	1.16

Table 6-31

Practitioners' assessment of the desirable competencies for accounting graduates

	Low		Moderate		High		Average Score Maximum 3
	No	%	No	%	No	%	
1. Quality of work	1	2	10	18	44	80	2.78
2. Accuracy and speed of work	0	0	13	24	42	76	2.76
3. Creativity in activities performed	0	0	19	35	36	66	2.65
4. Use of accounting knowledge in actual practice	0	0	22	40	33	60	2.60
5. Participation in decision-making	3	5	25	46	27	49	2.44
6. Ability to use computers in accounting	1	2	31	56	23	42	2.40
7. Carrying out duties ethically	1	2	31	56	23	42	2.40

6.3.13.3 *Reasons for the inadequacy of competencies*

The practitioners were requested to indicate their opinion on the reasons for inadequate competencies of recent accounting graduates. A list of possible reasons was given in the questionnaire with a request to rank them according a 1-4 scale representing a range from ‘least likely reason’ to ‘most likely reason’. The possible reasons included in this list were determined on the basis of a study by Novin and Saghafi’s (1994) who examined the problems and remedial strategies for enhancing accounting education in Iran. After careful review of the reasons given in the Novin and Saghafi study and in consultation with several senior accounting educators and practitioners, the possible reasons were limited to five in order to minimise the complexity. Table 6-32 presents the rank ordering of means of these reasons. In this table, the closer the mean to 4, the higher is the likelihood of the potential reason.

Table 6-32
Possible reasons for the inadequate competencies of recent accounting graduates

	Mean
Lack of qualified accounting academics	3.94
Weakness of the accounting curriculum	3.42
Insufficient Internship (practical training for accounting students)	3.36
Lack of accounting text books in Farsi	2.30
Poor quality of university education	1.97

The data in Table 6-32 indicate that lack of qualified accounting academics, weakness of the accounting curriculum, and insufficient practical training for accounting students are the most likely reasons for the inadequate competencies of accounting graduates.

At the end of the questionnaire, the respondents were asked to make any additional comments or recommendations on the enhancement of accounting education and practice in the country. In response, several practitioners have noted that the lack of an well organised and officially recognised professional body for accounting is a

major impediment to the development of accounting education and practice in Iran. They have stressed the fact that because of the lack of recognition of accounting profession by the government and the business sector, it is viewed by the general public as a profession with “low status” and consequently high quality students are reluctant to pursue university education in accounting.

6.4 SUMMARY

A statistical analysis of the data obtained from the questionnaire survey and interviews was presented in this chapter. The perceptions of accounting academics and practitioners on the importance of each of the basic, general, and accounting subjects included in the existing undergraduate accounting curriculum were the core of this analysis. Aims and objectives of undergraduate accounting education, duration of the degree programme, supplementary activities for enhancing accounting education, performance of recent accounting graduates, and desirable competencies for accounting graduates were the other main aspects of responses analysed in this chapter.

CHAPTER SEVEN

FINDINGS, DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

7.1 INTRODUCTION

This research was an attempt to examine the strengths and weaknesses of the existing undergraduate accounting curriculum in Iran through a survey of perceptions of accounting educators and practitioners. The study also attempted to determine on the same basis the most desirable structure, contents, scope and duration for the undergraduate accounting curriculum to make it more effective and appropriate in the context of socio-economic conditions of the country.

A literature review, research methods and results of the questionnaire survey were presented in the previous chapters. The country's economic, social, political and educational background was also presented to place the subject matter of the study in proper context. The curriculum development procedure adopted after the Islamic Revolution and the structure and content of the existing undergraduate accounting curriculum were discussed in detail to provide the necessary background for the core of this study.

The purpose of this last chapter is to analyse the strengths and weaknesses of the current undergraduate accounting curriculum in light of the results of the questionnaire survey and to present the findings and conclusions of the study. Based on those findings and conclusions, it also provides some recommendations for improving the existing undergraduate accounting curriculum and enhancing accounting education and practice in the country.

7.2 OVERVIEW OF DATA ANALYSIS

The analysis of demographic data of accounting educators and practitioners reveals that both these groups who participated in the questionnaire survey and interviews possess several years of teaching and professional accounting experience. The university education of most of these participants has been in the area of accounting or related disciplines. Almost all of them have received their first degree from indigenous universities. Except a few with master degree qualifications from USA, UK and other foreign universities, the majority of participants have pursued their postgraduate education in Iranian universities. Thus, they are reasonably competent in presenting independent and reliable views on the existing undergraduate accounting curriculum in Iran.

Perceptions of all respondents on the importance of each of the subjects included in the existing curriculum, the objectives of undergraduate accounting education and the duration of accounting degree programme were analysed. The analysis was then extended to compare perceptions by dividing the respondents in accordance with their teaching experience and the country of their last university degree. This analysis was further extended on the basis of sub-grouping accounting practitioners according to their sectors of employment, areas of operation and use of computers in accounting.

Mean, standard deviation and the coefficient of variation were computed in respect of each subject for educators, practitioners and all respondents as well as for their subgroups. The same statistical techniques were used to analyse the importance of accounting curriculum objectives, proper duration for the undergraduate degree and some supplementary activities for enhancing the quality of accounting education. Similarly, the perceptions of practitioners on the performance of recent accounting graduates and the desirable competencies for accounting graduates were also analysed.

The overall comparison of perceptions of accounting educators and practitioners shows that they are quite similar on the importance of Accounting, Basic and General subjects. In general, all these three categories of subjects were viewed by respondents as having some degree of importance. The mean of importance of accounting subjects ranged between 2.24 and 4.95 with an average mean of 4.02. The Basic and General subjects ranged more narrowly from 2.92 to 4.41 and from 2.98 to 4.76 respectively.

The following accounting and basic subjects are among the first ten most important subjects as perceived by accounting educators and practitioners:

Accounting Subjects:

- Principles of Accounting I
- Cost Accounting I & II
- Auditing I & II
- Accounting studies (in English)
- Tax Accounting
- Managerial Finance

Basic Subjects:

- Application of Mathematics in Business
- Application of Statistics in Business
- Research Methods
- Macro Economics
- Micro Economics
- Business Law

The results also show that two proposed accounting subjects --Accounting Information Systems and Internship in Accounting-- were considered important to be added to the Iranian accounting curriculum. However, two existing subjects --Application of COBOL Programming in Accounting and Principles of Accounting III --were perceived to be the least important accounting subjects. At the interviews, many respondents suggested either to revise the titles and syllabi of these subjects or to replace them with two new subjects in order to include computer applications as well as more modern techniques and concepts in managerial accounting.

The importance attached to the Accounting and Basic subjects was also quite similar when the respondents were grouped according to their teaching experience or the country of the last degree awarded. Nevertheless, when the accounting practitioners were re-grouped according to the other classifications used in the analysis their attitudes regarding the importance of various subjects were seen to be slightly different.

Referring to the deficiencies in the accounting curriculum, the respondents emphasised the importance of introducing report writing and real world projects, and using personal computers and accounting software by students in their accounting assignments. They also suggested that new accounting concepts and techniques such as Activity Based Costing, Just In Time and Total Quality Management be added to cost accounting subjects. Changing the titles of the cost accounting subjects to give greater attention to managerial accounting was also suggested. Foreign exchange auditing and auditing for government agencies were suggested for inclusion in the topics of auditing subjects. Respondents also believed that accounting for construction should be a topic in the accounting subjects.

When the perceptions of accounting educators and practitioners were analysed in terms of various subgroups they did not differ significantly on the importance attached to each of the suggested accounting curriculum objectives. The results indicate that preparing students for financial data analysis and presenting professional opinion are the most important objectives. On the other hand, doing research in accounting was viewed as the least important objective. In the same way, all respondents preferred a four-year period as the most suitable duration for the undergraduate accounting programme. In addition, a period of internship was also considered necessary towards the end of the four-year programme.

In addition to financial accounting, cost accounting was perceived by all respondents as a most important area of instruction particularly in the context of economic development. They also believed that research and publications output of academics could be increased by reducing their teaching load and providing more facilities and encouragement. For successful implementation of the undergraduate accounting programme, producing local textbooks and enhancing the quality of teachers were considered extremely important. Other ways of contributing to achieving this objective included the following: increasing the number of accounting periodicals subscribed by university libraries; holding accounting seminars and conferences; inviting qualified accounting practitioners to lectures for accounting students; getting accounting educators to acquire professional accounting experience; expanding postgraduate education in accounting; increasing the number of government scholarships for doctoral studies in accounting; increasing the quality and quantity of computer facilities in accounting departments; and enhancing the English proficiencies of accounting students. Referring to the fact that some parts of the existing curriculum are not fully covered in lectures and other media of instruction, respondents suggested that this deficiency should not be repeated and could be overcome by recruiting more qualified full-time academics. For attracting more qualified persons into the teaching profession, it was also suggested that better salaries be paid to accounting academics.

According to the views of accounting practitioners, recent accounting graduates carry out their duties ethically, but they are not competent enough in their work mainly due to their lack of knowledge in using computers for recording and processing of accounting data. The lack of qualified academics, the deficiencies of the undergraduate accounting curriculum and the absence of a good internship programme were perceived to be the main reasons for this situation. Further, the results indicated that the quality, accuracy, speed, and creativity in the work

performed and the ability to use computers are the attributes required for an accounting graduate to become a competent accountant.

7.3 DISCUSSION

This discussion begins with a brief overview of some suggestions made by other writers as suitable measures for improving various aspects of undergraduate accounting programmes in developing countries. Based on the findings of this study, the discussion is then extended by a critical analysis of the current undergraduate accounting curriculum in Iran.

7.3.1 Analysis of the objectives of an undergraduate accounting curriculum

As stated before, accounting curricula of most DCs including Iran have been copied almost entirely from developed countries. Not surprisingly, most of these countries did not bother to set their own objectives when designing curricula for accounting degree programmes. Even in the cases where some attempts have been made to do so the objectives set seem to be very narrow and limited in scope and the subjects included in the curriculum are not in accordance with the objectives.

However, since the accounting curriculum is obviously the main vehicle of providing accounting education to students in any country, setting appropriate curriculum objectives should be the first step to be taken in that process. In this regard, Tipgos (1987: 392-93) suggested the following four steps: 1) defining the objectives of accounting in a DC, 2) identifying sub objectives for accounting in DCs, 3) taking an "accounting inventory" and identifying the existing accounting influence, and 4) establishing a strategy for attaining the overall objective(s) and sub objectives identified previously.

In the accounting literature there exists a sizeable number of studies on the objectives of accounting education or accounting curricula in developed countries. Even though their relevance to a developing country like Iran is limited, they can be used as guidance in designing its own objectives. Moreover, the curriculum objectives of developed countries can be modified and adapted to suit the socio-economic conditions of the developing country concerned. Therefore, presenting a discussion on the objectives of accounting curricula in developed countries in this section is considered relevant and useful before considering curriculum objectives for Iran.

In developed countries, in order to increase the relevance and usefulness of accounting education to accounting practice and economic development, not only the curriculum objectives are set at the time of designing an education programme but also they are reviewed and revised from time to time to incorporate new developments and changed situations. For example, in the United States the AAA and AICPA through their standing committees and individual researchers have taken many steps in this direction. Preparing accounting students for life long learning is one of the most important and broad education objectives suggested by these committees and individuals. According to them, teaching of young accountants is a gradual process in which university education plays only one part, though it is a very important part. Furthermore, they speculated that universities cannot produce completely matured accountants who are ready to take over the complicated accounting or auditing jobs. They need to gain some practical accounting experience before starting such careers. In this regard, the Committee on Courses and Curricula of the AAA described accounting curriculum objectives as:

The prime objective of the accounting student's college education is not to train him for a specific job or even to train him for his chosen career, but rather to create a capacity within him for gradual development in the years which lie ahead as he faces the challenge of his profession. Thus the development of abilities to reason, to communicate, to organize, and act when confronted by various business

situations become important considerations in structuring knowledge for an accounting major's college curriculum (AAA, 1964: 721).

More recently, the Bedford Report (AAA, 1986) has given the objectives of teaching professional accounting as follows:

The comprehensive professional accounting education program thereby must develop in students an understanding of the nature and skills of logical reasoning; a capacity for creative thinking and problem-solving; an appreciation of ethical standards and conduct; and a facility with the methods of effective communication and interpersonal relations (AAA, 1986: 180).

In response to recent critics of accounting curriculum, the Accounting Education Change Commission (AECC, 1990) has concluded that accounting education must undergo reassessment and redirection to meet the future needs of the accounting profession. About the accounting curriculum objectives the Committee recommended that teaching of accounting should emphasise "learning to learn" while developing communication and interpersonal skills.

Obviously, Some of the curriculum objectives used in developed countries are culture-free and universally applicable. However, there may be some objectives or sub-objectives which are specific to an individual developing country. However, as done in developed countries, it is necessary for a developing country to define its curriculum objectives before designing a new accounting curriculum or revising the existing curriculum. This can help in developing and implementing a most suitable and effective accounting curriculum for the country.

In the case of Iran, although some objectives have been given in the accounting curriculum handbook they are very narrow in scope. For example, the curriculum development sub-committee for accounting has specified three objectives as follows:

- 1) The graduates should be familiar with the accounting systems in commercial, banking and industrial organisations;
- 2) They should know the accounting systems of government bodies and municipal organisations.
- 3) After gaining a substantial professional accounting experience they should be able to work in managerial positions or become chief auditors (CRC, 1983: 5 and 6).

However, even these narrowly set objectives do not seem to have been taken into consideration fully in determining the individual components of the curriculum. This may provide a reason, at least partly, for the criticism that current graduates are not capable enough to function as competent accountants.

As the business sector expands and becomes more complex in Iran, it is common to see that accounting graduates are called upon to advise on financial matters and serve in various capacities. Some of the services provided and activities performed by these organisations are quite unfamiliar to the accounting graduates. If this trend continues, the demand for adequately qualified accountants will increase, and they will need to have greater knowledge and understanding in many different aspects of business. For example, after the Islamic Revolution the economic development plans were gradually changed to include Islamic ideology. Similarly, the banking system was changed to be known as 'Islamic banking interest-free system'¹. Unfortunately, these changes have not been incorporated in the current accounting curriculum. Also, no retraining programme has been in operation within the accounting profession to make accountants familiar with new developments in economic activities after the Islamic Revolution.

¹There are many differences between Islamic banking and non-Islamic banking in terms of philosophy, functions, services and sources of funds, which lead to different management and accounting systems. In the Islamic banking system, there is no direct charge of interest on credit granted to customers. The types of credit granted include several methods such as *Qard-al-hasanah*, *Mozara'ah*, *Mosaqat*, *Jo'alah* (Hedayati, 1993: 5-9). This system of credit granting is based on the Islamic Principles included in the Law for Usury-Free Banking. This law was passed by the Iranian Parliament in 1983.

Higher education in accounting must react to these changes or at least play a more active role, embracing the future, adapting accordingly, and making it more relevant and useful to the needs of the country. The objectives must be extended to inculcate in students logical and creative thinking. The abilities for synthesising, evaluating and problem-solving can pave them the way for the personally satisfying and fruitful high standard of contribution to the society. Of course, in all efforts for establishment of improved objectives the co-operation of accounting profession is a necessity. It is hope that the newly established Society of Accountants could effectively participate in setting objectives and re-engineering of the accounting curriculum.

Findings of this study reveal that an important objective of accounting curriculum in Iran should be to prepare students for analysing financial data and presenting professional opinion. Thorough understanding of accounting concepts and techniques by students is necessary for achieving this objective. Since accounting graduates should be able to respond effectively to ever changing business conditions in the country, their learning process should not end with graduation from a university. Instead, it should be a process of “life-long learning”. In fact, the interviewees of this study advocated that the objective of life-long learning is universally applicable and must be adopted not only by accounting students but also by all accounting educators and practitioners in Iran.

7.3.2 Analysis of strengths of the current accounting curriculum in Iran

One of the strengths of the current accounting curriculum is that it includes a considerable number of non-accounting subjects such as Islamic Ethics, Islamic Morals, Islamic History, Persian Language, English Language, Physical Education, Economics, Business Management, Sociology and Psychology. Many authors over the years have advocated that accounting programmes of DCs should also include

subjects that help students in gaining an understanding of the political, cultural, and socio-economic environment.

Accounting is a product of its political, social, and economic environments and should be flexible enough to adapt to these differing influences. For accounting to do that requires professional accountants who understand their environment. To prepare such accountants, the educational system should be designed to ensure that its graduates have a broad and basic understanding of the political, social, and economic systems (Agami and Alkafaji 1987: p 161).

Another striking feature of the current accounting curriculum is the inclusion of ideological and religion-oriented subjects such as Islamic Morals, Islamic Ethics and Islamic Texts. These subjects aim at shaping students' world views, and philosophical and ideological foundations. They also increase the students' understanding of Islamic morals and help them develop their ethical personality. Thus, inclusion of such subjects in the accounting curriculum eventually helps in building and maintaining ethical behaviour of accountants. Since the 1980s the development and integration of ethics into the accounting curriculum have been drawn attention of many scholars such as Langenderfer and Rockness ,1989; Ponemon and Glazer, 1990; Chua and Mathews, 1990; Ahadiat and Mackie, 1993; Gray, Bebbington and McPhil, 1994; Leung and Cooper, 1994; Puxty, Sikka and Willmott, 1994²; and AICPA, 1992. The recent researches called for university level education in accounting and business to become more involved in ethics instruction. The AICPA suggested that accounting programme should include more ethics subjects and implement ethic instruction.

Fundamental to any profession is the obligation of its members to maintain the highest standard of ethics conduct. A sense of responsibility to society and to one's own profession should be acquired

²The *Accounting Education* (Vol. 3. No. 1, March 1994) dedicated the whole issue to "Developing and Integrating Ethics Education into the Accounting Curriculum". The editorial comment stated that "increased attention is being paid to ethical issues in business in general and accounting in particular".

very early in the educational process and can begin with the nurturing of moral and ethical values (AICPA, 1992: 3).

All the general subjects that include 11 semester hours of teaching in Islamic Morals are viewed by most respondents in the questionnaire survey as having some degree of importance. The results also reveal that practitioners believe that recent accounting graduates carry out their duties ethically. One contributing factor for this is the inclusion of Islamic morals and ethics as compulsory subjects in the accounting curriculum.

Through the inclusion of subjects such as Islamic History, Islamic Morals and Sociology in the curriculum the authorities have also aimed at developing the cultural knowledge of accounting students. Since accountants cannot operate in isolation they must be able to appreciate the cultural and social needs and attitudes of people they work with. As such, the inclusion of culture-based subjects in the accounting curriculum also adds to its strength.

Another strength of the current curriculum is that it has several economics-based subjects, including Economic Development, and Money and Banking. The programme provides 12 semester hours of these subjects. It has been specifically stated in the subject outlines that the teaching of these subjects should be based on the features of the Iranian economy. Through these subjects students learn the basic economic concepts and how the Iranian economy operates in the context of those concepts. An adequate understanding of the economic behaviour and development strategies of Iran is considered important for accountants. This is evident from the high importance ratings given to most of the economics-based subjects in the questionnaire.

Another area of concentration in the accounting curriculum is Quantitative Techniques. A good knowledge of quantitative techniques is essential for accountants

to be able to analyse a wide range of accounting and managerial problems and remedial measures. Through the study of Business Mathematics, Business Statistics and two Operational Research subjects provided in the accounting curriculum, students are expected to gain this knowledge. In this regard, the AICPA remarks that,

Quantitative methods are essential to the understanding and analysis of a wide range of business and accounting issues. From the study of mathematics and statistics, the prospective CPA should become familiar with the quantitative technique that apply to the solution of business and accounting problems, including those involving uncertainty (AICPA, 1992: 6).

One of the features that distinguishes the current accounting curriculum from the previous ones is the inclusion of Operations Research I and II and more mathematics and statistics subjects. It seems that the Accounting Sub-Committee was aware of the importance of application of mathematics and statistics in business. The results of our survey show that the subjects in the area of mathematics, statistics and quantitative techniques, which include five basic subjects in the current accounting curriculum, are considered to be highly important. The means of importance of these subjects are very close to the highest possible mean of 5 (ranged between 4.03 to 4.42).

One of the primary functions of accountants is to provide information to managers for decision making. Therefore, it is important for them to have at least a basic knowledge of business management so that their supportive services to management can be more relevant and effective. In this area, students are expected to gain an understanding of the fundamental concepts and processes in production, marketing, finance and general management. The current accounting curriculum seems to cover these aspects of management (except marketing) to a satisfactory level. Both accounting educators and practitioners have assigned moderately high ratings to these subjects.

According to several interviewees, however, some of the specified topics in these subjects are not covered by lecturers as expected. For example, although the subject outline for Current Issues in Managerial Finance states that the case study method should be adopted in teaching this subject to make it more relevant and applicable to local situations, due to lack of local case material and textbooks most lecturers tend to repeat concepts and techniques covered in Financial Management. The chairman of one accounting department pointed out that in his department this subject is devoted to deal with some of the uncovered topics in other accounting subjects.

7.3.3 Analysis of weaknesses in the current accounting curriculum in Iran

As expected at the beginning of this study, its results reveal that the existing undergraduate accounting curriculum suffers from a number of weaknesses. The excessive emphasis on financial accounting, the inadequate attention devoted to managerial accounting, the deficiencies in the area of computer applications in accounting, the lack of coverage in some important subject areas, the inappropriate distribution of teaching time among subjects, the inflexibility in the contents of the curriculum, the dropping of the internship programme, and the lack of revision in the curriculum seem to be the main weaknesses of this curriculum. The following section attempts to analyse these weaknesses in more detail.

7.3.3.1 Excessive emphasis on financial accounting

Almost two decades ago Enthoven (1977: 88) commented that accounting education of DCs was too financial accounting oriented and did not adequately gear itself to their economic conditions. His comment is still applicable to most of these countries including Iran. The major reason for this situation is the direct transfer of accounting technology from more developed countries to DCs without making appropriate modifications to suit their economic conditions.

The component of accounting subjects in the existing curriculum in Iran is about 50 per cent (69 of 142 total semester hours) of the total programme. These subjects consist of 26 semester hours of financial accounting, which is equal to 37.7 per cent of all accounting subjects and 18.3 per cent of all subjects in the undergraduate programme. Since the subject matter covered in several other subjects such as auditing, government accounting, tax accounting, current issues in accounting and accounting studies III and IV is also generally based on financial accounting, practically over 80 per cent of total semester hours of accounting seems to be devoted to financial accounting and financial accounting-based subjects. This shows that the existing undergraduate accounting curriculum in Iran places an excessive emphasis on financial accounting, which relates primarily to external reporting.

The weight given to financial accounting in Iran (37.7%) is even higher than that in the United States. According to the Beamer Report (1969), the weight given to financial accounting in a typical undergraduate accounting curriculum in the United States amounted to 31.6 per cent of all accounting subjects, which is about 6 per cent lower than that in Iran. On the other hand, the economy of the United States is heavily dependent upon the performance of large companies operating in the private sector. Timely reporting of financial information to existing and potential investors of these companies is essential for the smooth running of the US economic system. The primary purpose of financial accounting is to provide financial information to these external parties. It is also well known that accounting programmes in the United States are heavily influenced by professional accounting bodies who cater more to public accounting firms than to individual business firms. Public accounting firms and individual public accountants who operate in large numbers in the United States prefer to employ accounting graduates with a thorough knowledge of and skills in financial accounting and related areas because such knowledge and skills are necessary for the effective performance of their services to clients. Because of these reasons, it is obvious that accounting programmes in American universities devote a

high percentage of teaching time to financial accounting. In contrast, however, the Iranian economy is very much different from the American economy and does not depend so heavily on large-scale private companies and public accounting firms. Therefore, devoting such a high percentage of teaching time to financial accounting at the expense of other more important areas in accounting is unnecessary and inappropriate.

7.3.3.2 Inadequate attention to managerial accounting

The existing undergraduate accounting curriculum in Iran does not include any subject under the title of 'managerial accounting' even though it consists of three subjects under the titles of 'Cost Accounting I, II and III'. It is important to note that cost accounting usually deals with the collection, allocation and control of the costs of producing specific products and services (Hoggett and Edwards, 1990, p.11). By contrast, management accounting, while depending heavily on the function of cost accounting, has a wider scope and is concerned with the analysis, presentation and interpretation of financial, cost and allied operating data which assist management to carry out its planning, control and administration of duties effectively. However, some topics included in the three cost accounting subjects of the Iranian curriculum obviously cover certain aspects of managerial accounting. But, the subject matter covered in these three subjects is based more on traditional and technical aspects of costing and does not sufficiently cater to the needs of internal decision makers in organisations.

Another significant deficiency of the existing curriculum is the inadequate teaching time allocated to this area of accounting. Even when the three cost accounting subjects are taken together to represent the area of management accounting, the total teaching time allocated to management accounting is 9 semester hours, which is only about 13 per cent of the total 69 semester hours of accounting and only 6.3 per cent

of the total teaching time in all subjects. These two percentages in a typical undergraduate accounting programme in Australia, for example, are as high as about 27 per cent and 14 per cent respectively. Even though the weight given to managerial accounting in Australian accounting curricula is more than twice that in Iran, there exists a considerable amount of criticism that accounting education in Australia still devotes relatively inadequate attention to managerial accounting while concentrating heavily on financial accounting (Standish, 1983; Parker, 1990; Wijewardena and Cooray, 1995). Referring to the nature of undergraduate accounting education in Australia during 1982-83, the President of the Accounting Association of Australia and New Zealand made the following remark:

If it were accepted that, of the specified course categories, those in managerial accounting and control come closest to serving the objective of imparting basic skills of managerial decision making, it is noteworthy that this occupied only an overall 14% of teaching time. Some may wish to add business finance to the foregoing, which would increase the overall level to 26%. Clearly, a large proportion of what remains is devoted to teaching students the basic objectives and procedures of accounting and how to comply with requirements for corporate accountability, legal constraints and audit. All of these are probably agreed to be essential elements in an accounting education programme, though they are more of preventive and detective character than directly supporting the development of entrepreneurial skills (Standish, 1983, p.5).

The above criticism seems to be even more applicable to accounting education in Iran due to two basic reasons. The most obvious reason is that the attention given to management accounting in the existing Iranian curriculum is grossly inadequate. This fact was specifically mentioned by several respondents at the interviews conducted for this study. Secondly, financial accounting is less important to Iran because most Iranian business organisations are significantly different in many respects from their counterparts in Australia or the United States. They do not depend so heavily on speculative investors and there is no adequately developed share market to support corporate form of private business. Most of the business organisations are family-owned or government-owned. It is also well known that the level of productivity in

both government and private sector organisations in Iran is low. Providing timely and accurate financial information to internal decision makers is extremely important for running these organisations more efficiently and increasing their productivity. Therefore, management accounting, which is concerned with providing information to internal decision makers, is undoubtedly more important to Iran than financial accounting which is concerned more with catering to speculative investors and various players in share markets.

7.3.3.3 Deficiencies in the area of computer applications in accounting

The existing curriculum provides 7 semester hours of teaching in two subjects under the titles of Application of Computers in Business and Application of COBOL Programming in Accounting. Several deficiencies seem to be associated with this arrangement. One major deficiency lies in the subject matter covered particularly in Application of COBOL Programming in Accounting. Nearly three decades ago at the initial stage of development of computers it was believed that a knowledge of programming was essential for a person to use computers for recording and processing of accounting data. Consequently, most of the business schools particularly in the United States included COBOL, FORTRAN and other programming languages in their programmes of studies. However, in the recent past as a result of rapid developments taken place in the computer software industry the study of complicated programming languages became unnecessary for a person to use computers for data processing and numerous other operations. The software industry has developed many computer packages to suit any type of accounting operations. Therefore, what is done in accounting programmes even in developed countries is to teach the student how to use a computer software package in various types of accounting functions. As such, the subject of Application of COBOL Programming in Accounting included in the Iranian accounting curriculum is very much outdated. The inclusion of this subject in the curriculum is a clear evidence of the Anglo-American influence on accounting education in Iran.

Another noteworthy aspect of this deficiency is that the above two computer-based subjects are usually taught by the computer department's staff who do not have a knowledge of accounting. Moreover, most of the computer training time is devoted to computer programming and even in the examples used for demonstrating possible computer applications in business, accounting exercises are not used by these instructors. What they try to do is to teach the theory of programming using main frame computers (Pazouhi and Yazdi, 1994: 53). This may be one of the reasons for assigning a low degree of importance to Application of COBOL Programming by respondents to our questionnaire survey.

Both accounting educators and practitioners have emphasised the importance of imparting a knowledge of working with personal computers and using computer software for accounting functions. Many Iranian firms operating in both the government and private sectors in recent years have started using personal computers in their accounting operations. This recent development is likely to expand quite rapidly in the near future. For example, the results of a survey conducted recently in Iran show that 29 per cent of large firms (i.e. companies with more than 1000 million Rials, in sales) are already using personal computers for their accounting functions (Pazouhi and Yazdi, 1994: 56).

According to Pazouhi and Yazdi (1994: 50), one of the reasons for the reluctance of some firms to introduce computers for financial data processing is that their accountants and financial managers do not possess a knowledge of using computers for such purposes. Surprisingly, most of these accountants and financial managers are accounting graduates. This shows that the existing undergraduate accounting programme has not been able to produce accounting graduates with the necessary knowledge of computing. Referring to this deficiency of the Iranian undergraduate accounting curriculum, Novin and Saghafi suggested that:

Attempt should be made to incorporate an adequate number of courses covering topics in accounting information systems and application of microcomputers in accounting within the curriculum (1994: 137).

In the literature of accounting education, the importance of using computers for providing timely and accurate financial data motivated many studies in this area. All these studies pointed out that computers have become an integral part of modern accounting practice in the technological age. Every accounting graduates must be familiar with the relevant software. In a recent study, Heagy and Gallun have made the following remarks:

The results of this study suggest that universities should place the greatest emphasis on spreadsheets, followed by accounting system and word processing. In addition, students should be encouraged to learn how to type. Considerably less emphasis-just an overview- should be placed on database management systems, telecommunications, and system development. For both spreadsheets and database management systems, attention should be focused on the basic features rather than more complicated features such as macros and programming (Heagy and Gallun, 1994: 210).

7.3.3.4 Lack of coverage in some important subject areas

The list of subjects as well as the topics to be covered under each subject are given in the curriculum handbook issued by the Curriculum Sub-committee. It is evident from this publication that a few important topics and subjects are not included in the curriculum. Since the topics to be covered in each subject have been specified by the Curriculum Sub-committee, lecturers teaching these subjects do not go beyond those topics and look for new developments in their subject areas to incorporate them in their teaching programmes. In subject areas like accounting, management and computing, new concepts and techniques are being developed almost every day. Some of them may be useful to accountants for making their functions more efficient and less expensive. Therefore, it is important for accounting students to be aware of such useful and relevant new developments in their profession.

The main deficiency is found in the list of topics given under the subject titles of cost accounting. It does not include some of the newly developed concepts and techniques in costing and management accounting. For example, Activity Based Costing (ABC), Target Costing, Responsibility Accounting, Product Life Cycle Costing, Backflush Costing, Just-In-Time Inventory System and Total Quality Management are some of these new concepts and techniques. Some of these new concepts and techniques may not be immediately applicable to organisations in Iran. Yet, the understanding of these new developments can pave the way for Iranian accountants at least to look for new ways of increasing the effectiveness of their operations. On the other hand, business organisations even in developing countries including Iran cannot operate in isolation because they also face the increasing competitiveness in the global market. Thus, in order to operate successfully and achieve progress, they must be cost conscious, quality oriented, and innovative. Therefore, it is important for accounting graduates to be familiar with the relevant new developments taking place in their profession through out the world.

In addition to the above, a few other omissions in the current curriculum were pointed out by the respondents particularly at the interviews. One of them is the subject of Marketing. Prior to the Islamic Revolution, marketing was taught as one of the subjects in undergraduate accounting programmes. It is not included as a subject or topic in the current curriculum. Regarding the importance of a knowledge of marketing for accountants, the AICPA in the United States made the following observation:

Since it is often through marketing that an organization makes contact with current and perspective customers, CPAs should be familiar with how an organization combines its products and services with price, promotion, and distribution to meet the needs of the marketplace (AICPA, 1992: 8).

Public enterprises (Government-owned businesses) play a very significant role in the economy of Iran. Particularly after the Islamic Revolution, these enterprises became a dominant partner of the Iranian business sector. There are also many not-for-profit organisations operating in different sectors of the economy. Efficient operation of these organisations is vitally important for the country's economic and social development. These enterprises are considerably different from private business enterprises even in their accounting operations. These enterprises are often criticised for inefficiency, waste, high cost, and low productivity. The role that accountants can play in assisting management of these enterprises to minimise those weaknesses is enormous. However, no subject dealing with accounting in public enterprises is included in the current accounting curriculum. Exclusion of such a subject or at least some topics to cover the accounting aspect of this very important segment of the Iranian business sector is a serious deficiency in the current curriculum.

7.3.3.5 Inappropriate distribution of teaching time among subjects

Another fundamental weakness of the current curriculum is the inappropriate time allocation for the teaching of certain subjects. For some subjects which are extremely important for accounting students in Iran, no sufficient number of semester hours of instruction has been provided. On the other hand, the number of semester hours allocated to some other subjects seems to be relatively excessive.

For example, prior to the Islamic Revolution all accounting departments in Iranian universities had allocated over 6 semester hours for the teaching of English. This has been reduced to only 3 in the post-revolution curriculum. As pointed out by most interviewees, this is grossly inadequate. Since most of the library books and other reference material are available only in English a sufficient knowledge of English is necessary for students to use them effectively. Moreover, when accounting graduates are employed in various organisations, the knowledge of English is very important for them to perform their duties efficiently and with confidence. Also, if accounting

graduates proceed to higher education at master's or doctoral levels, the knowledge of English will become even more important.

As stated previously in this discussion, the number of semester hours allocated to Cost Accounting (Management Accounting) is only 9. One of the most important subject areas for Iranian accounting graduates is Management Accounting, and more hours of instruction should have been allocated to this subject. When compared with the inadequate time provided for this subject, the number of semester hours allocated to the financial accounting subjects (26 semester hours) is quite excessive.

Another improper allocation of teaching time relates to the two subjects given under the titles of Principles of Government Budgeting and Control, and Government Accounting and Auditing. The number of semester hours allocated to these two subjects is 7, which is relatively excessive. These two subjects can be combined into a single subject with less teaching hours without adversely affecting the usefulness of the subject.

For the two subjects of Sociology and Psychology, a total of six semester hours of teaching has been allocated. This seems relatively excessive. Also, may not be a necessity for providing a full subject on psychology for accounting students. Psychology does not seem to be as important as sociology for a person expecting a career in accounting. Therefore, these two subjects can be combined into a single subject with two parts as Sociology and Psychology, with a higher weight being given to Sociology.

73.3.6 Inflexibility in the contents of the curriculum

Before 1979, the accounting department of each Iranian university had the freedom to design and offer its own accounting curriculum. Since the Islamic Revolution, due to political and other reasons, undergraduate accounting education in Iran has been based

on a single curriculum designed by the state. Apart from some advantages of the new system, one major disadvantage, which deserves the attention of the Council for Higher Education Planning, is the restrictions and inflexibility associated with the contents of the curriculum.

University education in any disciplinary area should cater to the needs of students, which depend, to a large extent, on the career opportunities and the needs of employers. This is particularly true in the case of accounting students. Although accounting graduates produced by all universities on a single curriculum are expected to be able to meet, at least theoretically, the needs of all employers in the country, practically it is not possible because the needs of employers vary, depending on the nature of business, the type of industry or service, and the size and nature of operations. Accordingly, some employers expect accounting graduates with special knowledge and skills in certain specific areas of accounting. Under the existing system, it is not possible for a university accounting department to design alternative programmes of studies to suit the different needs of students and employers. Even within a single programme of study it is possible to offer additional subjects in the form of electives or specialisations for the purpose of catering to the different needs and interests of students and employers. Unfortunately, the existing curriculum does not allow universities to introduce such flexibility into their accounting programmes.

The inflexible nature of the current curriculum is disadvantageous to the academic community as well. Since academics are expected to follow a single curriculum, which has been imposed on them, they do not get the opportunity to gain the experience of curriculum design and course planning on the one hand. On the other

hand, they are not motivated to look for new developments in a subject area, because introducing new techniques, concepts or topics other than those listed under each of the subjects in the curriculum booklet is considered illegal under the existing system. Even though it is possible to submit a written request or proposal to the Curriculum Sub-committee of the CHEP asking for permission to add a new topic or make an amendment to an existing topic or subject, it is not practically possible to obtain the official approval. As a matter of fact, some heads of departments and senior academics interviewed by the researcher mentioned that they could not get even a reply for any such request made in the past. Students are also aware of this situation and some students who like to pass an examination with the minimum amount of studies may even complain to the authorities, if a lecturer attempts to introduce a new topic or concept in addition to those given in the curriculum handbook. As a matter of fact, the author of this thesis has had a similar experience a few years ago. It is common knowledge among academics in Iranian universities that this situation has created a considerable amount of frustration in the university academic and administrative community.

A more serious problem emanating from the above situation is that some of the concepts, techniques or topics used by lecturers in the teaching of subjects in the accounting curriculum naturally become outdated and obsolete. This is inevitable because lecturers are not expected to replace any outdated parts of the subject matter specified in the curriculum handbook by newer and more refined concepts, techniques or topics. Consequently, this situation has a serious adverse impact on the quality of accounting graduates and the morale of academics in Iran. This may be a reason at

least partly for the low level of performance shown by recent accounting graduates according to the assessment of the accounting practitioners reported in Table 6-24.

7.3.3.7 Dropping of the internship programme

Before the Islamic Revolution, every accounting student was required to complete a short-term internship programme in the accounting section of a private or public sector organisation before he or she could be admitted to the bachelor degree in accounting. Placement of students in various organisations for this type of training was organised by the university's accounting department. Although this programme had been similarly included in the post-revolution accounting curriculum as well, it was subsequently omitted from it due to some administrative difficulties. Respondents to the questionnaire survey and interviews considered this omission as another deficiency in the current curriculum.

Zamanian (1980: 90) in his dissertation on *An Appraisal of the Business Administration Program at the Collage of Business Tehran Iran* concluded that "A majority of graduates, specially accounting graduates, were in favour of some form of internship programme". Furthermore, according to a study by Novin and Saghafi (1994: 136), the internship programme in accounting is extremely useful for Iran. Moulkaraei (1991: 20) has proposed a compulsory internship programme for every accounting student in year two and above.

Obviously, if properly organised and implemented, an internship programme can contribute significantly to the students' better understanding of accounting functions

and business operations. Therefore, all respondents to the questionnaire survey of this study supported the reintroduction of the internship programme.

7.3.3.8 Lack of periodic revision of the curriculum

Another major weakness in the current system of accounting education is that the undergraduate accounting curriculum has remained unchanged for more than ten years. Even though the intention of the curriculum planners at the inception of this new programme was to revise the curriculum after a few years of its implementation. However, that intention has not been realised.

As pointed out by many scholars and educationists, if the accounting departments of universities want to produce graduates who can meet the ever changing needs of the accounting profession they must revise their curriculum from time to time (Elliot, 1992: 83 and Ainsworth and Plumlee, 1993: 127). Novin and Saghafi (1994: 137) and Molkarai (1991: 20) suggested that revision of accounting curricula is a continuing process and should be undertaken by joint committees of accounting educators and practitioners. If what the educators teach students is irrelevant or does not meet the needs of the practitioners and business organisations they work for, the efforts of educators and students can be a worthless exercise. Therefore, ideas of educators must be combined with those of practitioners in the process of curriculum revision. However, there can be differences in the views and approaches of these two groups. In this regard, Solomon (1972) remarked that

If both groups know where they differ in opinion, they could concentrate on reconciling these differences, with the result that there would be better communication regarding their needs. Accounting education can then be improved to provide the knowledge required for graduates to perform effectively in accounting practice (Solomon, 1972, p17).

When commenting on the weaknesses of the curriculum the interviewees emphasised the fact that if a proper system of revision was adopted some of the weaknesses could have been eliminated.

7.3.4 Duration of the undergraduate accounting programme

The current undergraduate accounting curriculum is based on a total of 142 semester hours of instruction, which is expected to be completed in eight semesters within a period of four years. Although the existing curriculum when it was first introduced in 1982 was a 5-year programme, after the first few years of its implementation, the duration was reduced from 5 to 4 years for pragmatic reasons. Since the shortage of skilled accounting personnel is a considerable impediment the development of economic organisations in the country, producing competent accounting graduates in the shortest possible time is important for Iran. However, because of the large volume of work needed to be completed by students in order to be competent graduates, both accounting educators and practitioners in our questionnaire survey believe that the currently used 4-year period is the most appropriate duration for the undergraduate accounting programme.

Most of the other developing and developed countries also follow a four-year duration for their undergraduate accounting degrees. For example, all American universities currently follow a 4-year programme, although the AICPA has recommended a 5-year programme for its new members by year 2000. In Australia, the duration of the undergraduate accounting programmes is only 3 years. However, the Mathews

the duration of the degree programme from 3 to 4 years (DEET, 1990, xxii). These experiences of other countries also support the 4-year duration of the Iranian accounting programme.

7.4 CONCLUSIONS

From the findings of this study as discussed in the above section, several conclusions have emerged. They are summarised as follows:

- (a) Despite several weaknesses in the existing undergraduate accounting curriculum, it deserves special commendation for one of its structural characteristics. Inclusion of a sufficient number of general and basic subjects to provide a broad-base education to accounting students is a major strength of this curriculum. These non-accounting subjects also include subjects such as Islamic Ethics, Islamic Morals and Islamic History, which have contributed to the development of cultural and ethical values of accounting students. This is evident from one of the findings of this study, which indicates that recent accounting graduates carry out their duties ethically. In terms of this aspect, the Iranian undergraduate accounting curriculum is superior to some of the similar curricula in other countries. For example, the Australian undergraduate accounting programmes have been criticised recently for not providing a broad-based general education (DEET, 1990, xxii).
- (b) In spite of the above desirable characteristic, the existing accounting curriculum suffers from a number of weaknesses. Since these weaknesses have already been discussed in sufficient detail in the previous section, their main aspects are presented below in the form of conclusions:

(1) A major weakness of this curriculum is the excessive emphasis placed on financial accounting at the expense of insufficient attention being devoted to managerial accounting. Placing such a heavy emphasis on financial accounting is unnecessary for Iran because the main purpose of financial accounting is to provide financial information for external parties such as existing and potential shareholders and lenders, and most of the Iranian business entities are family-owned and government-own businesses, which do not depend so heavily on such external parties.

(2) On the other hand, management accounting which is concerned with providing financial information to internal managers of all types of organisations for making sound decisions is more important for economic development of the country. Unfortunately, the existing curriculum has failed to provide a sufficient instructional basis for making students adequately equipped with the techniques and concepts of management accounting.

(3) Knowledge and skills in using computers for accounting purposes have become important for many Iranian organisations in recent years. The findings of this study reveal that the demand for knowledge and skills in this area is likely to increase rapidly in the near future. Nevertheless, the current accounting programme has not been able to equip students with the required knowledge and skills in computing. The main reason for this situation can be attributable to the inappropriate and out-dated teaching package and the inadequate instructional hours provided in the curriculum.

(4) The existing accounting curriculum has also failed to include in its teaching programme some important subjects and topics. The restrictions and rigidity associated with this curriculum do not motivate academics to look for newer and more useful topics, concepts, techniques in their subjects and incorporate them in

the teaching programmes. This has a severe adverse effect on the quality of accounting graduates.

(5) The dropping of the internship programme from the curriculum seems to have weakened the practical knowledge of students. A properly organised internship programme can provide students with some first-hand experience in business operations and accounting functions. Therefore, despite the administrative difficulties involved, it is worthwhile to reintroduce this programme.

(6) The lack of periodic revision is a major cause of several weaknesses in this curriculum. In the absence of any serious revision during the entire 14-year period of its existence, it is reasonable to believe that several elements of the curriculum such as subjects, topics, concepts and techniques that have been determined over one and a half decades ago have become considerably out-dated and less important.

(7) The inappropriate allocation of teaching time for certain subjects is another fundamental weakness in this curriculum. As a consequence of this, some important subjects have not been covered adequately. For example, the subject area of management accounting has not received sufficient attention. As discussed in detail in the previous section, this weakness has caused adverse effect on the effectiveness of accounting graduates.

(8) The restrictions and inflexibility associated with the current accounting curriculum reduce the effectiveness and employability of accounting graduates on the one hand, while undermining the creativeness, morale and productivity of accounting educators on the other. This is because these restrictions do not permit accounting educators to design and offer different programmes to meet the

different needs of employers or to make any changes to the existing subjects and topics even if such changes are most desirable.

(9) From the findings of this study, it is seen that the current undergraduate accounting curriculum has not been able to achieve its intended objectives to a satisfactory level due to the various weaknesses discussed in this thesis. Therefore, there is an urgent need for revising the curriculum to make it a more useful and effective tool for producing accounting graduates who are able to contribute fully to the economic development of Iran.

(10) Most of the weaknesses and problems associated with this curriculum seem to have arisen from the imposition of a centrally designed single curriculum on all universities in the country. Since the disadvantages of this system are unbearably high, it is appropriate to change it to a decentralised multi-curricula system.

7.5 RECOMMENDATIONS FOR IMPROVING THE ACCOUNTING CURRICULUM IN IRAN

On the basis of the findings and conclusions of this study, and the views and suggestions of many accounting educators and practitioners as well as the author's own experience with and understanding of the Iranian accounting education system the following recommendations can be presented for improving the existing undergraduate accounting curriculum in Iran:

- (a) Since most of the weaknesses and problems associated with this curriculum seem to have been caused by the imposition of a centrally designed single curriculum on all universities in the country, it is recommended that the Council for Higher Education Planning change this system to allow individual universities to design

and offer their own programmes. However, if necessary, the CHEP may still retain its power to determine the overall policy framework within which each individual university can design and implement its own curriculum.

(b) If, however, the CHEP is not agreeable to change the current system as recommended above, it is essential at least to allow the accounting department in each university to introduce necessary changes from time to time to the subjects or topics included in the curriculum with the approval obtained only from its own university senate and council.

(c) Steps must be taken as early as possible to revise the existing curriculum as suggested below:

(1) The emphasis of the curriculum should be shifted from financial accounting to management accounting. This can be achieved by reducing the teaching time allocated to Financial Accounting and increasing it for Management Accounting. The subject title should be changed from 'Cost Accounting' to 'Management Accounting' with new concepts and techniques being added to the list of topics given in the curriculum handbook.

(2) The currently offered subject of COBOL Programming in Accounting should be replaced by spreadsheets and appropriate accounting software packages. Also, the time devoted to this subject must be increased. In addition, computer exercises must be included as an integral part of accounting assignments of students. (To carry out this programme effectively, universities must expand their hardware facilities by installing personal computers in their laboratories.)

(3) Internship programme must be re-introduced as a compulsory requirement of the degree programme. For the successful implementation of this programme, steps must be taken to establish and maintain close co-operation between universities and business organisations.

(4) The group of subjects in mathematics, statistics, and operations research should be revised and rearranged to avoid duplication and to provide adequate instructional support to students for acquiring sufficient knowledge and skills in quantitative techniques.

(5) The curriculum should provide for students to select a sufficient number of elective subjects. This will allow students to select at least a few subjects in accordance with their own interests and employment needs.

A revised model of the existing curriculum after incorporating the structural changes suggested by the researcher is presented in Appendix 7-1. It is also recommended that this model curriculum be further reviewed by a committee consisting of both experienced academics and accounting practitioners with serious attention being given to the problems discussed and the remedial measures suggested in this thesis. In addition, the approved accounting curriculum and its syllabi must be periodically reviewed and necessary adjustments must be made to make them up-to-date and relevant to the changes taken place in the accounting discipline and the economic environment of the country.

Appendices

Appendix 4-1:

Master of Accounting degree in Iran.

	Semester Hours	
Core Subjects:		
Accounting Theory I	3	
Accounting Theory II	3	
Managerial Accounting	3	
Advanced Government Accounting	3	
Advanced Auditing	3	
Current problems in Accounting	3	
Decision-Making in Finance Issues	3	
Statistical Analysis	2	23
Research Subjects:		
Seminar in Accounting	2	
Thesis	4	6
Elective Subjects (9 semester hours):		
Current Issues in Accounting	3	
Managerial Economics	3	
Advanced Operations Research	3	
Accounting Systems	3	
Accounting Information Systems	3	9
Total		38

Source: Source: *The Graduate Accounting Subjects Description*, (1985) The Cultural Revolution Council, Social Science Group, The Administrative and Management Science Committee, Tehran, Iran.

Appendix 5-1:

Questionnaire

Section 1: Personal Information: (applicable to accounting educators only)

1- Academic:

	Bachelor	Master	PhD
Field of study			
Country of degree awarded			
Year of graduation			

2- Teaching Experience (accounting subjects) Years.

3- University Title (i.e., Lecturer, Assistant Professors, Associate Professor and Professors)

4- Professional Accounting Experience Years or [] No Experience

Section 2: (applicable to both educators and practitioners)

The current accounting curriculum which is approved by the High Council of Cultural Revolution is presented in three parts as Accounting, Basic and General subjects in this section.

Part 1:

The accounting subjects with related outline and the number of credit hours are presented in this part. Your views on the importance of these accounting subjects in the accounting curriculum considering business and economic conditions of the country are sought. You are kindly requested to indicate the importance you attach to each subject by circling the appropriate number according to the following scale:

Not Important

12345

Extremely Important

1-Principles of Accounting I		4 Cr	1	2	3	4	5
This subject is an introduction to accounting, the profession, and basic accounting skills that enable students to understand financial information and the importance of accounting in decision making. It includes:							
1	Bookkeeping and account keeping	6	Debits and liabilities				
2	Accounting cycle	7	Inventory				
3	Completing the accounting cycle	8	Prepaid and accruals				
4	Accounting for sales and cash transactions	9	Fixed assets and intangible assets				
5	Annual reports						

2-Principles of Accounting II		4 Cr	1	2	3	4	5
This subject is a continuation of Accounting Principles I. It includes:							
1	Systems and control	5	Partnership: establishment, profit distribution and insolvency				
2	Payroll accounting	6	Corporation: organisation and operation				
3	Computing machines in accounting	7	Corporation: owners' equity, revenues and share dividends				
4	Accounting principles	8	Corporation: long term liabilities and investments				

3-Principles of Accounting III		4 Cr	1	2	3	4	5
This subject is a continuation of Accounting Principles II. It includes:							
1	Accounting for branches and departments	6	Management special reports and special analysis				
2	Cost-Volume-profit analysis	7	Financial changes statements				
3	Accounting for manufacturing operations and job order costing system	8	Consolidated financial statements and other reports				
4	Accounting for process cost system	9	Financial statements analysis				
5	Standard costing system and budgeting						

Do you think that any topic or topics which are not necessary for an undergraduate accounting program are included in the above accounting subjects (i.e. Accounting I, II, & III) and should be dropped when designing a new curriculum? If so please indicate them below:

Unnecessary topics Principles of Accounting I	Unnecessary topics Principles of Accounting II	Unnecessary topics Principles of Accounting III

Do you think that any topic or topics which are necessary for an undergraduate accounting program are not included in the above accounting subjects (i.e. Accounting I, II, & III)? If so please indicate them below:

Necessary topics Principles of Accounting I	Necessary topics Principles of Accounting II	Necessary topics Principles of Accounting III

4-Intermediate Accounting I	4 Cr	1	2	3	4	5
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This subject deals with the topics covered in Accounting Principles I, II, and III at a higher level to increase the ability of students in accounting specialised problem solving. It includes:

- | | |
|---|---|
| 1 Development of accounting theory and practice | 8 Inventory: cost basis, planning and control |
| 2 Accounting periodic procedures | 9 Inventory: other valuation methods |
| 3 The income statement: a report on operating performance | 10 Inventory: estimating techniques |
| 4 The balance sheet: a report on financial position | 11 Fixed assets: acquisitions and retirements |
| 5 Cash and secondary cash resources | 12 Fixed assets: depreciation and depletion |
| 6 Receivable | 13 Intangible assets |
| 7 Current liabilities | |

5-Intermediate Accounting II	4 Cr	1	2	3	4	5
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This subject is a continuation of Intermediate Accounting I. It includes:

- | | |
|---|---|
| 1 Corporations: paid-in capital | 6 Accounting changes: statements from incomplete records |
| 2 Warrants and stock rights, management qualifying stock options and convertible securities | 7 Statement of changes in financial position |
| 3 Retained earnings and dividends | 8 Financial statement analysis |
| 4 Bonds payable | 9 Accounting for changes in price level and fair market value |
| 5 Long-term investments in corporate securities | |

6-Advanced Accounting I	3 Cr	1	2	3	4	5
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This subject emphasis the theoretical aspects of accounting in business corporations. It includes:

- | | |
|---|---|
| 1 Partnership-formation and operation | 4 Business combinations |
| 2 Partnership-liquidation and practical firms | 5 Department reports, short-term statements and predication |
| 3 Accounting for branch operations | 6 Instalment sales and consignment |

7-Advanced Accounting II	3 Cr	1	2	3	4	5
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This subject is a continuation of Advanced Accounting I. It includes:

- | | | | |
|---|--|---|--|
| 1 | Consolidate financial statements: on date of purchase business combination | 5 | Financial reporting in multinational enterprises |
| 2 | Consolidate financial statements: subsequent to date of business combination | 6 | Bankruptcy and reorganisation in corporations |
| 3 | Consolidate financial statements: inter company profits and loss | 7 | Current value: concepts and application |
| 4 | Consolidate financial statements: special problems | | |

Do you think that any topic or topics which are not necessary for an undergraduate accounting program are included in the above accounting subjects (i.e. Intermediate Accounting I&II and Advanced Accounting I& II) and should be dropped when designing a new curriculum? If so please indicate them below:

Unnecessary topics Intermediate Acc. I	Unnecessary topics Intermediate Acc. II	Unnecessary topics Advanced Acc. I	Unnecessary topics Advanced Acc. II

Do you think that any topic or topics which are necessary for an undergraduate accounting program are not included in the above accounting subjects (i.e. Intermediate Accounting I&II and Advanced Accounting I& II)? If so please indicate them below:

Necessary topics Intermediate Acc. I	Necessary topics Intermediate Acc. II	Necessary topics Advanced Acc. I	Necessary topics Advanced Acc. II

8-Cost Accounting I	3 Cr	1	2	3	4	5
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This subject covers the use of accounting information for managerial planning and control in manufacturing firms. It includes:

- | | | | |
|---|--|---|---|
| 1 | Basic concepts of cost and expenses in cost accounting | 5 | Material and labour |
| 2 | Manufacturing chart of accounts and cost of goods manufactured | 6 | Indirect costs (1): budgeting and allocation of indirect costs |
| 3 | Determining unit costs (1): Job order costing system and process cost system | 8 | Indirect costs (2): recording indirect costs, recording and analysis of variance between actual and allocated costs |
| 4 | Determining unit cost (2): work in process | | |

9-Cost Accounting II	3 Cr	1	2	3	4	5
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This subject is a continuation of Cost Accounting I. It includes:

- | | | | |
|---|--|---|--|
| 1 | Standard costing (1): concepts and analysis of variances | 5 | Costs: Classification and analysis |
| 2 | Standard costing (2): accounting for standard costs | 6 | Cost-volume-profit analysis (1): concepts and limitations |
| 3 | Joint production cost | 7 | Cost-volume-profit analysis (2): changes in price and volume |
| 4 | Direct costing | | |

10-Cost Accounting III	3 Cr	1	2	3	4	5
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This subject is a continuation of Cost Accounting II. It includes:

- | | | | |
|---|---|---|---|
| 1 | Comprehensive budgeting in manufacturing firms | 4 | analysis of distributing expenses; marginal income and its managerial usage |
| 2 | Responsibility accounting; managerial reports | 5 | Expenses which is related to decision making |
| 3 | Profit performance measurements; analysis of gross profit; return on investment | 6 | Planning for capital expenditure |

Do you think that any topic or topics which are not necessary for an undergraduate accounting program are included in the above accounting subjects (i.e. Cost Accounting I, II, & III) and should be dropped when designing a new curriculum? If so please indicate them below:

Unnecessary topics Cost Accounting I	Unnecessary topics Cost Accounting II	Unnecessary topics Cost Accounting III

Do you think that any topic or topics which are necessary for an undergraduate accounting program are not included in the above accounting subjects (i.e. Cost Accounting I, II, & III)? If so please indicate them below:

Necessary topics Cost Accounting I	Necessary topics Cost Accounting II	Necessary topics Cost Accounting III

11-Auditing I	3 Cr	1	2	3	4	5
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In this subject students become familiar with the concepts of auditing and auditing profession. It includes:

- | | | | |
|---|---|----|--|
| 1 | The role of auditor in the country economic development program | 6 | The audit of electronic data processing systems |
| 2 | Professional ethics | 7 | Audit evidence-what kind and how much |
| 3 | Legal liabilities of auditors | 8 | Statistical sampling |
| 4 | The auditing profession | 9 | Auditing working papers, quality control in auditing |
| 5 | Internal control | 10 | Beginning the audit: examination of general records |

12-Auditing II	3 Cr	1	2	3	4	5
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This subject is a continuation of Auditing I and emphasis the auditing techniques. It includes:

- | | | | |
|---|---|----|--|
| 1 | Auditing of cash and bank accounts | 6 | Auditing of accounts payable and other liabilities |
| 2 | Auditing of stock, bonds and income from investments | 7 | Auditing of interest-bearing debt and interest expense, disclosure of contingent liabilities and commitments |
| 3 | Auditing of accounts and notes receivable and sales transactions | 8 | Auditing of the owner equity |
| 4 | Auditing of inventories and cost of good sold | 9 | Further verification of revenue and expenses |
| 5 | Auditing of fixed assets: depreciation and depletion in natural resources | 10 | Audit reports |

13-Managerial Finance	4 Cr	1	2	3	4	5
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This subject covers the tools and techniques used in managerial finance. It includes:

- | | | | |
|---|---|----|--|
| 1 | Introduction to managerial finance | 6 | Investment decision under uncertainty and certainty conditions |
| 2 | Financial report analysis in the light of financial ratios | 7 | Working capital management financing |
| 3 | Usage of break-even points analysis for profit and volume forecasting | 8 | Financial structure and the use of leverage |
| 4 | Financial forecasting: budgeting | 9 | Dividend policy and internal financing |
| 5 | Role of interest rate in financial decisions | 10 | The capital expenditure |

Do you think that any topic or topics which are not necessary for an undergraduate accounting program are included in the above accounting subjects (i.e. Auditing I&II and Financial Management) and should be dropped when designing a new curriculum? If so please indicate them below:

Unnecessary topics Auditing I	Unnecessary topics Auditing II	Unnecessary topics Financial Management

Do you think that any topic or topics which are necessary for an undergraduate accounting program are not included in the above accounting subjects (i.e. Auditing I&II and Financial Management)? If so please indicate them below:

Necessary topics Auditing I	Necessary topics Auditing II	Necessary topics Financial Management

14-Tax Accounting	2 Cr	1	2	3	4	5
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This subject covers Tax Laws applicable to individuals and businesses. Accounting practices for different types of taxes including tax computations. It includes:

- | | | | |
|---|--|---|------------------------------------|
| 1 | Taxes and accounting | 5 | Tax penalties and late tax charges |
| 2 | Taxes computation for salary, real estate income, interest, inheritance, extraordinary revenue and corporate | 6 | Bookkeeping for tax purposes |
| 3 | Tax deductible expenses and depreciations | 7 | Tax allowances and exemption |
| 4 | Tax evidence | 8 | Tax declaration preparation |

15-Government Accounting and Auditing	4 Cr	1	2	3	4	5
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This subject covers the theory and practice of governmental accounting. It includes:

- | | | | |
|---|--|----|--|
| 1 | The government organisational chart, bookkeeping requirements and accounting documents | 8 | Special accounts: statutory limitations, recording, balancing and end year closing |
| 2 | The government budgeting accounts, accounting for revenue and expenses and end year closing the accounts | 9 | Superannuated and pensioned accounts: financial resources and matching expenses and payment procedures |
| 3 | The Law of the Courts of Accounts and government entities financial transactions | 10 | Accounting for deposits |
| 4 | Program budgeting: preparation and procedures | 11 | Financial reporting for treasury officers and province Department of Finance |
| 5 | The central and province treasury officers' financial activities | 12 | Closing and posting government accounts at the end of the year |
| 6 | The treasury officers and province Department of Finance chart of accounts | 13 | Annual financial reports for government units at the end of the fiscal year |
| 7 | The nature of general revenue and expenses in contrast to special revenue and expenses | | |

16-Principles of Government Budgeting and Control	3 Cr	1	2	3	4	5
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In this subject students become familiar with the government budgeting system and the role of fiscal policy. It includes:

- | | | | |
|---|---|---|---|
| 1 | Budgeting: principles and concepts | 6 | Financial policies and the role of budgeting |
| 2 | Budgeting procedures | 7 | Budgeting methods |
| 3 | Procedures of budgeting and controlling | 8 | Budgeting and accounting and their role in management improvement |
| 4 | Role of budgeting in economic planning | 9 | Evolution of budgeting in Iran |
| 5 | Fundamental barriers in budgeting process of the developing countries | | |

Do you think that any topic or topics which are not necessary for an undergraduate accounting program are included in the above accounting subjects (i.e. Governmental Accounting, Tax Accounting, and Principles of Government Budgeting and Control) and should be dropped when designing a new curriculum? If so please indicate them below:

Unnecessary topics Governmental Acc.	Unnecessary topics Tax Accounting	Unnecessary topics Government Budgeting

Do you think that any topic or topics which are necessary for an undergraduate accounting program are not included in the above accounting subjects (i.e. Governmental Accounting, Tax Accounting, and Principles of Government Budgeting and Control)? If so please indicate them below:

Necessary topics Governmental Acc.	Necessary topics Tax Accounting II	Necessary topics Government Budgeting

17-Application of COBOL in Accounting	3 Cr	1	2	3	4	5
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This subject covers the COBOL programming in accounting. It includes:

- | | | | |
|---|--|---|--|
| 1 | Importance of data processing | 5 | Fundamental of COBOL programming |
| 2 | Definition and structure of the computer files | 6 | COBOL reserved word list |
| 3 | Introduction to COBOL | 7 | COBOL programming |
| 4 | Organisation of a COBOL program | 8 | Usage of computer for decrease the expenses and increasing the revenue |

18-International Finance	3 Cr	1	2	3	4	5
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This subject introduces students to international trade. It includes:

- | | | | |
|---|---|---|---|
| 1 | Study of the foreign payments concepts | 5 | Stabilised exchange rate and adjustable rates |
| 2 | Balance of payments and foreign exchanges market | 6 | Gold standard monetary system and other exchange rates |
| 3 | Study of the international payments regulations and its adjustments | 7 | Analysis of foreign exchange fluctuations and international currency issues |
| 4 | Floating foreign currency rates | 8 | Domestic monetary system and international transaction (International Market Found) |

Do you think that any topic or topics which are not necessary for an undergraduate accounting program are included in the above accounting subjects (i.e. Application of COBOL in Accounting and International Finance) and should be dropped when designing a new curriculum? If so please indicate them below:

Unnecessary topics Application of COBOL in Accounting	Unnecessary topics International Finance

Do you think that any topic or topics which are necessary for an undergraduate accounting program are not included in the above accounting subjects (i.e. Application of COBOL in Accounting and International Finance)? If so please indicate them below:

Necessary topics Application of COBOL in Accounting	Necessary topics International Finance

19-Current Issues in Financial Management 3 Cr	1	2	3	4	5
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This subject is designed to increase the ability of students to use the financial theories and techniques to analyse actual business problems on the basis of case studies.

20-Current Issues in Accounting 2 Cr	1	2	3	4	5
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This subject is designed to increase the ability of students to use the accounting theories and techniques to analyse actual business problems on the basis of case studies.

21-Accounting Studies (in English) I & II 4 Cr	1	2	3	4	5
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This is a review subject of accounting subjects covered in Farsi. Also it introduces students to the accounting literature in the English language.

Concerning the accounting core subjects (all 22 subjects) in the accounting curriculum approved by the High Council of Cultural Revolution given above, please answer the following questions:

1. What additional accounting subjects do you think necessary to be included in the above curriculum? Please list them below:

Necessary subjects

2. Do you think any subjects which are not necessary for an undergraduate accounting program are included in the existing curriculum and should be dropped when designing a new curriculum? If so please indicate them below:

Unnecessary subjects

6-Money and Banking	3 Cr	1	2	3	4	5
7-Basic Mathematics and Introduction to Statistics	3 Cr					
8-Application of Mathematics in Business	3 Cr	1	2	3	4	5
9-Application of Statistics in Business and Economics	4 Cr	1	2	3	4	5
10-Application of Computer in Management	4 Cr	1	2	3	4	5
11-Operations Research I and II	6 Cr	1	2	3	4	5
12-Governmental Policy and Finance	3 Cr	1	2	3	4	5
13-Business Law	3 Cr	1	2	3	4	5
14-Production Management	3 Cr	1	2	3	4	5
15-Principle of Management	3 Cr	1	2	3	4	5
16-Research Methods	3 Cr	1	2	3	4	5

Concerning the basic subjects in the accounting curriculum approved by the High Council of Cultural Revolution given above, please answer the following questions:

1. What other basic subjects (subjects) do you think necessary to be included in the above curriculum? Please list them below:

Necessary subjects)

2. Do you think that any subjects which are not necessary for an undergraduate accounting program are included in the existing curriculum and should be dropped when designing a new curriculum? If so please indicate them below:

Unnecessary subjects)

Part 3:

The general subjects in the current accounting curriculum approved by the High Council of Cultural Revolution with the number of credit hours for each subject are presented in this part. Your views on the importance of these subjects in an accounting curriculum for the Iranian universities are sought. You are kindly requested

to indicate the importance you attach to each subject by circling the appropriate number according to the following scale:

Not Important Extremely Important

1 2 3 4 5

1-Persian Language	4 Cr	1	2	3	4	5
2-English Language	4 Cr	1	2	3	4	5
3-Physical Education	2 Cr	1	2	3	4	5
4-Islamic ethics, moral, and history subjects	12* Cr	1	2	3	4	5

* In order to save space and minimise complexity four separate religion-based subjects under the titles of Islamic Moral, Islamic History, Islamic Revolution Roots and Islamic Ethics, are presented under one title with 12 semester hours.

Section 3: (applicable to both educators and practitioners)

1. Your views on the ways to improve the quality of accounting education in Iranian universities is sought. You are kindly requested to indicate the importance you attach to each of the following by circling the appropriate number on the scale:

Not Important Extremely Important

1 2 3 4 5

1. Increase domestic periodicals in accounting and auditing	1	2	3	4	5
2. Increase the number of accounting periodicals subscribed by university libraries	1	2	3	4	5
3. Publish more accounting books in Persian	1	2	3	4	5
4. Increase the number of foreign textbooks in accounting in university libraries.	1	2	3	4	5
5. Hold more accounting seminars	1	2	3	4	5
6. Provide more research facilities for academic and reduce their formal lecturing time	1	2	3	4	5
7. Invite professional accountants to lecture in universities (on visiting basis)	1	2	3	4	5
8. Require university accounting teachers to acquire some practical experience in industry and commerce	1	2	3	4	5
9. Others, please specify:					

2. In your opinion, what are the major objectives of accounting education should be. Please rank them in order of importance in the following table (the most important =1):

	Rank 1, 2, 3, 4, & 5
--	----------------------

To enable students to analyse financial data and present professional opinion	
To enable students to know the accounting concepts and principles and use them in various business situations.	
To prepare students for professional accounting jobs and business leadership.	
To enable students to do research in accounting.	
Other, please specify	

3. What is your opinion about the on-the job training (internship) in the accounting curriculum?

- ☐ Must be included in the accounting curriculum
☐ No opinion
☐ Not necessary to be included in the accounting curriculum

4. In your opinion what should be the proper duration of an undergraduate accounting degree program?

- ☐ Three years
☐ Three years and month of internship in accounting
☐ Four years
☐ Four years and month of internship in accounting
☐ Five years
☐ Five years and month of internship in accounting

5. If you have further suggestion or recommendation for enhancement of accounting curriculum in the country please list them here.

Section 4: (applicable to accounting practitioners only)

1. Your views on the following two issues are sought:

- a. Please indicate your assessment of performance of the accounting graduates who have been working under your supervision in recent years in the first three columns of the following table.
- b. Please also indicate your opinion about the desirable characteristics of accounting graduates in the second three columns of the table.

Characteristics	Current graduates' performance			Desirable characteristics		
	Low	Moderate	High	Low	Moderate	High
1. Use of accounting knowledge in actual practice						
2. Accuracy and speed of work						
3. Quality of work						
4. Use of computers in accounting						
5. Participating in decision-making						
6. Creativity in activities performance						
9. Carrying out duties ethically						

2. Do you think that the recent accounting graduates have acquired the knowledge and skills needed for starting an accounting career in an organisation?

- ☐ Yes
- ☐ No

3. If your response to the above question is "no", what could be the reasons? Please rank in order of importance in the following table (the most important =1):

	Rank 1, 2, 3, & 4
Poor accounting curriculum	
Lack of accounting text books in Farsi	
Lack of qualified accounting academics	
Insufficient internship (practical training) for accounting students	
Poor quality of university accounting education	
Others, please specify.	

بسمه تعالی

بخش اول = اطلاعات شخصی پاسخ دهنده

۱- تحصیلات :

دکتری	فوق لیانس	لیانس	
			رشته تحصیلی
			کشور محل اخذ مدرک
			سال اخذ مدرک

۲- تجربه آموزشی _____ سال

۳- رتبه علمی _____ (یکی از مراتب مربی، استاد یار، دانشیار و یا استاد)

۴- تجربه کار عملی حسابداری _____ سال [] بدون سابقه

بسمه تعالی

بخش اول = اطلاعات شخصی پاسخ دهنده

۱- تحصیلات :

دکتری	فوق لیسانس	لیسانس	
			رشته تحصیلی
			کشور محل اخذ مدرک
			سال اخذ مدرک

۲- تجربه کار عملی حسابداری — سال

۳- تجربه آموزشی — سال (تدریس دروس حسابداری)

۴- بیشترین وقت کاری خود را در کدام بخش می گذرانید

[] بخش دولتی [] بخش خصوصی [] بخش وابسته به دولت

۵- زمینه اصلی کار شما در چه رشته حسابداری طبقه می گردد

[] حسابداری بازرگانی [] حسابداری صنعتی [] حسابداری دولتی و موسسات غیرانتفاعی [] حسابرسی

۶- آیا در سازمان شما از کامپیوتر استفاده می شود

[] بلی [] از نوع شخصی PC [] از کامپیوترهای بزرگ Main Frame

[] خیر

۷- در صورتیکه پاسخ شما به سوال بالا بلی باشد، آیا کامپیوتر در انجام امور سازمان شما تغییری ایجاد نموده است

[] بلی خیلی زیاد

[] بلی

[] اطلاع ندارم

[] خیر

[] خیلی کم

بخش دوم

در این بخش دروس عمومی ، پایه ، اصلی و تخصصی برنامه آموزش کارشناسی حسابداری مصوب ستاد انقلاب فرهنگی در سه قسمت ؛ دروس اصلی و تخصصی حسابداری ، دروس پایه و دروس عمومی ارائه شده اند. در این تحقیق اهمیت دروس از این دیدگاه که هدف برنامه مذکور تربیت نیروی انسانی کارآمد برای تصدی مشاغل حسابداری و پاسخگویی به نیازهای اطلاعات مالی در برنامه ریزیهای اقتصادی در محیط اقتصادی-اجتماعی ایران است، مورد بررسی و تجزیه و تحلیل قرار می دهد.

قسمت اول - دروس اصلی و تخصصی برنامه آموزش کارشناسی رشته حسابداری

در این قسمت دروس اصلی و تخصصی برنامه مصوب آموزش حسابداری با توضیح مختصر اهداف و سرفصل های (syllabus) هر درس مطرح شده اند. از آنجا که اهداف بیان شده در برنامه مصوب دوره کارشناسی حسابداری کلی بوده و با اهداف دروس حسابداری سایر کشورها مشابه می باشند، لذا برای منظورهای این تحقیق ثابت فرض شده اند. لطفاً با توجه به سرفصل های هر درس نظر خودتان را نسبت به درجه اهمیت آن درس (از نقطه نظر اهمیت آن در فراهم آوری دانش لازم برای پاسخگویی به نیازهای جامعه به اطلاعات حسابداری) در مجموعه دروس برنامه آموزش کارشناسی حسابداری با گذاشتن علامت (+) در جدول مقابل آن بیان فرمائید. بالاترین درجه اهمیت را ۵ و پائین ترین درجه اهمیت را یک انتخاب فرمائید.

کم اهمیت ترین درس با اهمیت ترین درس

۱	۲	۳	۴	۵
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در این بخش همچنین پس از طرح چند درس تخصصی حسابداری با ماهیت تقریباً مشابه دو سؤال در مورد کمبودها و اضافات احتمالی در سرفصل های آن دروس ارائه شده اند. لطفاً سرفصل یا سرفصل هایی را که به نظر شما باید اضافه یا حذف شوند را در محل های تعیین شده بیان فرمائید.

۱- اصول حسابداری (۱)	۴ واحد	درجه اهمیت	۱	۲	۳	۴	۵
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هدف دروس حسابداری مالی آشنائی با مفاهیم حسابداری و نقش آن در تهیه اطلاعات مالی مورد نیاز تصمیم گیری در واحدهای اقتصادی و آموزش تکنیک های اولیه جمع آوری و ثبت اطلاعات مالی می باشد و سرفصل های درس حسابداری (۱) عبارتند از :

- ۱- اصول و طرزعمل حسابداری
- ۲- مراحل مختلف حسابداری
- ۳- تکمیل مراحل مختلف حسابداری
- ۴- حسابداری کالا و معاملات صندوق
- ۵- تهیه گزارشهای دوره ای
- ۶- دیون و مطالبات
- ۷- موجودی کالا
- ۸- پیش پرداختهای هزینه ، پیش دریافتهای درآمد و هزینه ها
- ۹- دارائی های ثابت و دارائی های غیر مادی

۲- اصول حسابداری (۲)	۴ واحد	درجه اهمیت	۱	۲	۳	۴	۵
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مباحث درس حسابداری (۲) دنباله مطالب درس اصول حسابداری (۱) می باشد و سرفصل های آن عبارتند از :

- ۱- سیستم ها و کنترل ها
- ۲- سیستم های حقوق و دستمزد
- ۳- تنظیم سیستم ها و ماشینهای محاسب الکترونیکی
- ۴- اصول و مفاهیم حسابداری
- ۵- شرکتهای تضامنی : تشکیل ، تقسیم سود و تصفیه
- ۶- شرکتهای سهامی : سازمان و عملیات
- ۷- شرکتهای سهامی : حقوق صاحبان سهام، درآمد شرکت و سود سهام
- ۸- شرکتهای سهامی : بدهی های بلندمدت و سرمایه گذارها

۳- اصول حسابداری (۳)	۴ واحد	درجه اهمیت	۱	۲	۳	۴	۵
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مباحث درس حسابداری (۳) دنباله مطالب درس اصول حسابداری (۱) و (۲) می باشد و سرفصل های آن عبارتند از :

- ۱- حسابداری قسمت ها و شعب
- ۲- ارتباط قیمت تمام شده و درآمد (سود) از نظر مدیریت
- ۳- سیستم های حسابداری تولید و تعیین هزینه سفارشات
- ۴- سیستم های حسابداری تعیین هزینه مراحل تولید
- ۵- کنترل بودجه ای و سیستمهای حسابداری قیمت تمام شده استاندارد
- ۶- گزارشهای مخصوص مدیریت و تجزیه و تحلیل های خاص
- ۷- صورت تغییرات در وضع مالی
- ۸- صورتهای مالی تلفیقی و سایر گزارش ها
- ۹- تجزیه و تحلیل صورتهای مالی

لطفاً در صورتیکه کمبودی در سرفصل های دروس اصول حسابداری (۱)، (۲) و (۳) مصوب ستاد انقلاب فرهنگی که در بالا ارائه شده مشاهده می نمائید در جدول زیر ذکر فرمائید.

پیشنهاد حذف از اصول حسابداری (۱)	پیشنهاد حذف از اصول حسابداری (۲)	پیشنهاد حذف از اصول حسابداری (۳)

لطفاً در صورتیکه در سرفصل های دروس اصول حسابداری (۱)، (۲) و (۳) مصوب ستاد انقلاب فرهنگی ارائه شده در بالا سرفصل یا سرفصل هایی را اضافه می دانید در جدول زیر ذکر فرمائید.

پیشنهاد حذف از اصول حسابداری (۱)	پیشنهاد حذف از اصول حسابداری (۲)	پیشنهاد حذف از اصول حسابداری (۳)

۴- حسابداری میانه (۱)	۴ واحد	درجه اهمیت	۱	۲	۳	۴	۵
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هدف دروس حسابداری میانه تأکید بر نظریه ها و مفاهیم اساسی حسابداری و افزایش توانائی دانشجویان در حل و درک مسائل تخصصی

حسابداری می باشد و سرفصل های درس حسابداری میانه (۱) عبارتند از :

- ۱- بسط و تکامل حسابداری از جهات نظری و عملی
- ۲- جریان عمل حسابداری
- ۳- صورت سود و زیان : گزارش در باره نتایج عملیات
- ۴- ترازنامه : گزارشی درباره وضع مالی
- ۵- صندوق، گردش وجوه نقدی و منابع ثانوی صندوق
- ۶- مطالبات
- ۷- بدهی های جاری
- ۸- موجودیهای جنسی : قیمت تمام شده ، فروض مختلف گردش هزینه ، و کنترل موجودیهای جنسی
- ۹- موجودیهای جنسی : روشهای مخصوص ارزیابی
- ۱۰- موجودیهای جنسی : سایر فنون ارزیابی براساس تخمین
- ۱۱- دارائیهای ثابت : تهیه و از جریان خارج کردن آن
- ۱۲- دارائیهای ثابت : استهلاك و کاهش ذخیره منابع طبیعی
- ۱۳- دارائیهای غیرمادی

۵- حسابداری میانه (۲)	۴ واحد	درجه اهمیت	۱	۲	۳	۴	۵
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مباحث درس حسابداری میانه (۲) دنباله مطالب درس حسابداری میانه (۱) می باشد و سرفصل های آن عبارتند از :

- ۱- شرکت های سهامی : سرمایه پرداخت شده
- ۲- حق تقدم در خرید سهام جدید، حق خرید سهام شرکت
- بمبلغ معین برای مدیران بعنوان پاداش و سهام
- و اوراق قرضه قابل تبدیل
- ۳- سود تقسیم نشده و سود سهام
- ۴- اوراق قرضه پرداختنی
- ۵- سرمایه گذارهای بلندمدت در سهام و اوراق قرضه شرکت های سهامی
- ۶- تغییرات حسابداری، تهیه صورتهای مالی با استفاده از دفاتر ناقص
- ۷- صورت تغییرات در وضع مالی
- ۸- تجزیه و تحلیل صورتهای مالی
- ۹- حسابداری تغییر سطح قیمتها و ارزش عادله

۶- حسابداری پیشرفته (۱)	۳ واحد	درجه اهمیت	۱	۲	۳	۴	۵
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هدف دروس حسابداری پیشرفته بررسی اشکال خاص واحدهای اقتصادی از دیدگاه تئوری و کاربرد اصول اساسی حسابداری می باشد و

سرفصل های درس حسابداری پیشرفته (۱) عبارتند از :

- ۱- تشکیل شرکتهای تضامنی و عملیات آن
- ۲- تصفیه شرکتهای تضامنی ، شرکتهای عملی
- ۳- حسابداری شعب
- ۴- ترکیب شرکتها
- ۵- گزارشهای مالی بخشها، صورت مالی کوتاه مدت و پیش بینی
- ۶- فروش اقساطی و کالای امانی برای فروش

۵	۴	۳	۲	۱	درجه اهمیت	۳ واحد	۷- حسابداری پیشرفته (۲)
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مطالب درس حسابداری پیشرفته (۲) دنباله درس حسابداری پیشرفته (۱) میباشد و سرفصل های آن عبارتند از :

۱- صورتهای مالی تلفیقی : در تاریخ ترکیب شرکتها
 ۲- صورتهای مالی تلفیقی : بعد از تاریخ ترکیب شرکتها
 ۳- صورتهای مالی تلفیقی : سود و زیان بین شرکتها
 ۴- صورتهای مالی تلفیقی : مسائل خاص

۵- گزارش دهی مالی شرکتها چند ملیتی (گزارش دهی فعالیتهای خارجی)
 ۶- ورشکستگی و تجدید سازمان شرکتهای سهامی
 ۷- ارزش فعلی : مفاهیم و کاربردها

لطفاً در صورتیکه کمبودی در سرفصل های دروس حسابداری میانه (۱) و (۲) و حسابداری پیشرفته (۱) و (۲) مصوب ستاد انقلاب فرهنگی که در بالا ارائه شده مشاهده می نمائید در جدول صفحه بعد ذکر فرمائید.

پیشنهاد سرفصل برای حسابداری میانه (۱)	پیشنهاد سرفصل برای حسابداری میانه (۲)

پیشنهاد سرفصل برای حسابداری پیشرفته (۱)	پیشنهاد سرفصل برای حسابداری پیشرفته (۲)

لطفاً در صورتیکه در سرفصل های دروس حسابداری میانه (۱) و (۲) و حسابداری پیشرفته (۱) و (۲) مصوب ستاد انقلاب فرهنگی ارائه شده در بالا سرفصل یا سرفصل هائی را اضافه می دانید در جدول زیر ذکر فرمائید.

پیشنهاد حذف سرفصل از حسابداری میانه (۱)	پیشنهاد حذف سرفصل از حسابداری میانه (۲)

پیشنهاد حذف سرفصل از حسابداری پیشرفته (۱)	پیشنهاد حذف سرفصل از حسابداری پیشرفته (۲)

۵	۴	۳	۲	۱	درجه اهمیت	۳ واحد	۸- حسابداری صنعتی (۱)
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هدف دروس حسابداری صنعتی آشنائی بامفاهیم هزینه، روشهای اصلی حسابداری قیمت تمام شده و استفاده از اطلاعات هزینه در امر تجزیه و تحلیل، برنامه ریزی و کنترل داخلی در مؤسسات صنعتی می باشد و سرفصل های درس حسابداری صنعتی (۱) عبارتند از :

- ۱- رشته حسابداری صنعتی، مفاهیم اصلی قیمت تمام شده و هزینه
- ۲- حسابهای تولید، صورت قیمت تمام شده کالای ساخته شده
- ۳- تعیین قیمت تمام شده واحد محصول (۱) : سیستم
- ۴- تعیین هزینه سفارش و سیستم تعیین هزینه مراحل تولید
- ۵- مواد و دستمزد: تعیین هزینه و کنترل
- ۶- هزینه های غیر مستقیم تولید (۱) : بودجه بندی و تخصیص هزینه های غیر مستقیم تولید
- ۷- هزینه های غیر مستقیم تولید (۲) : ثبت هزینه های غیر مستقیم تولید، تجزیه و تحلیل و طرز بستن مابه التفاوت هزینه های غیرمستقیم تخصیص یافته و واقعی

۵	۴	۳	۲	۱	درجه اهمیت	۳ واحد	۹- حسابداری صنعتی (۲)
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مباحث درس حسابداری صنعتی (۲) دنباله مطالب درس حسابداری صنعتی (۱) می باشد و سرفصل های آن عبارتند از :

- ۱- هزینه های استاندارد (۱): مفاهیم اساسی و تجزیه و تحلیل
- ۲- هزینه های استاندارد (۲): حسابداری هزینه های استاندارد
- ۳- تعیین هزینه محصولات متعدد
- ۴- هزینه یابی مستقیم
- ۵- طبقه بندی هزینه ها و تجزیه و تحلیل آنها
- ۶- تجزیه و تحلیل هزینه - حجم - سود (۱) : مفاهیم اساسی و محدودیت ها
- ۷- تجزیه و تحلیل هزینه - حجم - سود (۲) : تغییر در ترکیب هزینه ها، قیمت ها و ترکیب فروش

۵	۴	۳	۲	۱	درجه اهمیت	۳ واحد	۱۰- حسابداری صنعتی (۳)
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مباحث درس حسابداری صنعتی (۳) دنباله مطالب دروس حسابداری صنعتی (۱) و (۲) می باشد و سرفصل های آن عبارتند از :

- ۱- تنظیم بودجه جامع (بودجه بندی جامع در مؤسسات تولیدی)
- ۲- حسابداری مسئولیتی (حسابداری براساس مسئولیتهای معینه) ؛
- ۳- ارزیابی سودآوری فعالیت ها ؛ تجزیه و تحلیل سود غیر خالص؛
- ۴- تجزیه و تحلیل هزینه های توزیع کالا ؛ گزارش میزان کمک
- ۵- هزینه های مرتبط با تصمیم گیری
- ۶- برنامه ریزی هزینه های سرمایه ای
- ۷- در تحصیل سود (حاشیه کمک به سود) و کاربرد آن در مدیریت
- ۸- تنظیم گزارش جهت مدیریت
- ۹- بازده سرمایه

لطفاً در صورتیکه کمبودی در سرفصل های دروس حسابداری صنعتی (۱)، (۲) و (۳) مصوب ستاد انقلاب فرهنگی که در بالا ارائه شده مشاهده می نمائید در جدول زیر ذکر فرمائید.

پیشنهاد برای حسابداری صنعتی (۱)	پیشنهاد برای حسابداری صنعتی (۲)	پیشنهاد برای حسابداری صنعتی (۳)

لطفاً در صورتیکه در سرفصل های دروس حسابداری صنعتی (۱) ، (۲) و (۳) مصوب ستاد انقلاب فرهنگی ارائه شده در بالا سرفصل یا سرفصل هائی را اضافه می دانید در جدول زیر ذکر فرمائید.

پیشنهاد حذف از حسابداری صنعتی (۱)	پیشنهاد حذف از حسابداری صنعتی (۲)	پیشنهاد حذف از حسابداری صنعتی (۳)

۱۱- حسابداری (۱)	۳ واحد	درجه اهمیت	۱	۲	۳	۴	۵
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هدف دروس حسابداری آشنائی با فلسفه و شرائط محیطی حسابداری و بررسی جامع حرفه حسابداری عمومی و حسابداری می باشد و

سرفصل های درس حسابداری (۱) عبارتند از :

- ۱- نقش حسابداری در اقتصاد کشور
- ۲- رفتار حرفه ای
- ۳- مسئولیت قانونی حسابرسان
- ۴- حرفه حسابداری
- ۵- کنترل داخلی
- ۶- حسابداری سیستمهای حسابر الکترونیکی
- ۷- دلایل و مدارک حسابداری و انواع و میزان آنها
- ۸- نمونه گیری آماری
- ۹- کاربردهای حسابداری ، کنترل کیفیت در مورد کار حسابداری
- ۱۰- رسیدگی به اسناد و مدارک ، طرح ریزی برنامه حسابداری

۱۲- حسابداری (۲)	۳ واحد	درجه اهمیت	۱	۲	۳	۴	۵
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مطالب این درس دنباله درس حسابداری (۱) بوده و تأکید بر تکنیک ها و فنون حسابداری می باشد و سرفصل های آن عبارتند از:

- ۱- حسابداری صندوق و بانک
- ۲- حسابداری سهام و اوراق قرضه و درآمد حاصل از سرمایه گذاری
- ۳- حسابداری حساب بدهکاران و سفته های وصولی و معاملات فروش
- ۴- حسابداری موجودی های جنسی و قیمت تمام شده
- ۵- حسابداری اقلام دارائی ثابت: استهلاک و کاهش ذخیره منابع طبیعی
- ۶- حسابداری حساب بستانکاران و سایر اقلام بدهی
- ۷- حسابداری دیون با بهره و هزینه های بهره ، افساء بدهی های احتمالی
- ۸- حسابداری حقوق صاحبان سهام
- ۹- رسیدگی تفضیلی اقلام درآمد و هزینه
- ۱۰- گزارشهای حسابداری

۱۳- مدیریت مالی	۴ واحد	درجه اهمیت	۱	۲	۳	۴	۵
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هدف این درس تعلیم روشها و تکنیک های متداول مدیریت مالی می باشد . سرفصل های آن عبارتند از :

- ۱- آشنائی با مدیریت مالی
- ۲- تجزیه و تحلیل گزارشهای مالی با استفاده از نسبت های مالی
- ۳- پیش بینی سود در رابطه با فعالیت تولید و فروش و استفاده
- ۴- پیش بینی نیازهای مالی: بودجه بندی
- ۵- نقش بهره در تصمیمات مالی
- ۶- تصمیمات سرمایه گذاری و تخصیص منابع مالی در شرائط معلوم و نامعلوم
- ۷- خط مشی مدیریت اقلام سرمایه در گردش
- ۸- ساختمان مالی و موارد استفاده از اهرم مالی
- ۹- سیاست تقسیم سود و تأمین مالی داخلی
- ۱۰- هزینه های سرمایه ای

لطفاً در صورتیکه کمبودی در سرفصل های دروس حسابرسی (۱)، (۲) و مدیریت مالی مصوب ستاد انقلاب فرهنگی که در بالا ارائه شده مشاهده می نمائید در جدول زیر ذکر فرمائید.

پیشنهاد سرفصل برای حسابرسی (۱)	پیشنهاد سرفصل برای حسابرسی (۲)	پیشنهاد سرفصل برای مدیریت مالی
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لطفاً در صورتیکه در سرفصل های دروس حسابرسی (۱)، (۲) و مدیریت مالی مصوب ستاد انقلاب فرهنگی ارائه شده در بالا سرفصل یا سرفصل هایی را اضافه می دانید در جدول زیر ذکر فرمائید.

پیشنهاد حذف از حسابرسی (۱)	پیشنهاد حذف از حسابرسی (۲)	پیشنهاد حذف از مدیریت مالی
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۱۴- حسابداری مالیاتی	۲ واحد	درجه اهمیت	۱	۲	۳	۴	۵
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هدف این درس آشنائی با قانون مالیاتهای مستقیم ، نحوه محاسبه انواع مالیات و نحوه تنظیم اظهار نامه های مالیاتی می باشد.

سرفصل های آن عبارتند از :

- ۱- ارتباط حسابداری با مالیاتها
- ۲- محاسبه مالیات حقوق ، درآمد املای ، بهره ، ارث ، درآمد های اتفاقی، و درآمد اشخاص حقوقی
- ۳- هزینه های قابل قبول و استهلاکات
- ۴- قرائن مالیاتی
- ۵- جرائم و زیان دیر کرد مالیاتی
- ۶- نحوه تنظیم و نگهداری دفاتر تجاری از نظر مالیاتی
- ۷- معافیت های مالیاتی
- ۸- طرز تنظیم اظهار نامه های مالیاتی

۱۵- حسابداری و حسابرسی دولتی	۴ واحد	درجه اهمیت	۱	۲	۳	۴	۵
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هدف این درس آشنائی با حسابداری و نحوه کنترل مالی در سازمانهای دولتی و قوانین و مقررات ناظر بر آنها می باشد . سرفصل های

آن عبارتند از :

- ۱- اصول سازمان، خصوصیات و دفاتر و اسناد حسابداری دولتی
- ۲- حسابهای بودجه ای، حسابداری درآمد، هزینه ها، بستن حسابها
- ۳- قانون محاسبات عمومی و فعالیتهای مالی سازمانهای دولتی
- ۴- بودجه برنامه ای و مراحل تهیه و تنظیم آن
- ۵- فعالیتهای حسابداری ذیحسابیهای مرکوز ذیحسابیهای شهرستان
- ۶- سرفصل حسابهای ذیحسابی و ادارات دارائی شهرستان
- ۷- ماهیت درآمد و هزینه عمومی در مقایسه با درآمد و هزینه اختصاصی
- ۸- طرز تنظیم حسابهای اختصاصی ، محدودیتهای قانونی آنها و نحوه ثبت، موازنه و بستن حسابهای مربوط در پایان سال
- ۹- حساب حقوق بازنشستگان و موظفین و منابع تأمین درآمد و وضع هزینه های مربوط و طرز پرداخت از صندوق بازنشستگی
- ۱۰- انواع سپرده ها و عملیات حسابداری آن
- ۱۱- تهیه گزارشهای ماهانه توسط ذیحسابی های شهرستان
- ۱۲- بستن حسابها در پایان سال مالی و انتقال مانده حسابها به سال بعد
- ۱۳- تهیه گزارشهای نهائی پایان سال

۵	۴	۳	۲	۱	درجه اهمیت	۳ واحد	۱۶- اصول تنظیم و کنترل بودجه دولتی
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هدف این درس آشنائی با جنبه های عملی و نظری بودجه ، بررسی آثار فرهنگی - اجتماعی - اقتصادی حرکات مالی دولت میباشد .

سرفصل های آن عبارتند از :

- ۱- اصول و مفاهیم جدید بودجه
- ۲- مراحل یاگردش بودجه
- ۳- کنترل و روشهای کنترل بودجه
- ۴- نقش ماکرواقتصاد بودجه و برنامه اقتصادی
- ۵- مشکلات اساسی بودجه نویسی در کشورهای در حال توسعه
- ۶- سیاست مالی و نقش بودجه
- ۷- روشهای تنظیم بودجه
- ۸- بودجه و حسابداری و نقش آن در بهبود مدیریت
- ۹- تاریخچه تحولات بودجه نویسی در ایران

لطفاً در صورتیکه کمبودی در سرفصل های دروس حسابداری مالیاتی، حسابداری دولتی و اصول تنظیم و کنترل بودجه دولتی مصوب ستاد انقلاب فرهنگی که در بالا ارائه شده مشاهده می نمائید در جدول زیر ذکر فرمائید.

پیشنهاد برای حسابداری مالیاتی	پیشنهاد برای حسابداری دولتی	پیشنهاد برای اصول تنظیم و کنترل بودجه دولتی
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لطفاً در صورتیکه در سرفصل های دروس حسابداری مالیاتی ، حسابداری دولتی و اصول تنظیم و کنترل بودجه دولتی مصوب ستاد انقلاب فرهنگی ارائه شده در بالا سرفصل یا سرفصل هایی را اضافه می دانید در جدول زیر ذکر فرمائید.

پیشنهاد حذف از حسابداری مالیاتی	پیشنهاد حذف از حسابداری دولتی	حذف از اصول تنظیم و کنترل بودجه دولتی
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۵	۴	۳	۲	۱	درجه اهمیت	۳ واحد	۱۷- برنامه نویسی به زبان کویال و کاربرد آن در حسابداری و امور مالی
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هدف این درس فراگرفتن اصول برنامه نویسی به زبان کویال می باشد . سرفصل های آن عبارتند از :

- ۱- اهمیت جریان اطلاعات و پردازش داده ها
- ۲- تعریف و ساختمان مجموعه ها یا فایلها
- ۳- آشنائی با زبان کویال
- ۴- ساختمان کلی زبان کویال
- ۵- قوانین اولیه برنامه نویسی به زبان کویال
- ۶- فرهنگ لغات به زبان کویال
- ۷- برنامه نویسی به زبان کویال
- ۸- چگونگی استفاده از کامپیوتر در تقلیل هزینه ها و ازدیاد درآمد

۵	۴	۳	۲	۱	درجه اهمیت	۳ واحد	۱۸- امور مالی بین المللی
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هدف این درس آشنائی با بازرگانی بین المللی می باشد . سرفصل های آن عبارتند از :

- ۱- تحقیق و بررسی ماهیت پرداختهای بین المللی
- ۲- تراز پرداختها و بازار ارز ها
- ۳- مطالعه نحوه پرداختهای بین المللی و تعدیل آنها
- ۴- نرخهای شناور ارزها
- ۵- نرخهای تثبیت شده قابل تعدیل
- ۶- مطالعه سیستم طلا و سیستم های مختلف ارز
- ۷- تجزیه و تحلیل مسائل ارزی و مشکلات بین المللی
- ۸- سیستم پولی و پرداختهای بین المللی کنونی(صندوق بین المللی)

لطفاً در صورتیکه کمبودی در سرفصل های دروس برنامه نویسی به زبان کویال و امور مالی بین المللی مصوب ستاد انقلاب فرهنگی که در بالا ارائه شده مشاهده می نمائید در جدول زیر ذکر فرمائید.

پیشنهاد حذف سرفصل برای برنامه نویسی به زبان کویال	پیشنهاد سرفصل برای امور مالی بین المللی

لطفاً در صورتیکه در سرفصل های دروس برنامه نویسی به زبان کویال و امور مالی بین المللی مصوب ستاد انقلاب فرهنگی ارائه شده در بالا سرفصل یا سرفصل هایی را اضافه می دانید در جدول زیر ذکر فرمائید.

پیشنهاد حذف سرفصل از برنامه نویسی به زبان کویال	پیشنهاد حذف سرفصل از امور مالی بین المللی

۱۹- بررسی موارد خاص در مدیریت مالی	۳ واحد	درجه اهمیت	۱	۲	۳	۴	۵
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هدف این درس قراردادن دانشجویان در شرائط تصمیم گیری و آشنائی هرچه بیشتر با مسائل واقعی مدیران مالی است.

۲۰- بررسی موارد خاص در حسابداری	۲ واحد	درجه اهمیت	۱	۲	۳	۴	۵
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هدف این درس افزایش توان تجزیه و تحلیل مسائل واقعی با استفاده از تئوری های علمی و ایجاد ارتباط بین مسائل علمی و عملی حسابداری می باشد.

۲۱- زبان خارجی (۳) و (۴)	۴ واحد	درجه اهمیت	۱	۲	۳	۴	۵
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هدف این درس آموزش لغات و اصطلاحات حسابداری و ایجاد توانائی استفاده از متون مدیریت و حسابداری به زبان انگلیسی می باشد.

بنظر شما چه درس یا دروس اصلی و تخصصی حسابداری علاوه بر آنچه که در برنامه لیسانس حسابداری مصوب ستاد انقلاب فرهنگی که در بالا ارائه شده باید اضافه گردد. لطفاً عناوین این دروس را در جدول زیر بنویسید.

عناوین دروس تخصصی حسابداری که باید به برنامه مصوب اضافه شوند

با توجه به عناوین دروس اصلی و تخصصی حسابداری مصوب ستاد انقلاب فرهنگی که در بالا ارائه شده، بنظر شما کدامیک از عناوین دروس غیرضروری بوده و باید حذف شوند. لطفاً این عناوین را در جدول زیر بنویسید.

عناوین دروس اصلی تخصصی حسابداری غیرضروری

بررسی دروس دوره لیسانس حسابداری سایر کشورها نشان می دهد که دروس زیر علاوه بر دروس فوق نیز تدریس می شوند. لطفاً نظرخودتان را نسبت به درجه اهمیت هر درس در مجموعه دروس برنامه آموزش کارشناسی حسابداری ایران با گذاشتن علامت (+) در جدول مقابل آن بیان فرمائید.

با اهمیت ترین درس

کم اهمیت ترین درس

۵	۴	۳	۲	۱
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۵	۴	۳	۲	۱	درجه اهمیت	۱- سیستم های اطلاعاتی حسابداری
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هدف این درس آشنائی با تئوری و نحوه عمل سیستم های اطلاعاتی و تأکید بر سیستم های کامپیوتری حسابداری می باشد. مباحث این درس شامل: مفاهیم و تئوری سیستم ها، مراحل تصمیم گیری، تکنولوژی کامپیوتر های تجاری، سیستم های حسابداری و جریان عمل حسابداری، طراحی مدارک، کنترل های داخلی، گردش اطلاعات درون سازمان و چرخه حیات سازمانها می باشد.

۵	۴	۳	۲	۱	درجه اهمیت	۲- تئوری های حسابداری
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در این درس مبنای تئوریک استاندارد ها و اصول حسابداری مورد بحث قرارمیگیرد. مباحث این درس شامل: متدلوژی حسابداری و نحوه ایجاد تئوریهای حسابداری می باشد.

۵	۴	۳	۲	۱	درجه اهمیت	۳- کار آموزی در حسابداری
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هدف این درس آشنائی با محیط کار واقعی، کمک به درک بهتر ارتباط تئوری ها و مسائل عملی حسابداری می باشد. در این درس دانشجویان در مؤسسات خصوصی یا دولتی عملاً به کار حسابداری مشغول می شوند ولی بهر حال ارزیابی براساس گزارش ارائه شده توسط دانشجو انجام می گیرد.

قسمت دوم - دروس پایه در برنامه آموزش کارشناسی حسابداری
در این قسمت عنوان و تعداد واحدهای دروس پایه برنامه آموزش کارشناسی حسابداری ارائه گردیده اند. لطفاً نظرخودتان را نسبت به درجه اهمیت هر درس در مجموعه دروس برنامه آموزش کارشناسی حسابداری با گذاشتن علامت(+) در جدول مقابل آن بیان فرمائید. بالاترین درجه اهمیت را ۵ و پایین ترین درجه اهمیت را یک انتخاب فرمائید.
کم اهمیت ترین درس با اهمیت ترین درس

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۱- روانشناسی	۳ واحد	۱	۲	۳	۴	۵
۲- جامعه شناسی	۳ واحد	۱	۲	۳	۴	۵
۳- اصول علم اقتصاد (۱) (اقتصاد خرد)	۳ واحد	۱	۲	۳	۴	۵
۴- اصول علم اقتصاد (۲) (اقتصاد کلان)	۳ واحد	۱	۲	۳	۴	۵
۵- توسعه اقتصادی و برنامه ریزی	۳ واحد	۱	۲	۳	۴	۵
۶- پول و ارز و بانکداری	۳ واحد	۱	۲	۳	۴	۵
۷- ریاضیات پایه و مقدمات آمار	۳ واحد	۱	۲	۳	۴	۵
۸- ریاضیات و کار برد آن در مدیریت	۳ واحد	۱	۲	۳	۴	۵
۹- آمار و کاربرد آن در مدیریت	۴ واحد	۱	۲	۳	۴	۵
۱۰- مبانی و کاربرد کامپیوتر در مدیریت	۴ واحد	۱	۲	۳	۴	۵
۱۱- پژوهش عملیاتی (۱) و (۲)	۶ واحد	۱	۲	۳	۴	۵
۱۲- مالیه عمومی و خط مشی مالی دولت ها	۳ واحد	۱	۲	۳	۴	۵
۱۳- حقوق بازرگانی	۳ واحد	۱	۲	۳	۴	۵
۱۴- مدیریت تولید	۳ واحد	۱	۲	۳	۴	۵
۱۵- مبانی سازمان و مدیریت	۳ واحد	۱	۲	۳	۴	۵
۱۶- روش تحقیق و مآخذ شناسی	۳ واحد	۱	۲	۳	۴	۵

بنظر شما چه درس یا دروس پایه علاوه بر آنچه که در برنامه کارشناسی حسابداری مصوب ستاد انقلاب فرهنگی که در بالا ارائه شده باید اضافه گردد. لطفاً عناوین این دروس را در جدول زیر بنویسید.

عنوان دروس پایه که باید به برنامه مصوب اضافه شود

بنظر شما کدامیک از دروس پایه مصوب که در بالا ارائه شده غیر ضروری بوده و باید حذف گردد. لطفاً عناوین این دروس را در جدول زیر بنویسید.

عنوان دروس پایه که باید از برنامه مصوب حذف شود

قسمت سوم - دروس عمومی برنامه آموزش کارشناسی حسابداری

در این قسمت عنوان و تعداد واحدهای دروس عمومی برنامه آموزش کارشناسی حسابداری مصوب ستاد انقلاب فرهنگی ارائه شده اند. لطفاً نظرخودتان را نسبت به درجه اهمیت هردرس در مجموعه دروس برنامه آموزش کارشناسی حسابداری با گذاشتن علامت (+) در جدول مقابل آن بیان فرمائید. بالاترین درجه اهمیت را ۵ و پائین ترین درجه اهمیت را یک انتخاب فرمائید.

کم اهمیت ترین درس با اهمیت ترین درس

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۱- فارسی	۳ واحد	۱	۲	۳	۴	۵
۲- زبان خارجه	۳ واحد	۱	۲	۳	۴	۵
۴- تربیت بدنی	۲ واحد	۱	۲	۳	۴	۵
۵- دروس معارف اسلامی*	۱۲ واحد	۱	۲	۳	۴	۵

* بمنظور رعایت اختصار دروس تاریخ اسلام، معارف اسلامی (۱) و (۲)، انقلاب اسلامی و ریشه های آن

متون اسلامی و اخلاق و تربیت اسلامی در قالب یک در ۱۲ واحدی ارائه شده اند

بخش سوم

۱- نظر خودتان را نسبت به اثر بخشی هریک از موارد زیر بر کیفیت آموزش حسابداری با گذاشتن علامت (+) در جدول مقابل آن بیان فرمائید. بالاترین درجه اهمیت را ۵ و پائین ترین درجه اهمیت را یک انتخاب فرمائید.

با اهمیت ترین عامل

کم اهمیت ترین عامل

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۵	۴	۳	۲	۱	۱ انتشار بیشتر نشریات تخصصی حسابداری و حسابرسی در کشور.
۵	۴	۳	۲	۱	۲ افزایش تعداد نشریات خارجی رشته حسابداری در کتابخانه دانشگاهها.
۵	۴	۳	۲	۱	۳ انتشار بیشتر کتب حسابداری به زبان فارسی.
۵	۴	۳	۲	۱	۴ افزایش تعداد کتب خارجی در کتابخانه دانشگاهها.
۵	۴	۳	۲	۱	۳ برگزاری بیشتر سمینارها و کنفرانس های حسابداری در کشور.
۵	۴	۳	۲	۱	۶ ایجاد امکانات بیشتر تحقیقاتی برای اساتید حسابداری و کاستن ساعات تدریس موظف .
۵	۴	۳	۲	۱	۷ دعوت از حسابداران حرفه ای با تجربه برای سخنرانی در مورد مسائل عملی حسابداری در دانشگاهها.
۵	۴	۳	۲	۱	۸ تدریس حسابداری در دانشگاهها مشروط به داشتن تجربه عملی گردد.
۹- سایر، ذکر فرمائید:					

۲- بنظر شما کدامیک از موارد زیر مهمترین اهداف آموزشی حسابداری می باشند. موارد زیر را بترتیب اهمیت مرتب کنید. بالاترین درجه اهمیت را ۱ انتخاب کنید.

ایجاد توانائی تجزیه و تحلیل اطلاعات مالی و ارائه سیاستهای لازم در مواقع ضروری _____ درجه اهمیت
ایجاد توانائی درک اصول و مفاهیم حسابداری و استفاده از آنها در شرائط مختلف _____ درجه اهمیت
ایجاد توانائی قبول مسؤلیتهای حرفه ای حسابداری بازرگانی _____ درجه اهمیت
ایجاد توانائی انجام تحقیقات حسابداری _____ درجه اهمیت
سایر موارد ذکر فرمائید:

۳- نظر شما در مورد کار آموزی در برنامه آموزش کارشناسی حسابداری چیست؟

- [] کارآموزی باید در برنامه حسابداری وجود داشته باشد
[] نظری ندارم
[] کارآموزی در برنامه آموزش کارشناسی حسابداری لازم نیست

۴- بنظر شما طول مدت تحصیل برای دوره کارشناسی حسابداری چه مدت باید باشد.

- [] سه سال
[] سه سال و _____ ماه کارآموزی در حسابداری
[] چهار سال
[] چهار سال و _____ ماه کارآموزی در حسابداری
[] پنج سال
[] پنج سال و _____ ماه کارآموزی در حسابداری

با تشکر و آرزوی توفیق الهی

بخش چهارم

- ۱- هدف این سؤال ارزیابی کارائی فارغ التحصیلان اخیر (سالهای بعد از انقلاب فرهنگی) در رشته حسابداری و بررسی وضعیت مطلوب برای اینگونه دانش آموختگان می باشد. لطفاً نظر خودتان را در دو مورد زیر بیان فرمائید:
- ۱- کارائی فارغ التحصیلان اخیر - نظر خودتان را نسبت به اینکه خصوصیات زیر را زیاد، اغلب، و یا بندرت در فارغ التحصیلان اخیر رشته حسابداری مشاهده نموده اید در سه ستون اول جدول با گذاشتن علامت (+) بیان فرمائید.
- ۲- وضعیت مطلوب برای فارغ التحصیلان - نظر خودتان را نسبت به اینکه خصوصیات زیر را برای یک لیسانس حسابداری بسیار ضروری، ضروری و یا ضرورت کم داشته باشد در سه ستون دوم جدول با گذاشتن علامت (+) بیان فرمائید.

وضعیت مطلوب فارغ التحصیلان			کارائی فارغ التحصیلان			
بسیار ضروری	ضروری	ضرورت کم	بندرت	اغلب	زیاد	
						۱- کاربرد روشها و رویه های حسابداری.
						۲- سرعت و دقت در انجام امور حسابداری.
						۳- کیفیت انجام کار حسابداری
						۴- توانائی کاربرد کامپیوتر در انجام کار حسابداری.
						۵- توانائی شرکت در تصمیم گیری.
						۶- خلاقیت و حس ابتکار در امور حسابداری.
						۹- رعایت تقوای حرفه ای و امانتداری در حسابداری.
						۱۰- توانائی ایجاد ارتباط متقابل

- ۱- آیا بنظر شما فارغ التحصیلان اخیر (بعد از انقلاب فرهنگی) رشته حسابداری دانشگاهها دارای آموزش و مهارت لازم برای شروع کار حسابداری هستند؟
- [] بلی
- [] خیر

- ۲- در صورتیکه پاسخ شما به سؤال بالا خیر باشد، کمبود را در اثر کدامیک از عوامل زیر می دانید؟ این عوامل را براساس درجه اهمیت مرتب کنید. بالاترین درجه اهمیت را ۱ انتخاب کنید.

کمبود در برنامه آموزشی حسابداری _____ درجه اهمیت

کمبود در وجود کتب درسی حسابداری بزیان فارسی _____ درجه اهمیت

کمبود در وجود تعداد کافی اساتید متخصص حسابداری _____ درجه اهمیت

کمبود در تجربه عملی و کارآموزی دانشجویان _____ درجه اهمیت

کمبود در آموزش دانشگاهی بطور کلی _____ درجه اهمیت

سایر موارد ذکر فرمائید:

۳- با توجه به شرایط اقتصادی خاص ایران ، خصوصیات زیر را برای يك فارغ التحصيل کارشناسی رشته حسابداری تا چه میزان ضروری می دانید. لطفاً نظر خودتان را در جدول زیر بیان فرمائید.

غیرضروری	ضروری	بسیارضروری	خصوصیات فارغ التحصيل کارشناسی حسابداری
			۱ توانائی تهیه گزارشات پیچیده مالی
			۲ توانائی شرکت در تصمیم گیریهای مالی سطوح بالای مدیریت
			۳ توانائی درك قوانین مالی و مالیاتی کشور
			۴ آشنائی با قوانین مدنی، کار و تجارت
			۵ توانائی تنظیم اظهار نامه مالیاتی و تهیه اطلاعات لازم مالیاتی
			۶ توانائی اداره سیستم های اطلاعاتی حسابداری
			۷ توانائی طراحی سیستم های اطلاعاتی حسابداری
			۸ آشنائی با روشهای حسابداری صنعتی
			۹ توانائی درك مفاهیم حسابداری صنعتی
			۱۰ آشنائی با روشهای حسابرسی
			۱۱ توانائی درك مفاهیم حسابرسی
			۱۲ آشنائی با روشهای حسابداری و حسابرسی دولتی ایران
			۱۳ شناخت کافی از تکنیک های مدیریت مالی
			۱۴ توانائی کار با نرم افزار های حسابداری
			۱۵ آشنائی با اصول و استاندارد های حسابداری سایر کشورها
			۱۶ آگاهی به اصول اخلاق حرفه ای حسابداری سایر کشور
			۱۷ سایر، ذکر فرمائید:

با تشکر از همکاری شما

Appendix: 6-1:

F-Test: Two-Sample for Variances

Perceptions of accounting educators and Practitioners on the importance of Accounting subjects

	Educators		Practitioners		F Value
	N=48 df=47		N=56 df=55		
	Mean	Variance	Mean	Variance	
Principles of Accounting I	5	0	4.91	0.12	
Principles of Accounting II	4.27	1.01	4.607	0.53	0.10
Principles of Accounting III	2.562	2.46	3.517	2.11	0.29
Intermediate Accounting I	4.541	2.46	4.803	0.16	0.0001
Intermediate Accounting II	4.666	0.48	4.66	0.3	0.05
Advanced Accounting I	4.187	1.05	4.142	0.89	0.27
Advanced Accounting II	3.75	1.21	3.982	1.14	0.42
Cost Accounting I	4.77	0.31	4.857	0.2	1.57
Cost Accounting II	4.52	0.64	4.678	0.51	1.27
Cost Accounting III	3.812	1.47	3.928	1.38	0.4
Auditing I	4.729	0.2	4.553	0.54	0.0004
Auditing II	4.562	0.34	4.464	0.65	0.01
managerial Finance	4.604	0.41	4.571	0.36	0.3
Tax Accounting	4.729	0.29	4.642	0.26	0.41
Government Accounting	3.729	1.56	3.66	1.97	0.21
Principles of Government Budgeting and Control	3.083	0.97	3.16	1.34	0.13
Application of COBOL programming in Accounting	1.958	1.66	2.482	2.33	0.12
International Finance	3.145	1.23	3.196	0.49	0.0005
Current Issues in Finance	2.27	1.86	3.428	1.34	0.12
Current Issues in Accounting	2.52	2.34	3.589	1.77	0.16
Accounting Studies (in English)	4.791	0.21	4.571	0.09	0.01

Appendix: 6-2:

F-Test: Two-Sample for Variances

**Perceptions of accounting educators and Practitioners on the importance of
purposed accounting subjects**

	Educators		Practitioners		F Value
	N=48 df=47		N=56 df=55		
	Mean	Variance	Mean	Variance	
Accounting Information Systems	4.52	0.72	4.375	0.78	0.39
Accounting Theory	3.791	1.06	3.41	1.3	0.24
Internship in Accounting	4.458	1.15	4.41	1.05	0.37

Appendix 6-3:

Perceptions of respondents on the inclusion of Internship in Accounting (on-the-job training) in the accounting curriculum

	All Respondents		Educators		Practitioners	
	No	%	No	%	No	%
Must be Included in the curriculum	84	80.8	38	97.1	46	82.1
No Opinion	10	9.6	6	12.5	4	7.1
Not necessary to be included in the curriculum	10	9.6	4	8.3	6	10.7
Total	104	100	48	100	56	100

Appendix 6-4

F-Test: Two-Sample for Variances

Perceptions of accounting educators and Practitioners on the importance of Basic subjects

	Educators		Practitioners		F Value
	N=48 df=47		N=56 df=55		
	Mean	Variance	Mean	Variances	
	s				
Psychology	3.437	0.68	2.678	1.31	0.01
Sociology	3.375	0.54	2.535	1.49	0.0002
Macro Economics (Principles of Economics II)	4.25	0.57	4.017	0.61	0.44
Micro Economics (Principles of Economics II)	4.125	0.45	3.875	0.58	0.19
Economic Development	3.541	0.98	3.196	1.58	0.05
Money and Banking	4.25	0.57	3.625	0.86	0.08
Mathematics	4.5	0.59	4.071	1.26	0.005
Application of Mathematics in Business	4.416	0.5	4.25	0.59	0.29
Application of Statistics in Business	4.645	0.32	4.214	0.75	0.002
Application of Computer in Business	4.687	0.35	4.16	1.12	0.0000
Operations Research I & II	4.229	0.61	3.857	1.07	3
Public Finance	3.729	0.84	3	0.87	0.02
Business Law	4.125	0.69	4.178	0.92	0.45
Production Management	3.27	0.67	2.857	1.18	0.15
Principles of Management	3.625	0.84	3.785	0.61	0.02
Research Methods	4.375	0.58	4.232	0.69	0.13
					0.29

Appendix 6-5:

F-Test: Two-Sample for Variances
Perceptions of accounting educators and Practitioners on the importance of the General subjects

	Educators		Practitioners		F-Values
	N=48 df=46		N=56 df=55		
	Mean	Variance	Mean	Variance	
Persian Language	4.291	0.072	3.964	1.85	0.0006
English language	4.833	0.14	4.696	0.29	0.007
Physical Education	3.083	1.99	2.892	1.95	0.46
Islamic Moral	4.166	1.12	3.053	2.02	0.02

Appendix 6-6:

F-Test: Two-Sample for Variances

Perceptions of accounting educators and Practitioners on the supplementary activities for improving the quality of accounting education

	Educators		Practitioners		F-Value
	N=48 df=47		N=56 df=55		
	Mean	Variance	Mean	Variance	
Provide more research facilities for academic and reduce their formal lecturing time	4.79	.034	4.64	0.38	0.35
Publish more accounting books in Persian	4.63	0.37	4.32	0.84	0.002
Increase domestic periodicals in accounting and auditing	4.38	1.01	4.36	0.64	0.05
Increase the number of periodicals subscribed by university libraries	3.73	1.14	4.07	0.50	0.002
Hold more accounting seminars	3.81	0.84	3.75	0.81	0.45
Increase the number of foreign textbooks in accounting in university libraries	3.71	0.93	3.86	0.74	0.20
Invite professionals accountants to lecture in universities (on visiting basis)	3.63	1.47	4.16	0.83	0.02
Require university accounting teachers to acquire some practical experience in industry and commerce	3.25	2.02	3.84	1.88	0.39

Appendix 7-1:**Proposed Revision to the Existing Curriculum**

Based on the findings, conclusions and recommendations of this study, revision to the existing undergraduate accounting curriculum is proposed as indicated below:

Proposed accounting curriculum for Iranian universities

	Semester Hours	Total
General Subjects:		
Persian Language	3	
English Language	6	
Physical Education	2	
Islamic Morals	4	
Islamic Ethics	2	
Islamic History	2	
Islamic Texts	2	
Islamic Revolution	2	23
Basic Subjects:		
Sociology and Psychology	4	
Economics (theory and monetary system)	8	
Economic Development and Planning	3	
Public Finance	3	
Basic Mathematics	3	
Business Statistics	3	
Quantitative Methods	6	
Introduction to Business Computing	3	
Business Law	3	
Principles of Management	3	
Production Management	2	
Marketing Management	2	
Research Methods	2	45
Accounting Subjects:		
Introduction to Accounting	6	
Financial Accounting	9	
Business Finance	3	
Cost and Management Accounting	12	
Accounting Information Systems	3	
Auditing	6	
Government Accounting	3	
Public Enterprise Accounting	3	
Tax Accounting	3	
Internship in Accounting	3	
Computer Applications in Accounting	6	
Business Communications in English	4	61
Recommended Electives: (Any two of the following)		
Accounting Theory	3	
Financial Management	3	
Islamic Tax Accounting	3	
Advanced Auditing	3	
Industrial and Labour Law	3	
Advanced Management Accounting	3	
Administrative Law	3	
Business Computing Systems	3	
Issues in Financial Accounting	3	6
Total		135

The major changes in the proposed curriculum include the following:

The total number of semester hours is decreased from 142 to 135 because the MCHE recently announced that all bachelor's degrees must include only 130 to 135 semester hours of teaching.

Financial Accounting and Management Accounting: Number of teaching hours is reduced from 27 to 15 for financial accounting while increasing it from 9 to 12 for management accounting. The purpose of this change is to shift the emphasis from financial accounting to management accounting as recommended in the thesis.

Computing: The allocation of teaching time for computing subjects (including Accounting Information Systems) is increased from 7 to 12 semester hours. COBOL Computer programming is changed to include spread sheets and accounting software packages to make students adequately proficient in using computers in accounting operations. Accounting information systems is added to the curriculum as it is very important for students' proper understanding of the accounting data collection and processing functions including internal control and internal reporting.

Quantitative Methods: In order to avoid duplication and use teaching time more effectively the number of teaching time allocated to subjects in this area is reduced from 16 to 12. The subject titles have also been changed to make them more appropriate for the subjects.

Management: The distribution of teaching time among management subjects is changed from 6 to 7 semester hours by adding marketing also to the group to make this subject group more useful to accounting students.

Government Accounting: Public Enterprise Accounting which is very important for Iran is added to this group. Although the teaching time is reduced by one hour, the time allocated is quite adequate to cover the necessary aspects of these subjects.

Business Communications in English: The purpose of this new subject is to improve the English proficiency of accounting students to increase their ability for further studies as well as to enhance their employability.

Internship in Accounting: A total of 3 semester hours is allocated to internship to make it an integral part of the accounting curriculum. Under the guidance of an academic and the supervision of an accountant/manager, each student is required to complete an internship programme in a suitable public or private sector organisation and submit to the university a report based on his/her training. The report should be used for assessment purposes.

It should be noted that in the case of the subjects with semester hours greater than 4, the accounting department of each university must determine how that main subject is to be split into a number of individual subjects with an appropriate title being assigned to each of them. Most up-to-date and relevant topics, concepts and techniques should be included in the syllabus of each subject.

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