THE VALUE AND DEVELOPMENT OF SOFT SKILLS: THE CASE OF OMAN

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Abstract

The purpose of the study is to assess the role of soft component of human capital theory and explain the differences in soft skill endowment in Oman. Being quasi-experimental, the methodology envelops not only quantitative analysis but also qualitative case studies and in-depth illustrations to exemplify the relevance and relative contribution of soft skills vis-à-vis hard skills before and after intervention programs.

The research questions relate to: what are soft skills, how they can be categorized and measured and how differences in their endowment can be explained in different skill groups in different institutional setups, besides identifying the different sources of acquisition of soft skills and impact of the intervention programs like training, coaching and mentoring. The objectives have been to measure soft skills through an index in different skill groups in banks and oil companies; to assess the distance travelled and to assess the interaction between hard and soft skills in the performance of the employees. The hypotheses perceive variability in endowment of situational as contrast to personal and interpersonal soft skills, the association between soft and hard outcomes and distance travelled and the performance of the reference group. The general sample pertains to 120 (the intervention sample being 60) in four institutional setups equally distributed between senior and junior managers, while one third of that concentrates on the in-depth reference group analysis.

Data analysis (regression included) and narratives document soft skill impartment by higher education institutions in the region, besides the occurrence of high rate of increase especially in situational soft skills owing to intervention, the better performance of senior managers in soft skill index and distance travelled and human capital index, the importance of workplace learning, mentoring and idea storming on the impact of soft outcomes and the showcasing of the reference groups in experiential learning. The study pioneers in identifying the critical soft skills in the workplace and their measurement and also in their contribution to personal and institutional development.

The analysis shows that the oil companies place a lower degree of emphasis on soft skill development when compared to the banks owing to technical requirements. The soft skill index for the senior managers would be higher in the banks when compared to the oil companies. The difference will shoot up as a result of intervention programs, indicating the benefits of effective training and development policy in the banks. Adoption of best practices needs analysis, case study approach and positive interactions between the trainers and the trainees which prove as important factors in up skilling. Since the reference group is drawn from the intervention sample, the difference in the soft skill index emphasizes development pattern that is taking place. The impact of intervention is shown as greater in the case of senior managers especially in the banks when compared to the junior managers. It appears that the approach to soft skill enhancement is biased towards the senior managers in the banks who utilize the intervention facilities to the maximum extent possible when compared to the junior managers.

When the bank and the oil company scores are averaged for the regression analysis, the relative contribution of hard and soft skills to performance shows that the senior managers are able to realize a
higher level of soft skill enhancement when compared to the junior managers (the soft skill coefficient being higher than the hard skill coefficient in the post-training scenario).

In respect of improvement in human capital stock index, the bank senior managers realize higher scores in soft skill when compared to hard skills, whereas in the oil companies, the contribution of soft skill to the index is lower. Though soft skills are important, the analysis shows that hard skills dominate and only in Bank A the senior managers realize a higher contribution of soft skill than the hard skills.

The observation that skills are developed not only in the workplace but also in other institutional setups like family, school and college negates the signaling approach to educational planning (where the emphasis is only on the workplace) and reinforce the prevalence of human capital theory, especially its soft component. Soft skills not only empower the higher education institutions and workforce in advancing career development and personal growth, they also create new opportunities and go beyond money motivation. The importance of experiential learning is brought out by concentrating on narratives.

Though there are many studies on human capital theory and empirical studies on soft skill development and measurement are very much limited in their focus, the present study attempts to bridge the knowledge gap in the understanding of soft skills in workplaces across different avocations and skill groups. The construction of the skill wheel and the soft skill index along with distance travelled and human capital index showcases the growing importance of soft skills, the exposition of which rests with the present study.

1. KNOWLEDGE ECONOMY, HUMAN CAPITAL AND DEVELOPMENT

The purpose of this study is to evaluate the strategy of higher education in achieving the long-term objectives of soft skill development in Oman. The research questions revolve around: what is the role of higher education in economic development; what is the role of human capital (hard and soft skills); why the study of human capital is important in evolving strategies of higher education in the promotion of soft skills; why human capital theory is a better alternative than market signalling or screening in espousing the cause of soft skills; what is the role of higher education institutions in skill development and what is the role of human capital in education development in Oman.

Since human capital is the stock of knowledge, skills and abilities, which can help employees increase productivity and performance at work, it may be interesting to know how far it has been able to contribute to economic development vis-à-vis other types of capital. There have been many studies on this aspect (dealing with hard or technical skills) but our interest is not only to assess the relative contribution of the hard skill components but also to document the presence and need for soft skills in an emerging economy like Oman. This study contributes to the need for soft skills at the learning stage and at the workplace to be enabled by experiential learning.

1.2 Interest in the study

With a global economy comes opportunity and competition. As the Dean of a private college in Oman, I help my students meet that challenge through a curriculum and culture that embraces innovation. Our programmes incorporate masters and bachelor’s degrees in business, computing and accounts focused on innovation management and entrepreneurship. Our faculty is committed to both outstanding teaching and providing an opportunity for students to be trained. The flexible undergraduate curriculum that we have implemented allows every student to customise the programme to achieve his or her goals. We have launched an initiative to support first-year students during that critical transition from high school to college through foundation courses. The primary objective of our education is to provide the students with the skills required for the workplace so that they can be competitive and be responsible citizens. However, knowledge and skills alone do not suffice. The important
thing is attitudes and I feel that neglect of this component in the education system is responsible for many of the ills in society. We have to respond to this increased awareness, by exploring and experimenting in our own individual and creative ways. We need to take some responsibility for the condition of the student and for the direction he or she is heading and we should take absolute responsibility for our own behaviour and actions.

From this perspective as an education administrator, I have been involved in higher education in Oman since many years and I am instrumental in devising ways and means for development of higher education in the region and for the growth of private sector participation in tertiary education. Education in Oman has received importance only in recent times. As a Dean, I have participated in many national and international workshops and conferences on higher education and felt the necessity to recognise the critical role of human capital in educational planning and development. I have noticed that not only among students but also among workers in many institutions, the attitude to creative thinking is missing which has prompted me to undertake studies relating to human capital. Also, I found that human capital was equated with only education qualification resulting in the lack of awareness on attitudinal change toward innovativeness. With the research methodology training I had during my graduate degree, I began to browse literature on human capital and came out with interesting ideas on the softer side of human capital. I realised that what the students and workers lack is soft skills and hence I must equip myself with grounding in the theory of soft skills so that I can develop teaching methodologies for my students to excel in soft skills which is more important than hard skills. The interest in soft skills invariably enabled me to assess education as to its contribution to knowledge economy and sustainable development. The culmination of this interest was the undertaking of the present study.

1.2. Higher education in Oman

Oman is the second largest Gulf Cooperation Council (GCC) state in terms of area after Saudi Arabia and is composed of varying topographical areas consisting of desert plains, valleys and mountains with scanty rainfall except the southern region which receives monsoon rains. Oman was predominantly an agricultural country specialising in the manufacture of traditional artefacts like pottery, copper work, weaving and silverware before the discovery of oil in 1962. The social infrastructure was weak with very few educational institutions and hospitals. Many Omanis migrated to other countries to sustain their livelihood. After 1970, when oil became the major source of growth, the government launched successive development schemes to modernise the country. Today, Oman has evolved into a middle income country, with its nominal per capita income level of US $20,000 (CIA, 2009). It has a population of about 3.4 million with a workforce of about one million. Of this, 40 percent are expatriates (MONE, 2009).

We can also consider the human development index, which takes into account life expectancy, education and per capita income levels (with equal weights) that brackets Oman as middle level with a rank of 53 out of 179 countries in 2008 (UNDP, 2009), showing an improvement over 2003 when it was ranked 79 (UNDP, 2005). Countries with high per capita income also have a higher human development index and Oman has been showing progress in human development also. Oil revenue has been financing improvements in major social and economic infrastructures like schools, colleges, hospitals, roads, communications and construction. However, given its very low oil reserves to current production ratio, the necessity arises to broaden the Omani economic base and hence the attractions of developing a knowledge-based economy so that long-term sustainability can be established. This becomes pertinent when the illiteracy level was at around 20 percent according to 2003 census (MONE, 2003).

Towards long-term development, the government has launched Vision 2020 with the objective of complete literacy by the end of seventh plan in 2010. To achieve this, the government has increased its spending on education up to about five percent of GDP
recently (MONE, 2008a). The share of primary education in total government expenditure has been 36 percent, secondary education having 47 percent share leaving less than 10 percent share to tertiary education (UNDP, 2007). The importance given to tertiary education is grossly inadequate when compared to many advanced and also developing countries. It should be noted here that it is not mere reallocation of resources to tertiary education that will improve its status; rather it has to be through a balanced development of all levels of education. This requires additional investment in human capital which will facilitate substantial increase in science and technology (S&T) and research and development (R&D) intensity in many sectors. If manpower demand by these sectors will be a function of the existing level of technology and the quality of human capital required in particular sectors, as and when technology intensity increases the nature of manpower demand by firms will also change. Higher education involves increased investment coupled with increased productivity and innovativeness. The level of technical progress would be incorporated in the human capital endowment (Becker, 1993).

Currently, the proportion of unskilled and semiskilled labour force in Oman is about 75 percent, showing little variation over the past decade (MONE, 2008a). Through what is called as Omanisation process, the government is trying to replace expatriate workers with local workforce wherein targeted increased level of localisation in many sectors is to be achieved. The growing demand for technical manpower in the oil and non-oil sectors then will have to be matched with the supply. Towards this, many HEIs have been established to educate and train the youth.

The Arab Regional Conference on Higher Education (1998) has realised the importance of the contribution of higher education to local development. One of the main targets of the strategy has been to make HEIs prompt the students to undertake community service on the lines of UNESCO’s (2003) novel programme called the UNILIT (University Students for Literacy). The concept is based on the idea that “each one teach one” which presupposes that each university student enrolled in UNILIT will raise at least one person per year out of the darkness of illiteracy. The hope is that by the time a student has graduated from university, he or she would have contributed to eradicating the illiteracy of at least four individuals. This initiative is particularly important in the Arab region where illiteracy rates remain some of the highest in the world. But it is also an attempt to connect grassroots literacy programmes and HEIs in an effort to achieve sustainable human development. University-community partnership allows universities to extend their commitment to educate and to provide educational services at different levels of learning (UNESCO, 2003). In this, the focus of the innovative programmes is on the build-up of soft skills not only for lifelong learning but for better employability too.

In Oman, there are ten publicly-run colleges and a state-administered Sultan Qaboos University besides 25 private colleges and four private universities as a result of which the contribution of higher education has been marked in respect of enrolment and improvement in literacy. However, the challenges faced by these institutions are many and include absence of a clear comprehensive educational philosophy and the education system has failed to introduce consistent training programmes especially in soft skills and create partnership with the business community in better utilising the skills and efficiencies of the graduates. It is very clear that there is a gap between the society’s present and future needs for education and the plans for further expansion in education system (Wagiran, 2008).

The importance given to educational development in the country is of recent origin. The proportion of population obtaining higher education is less than eight percent but has to double if the necessary content of S&T personnel for knowledge development has to be obtained. The changing industrialisation scenario in the country demands generation of appropriate skilled and technical personnel which the HEIs have to supply in the respective fields. If Oman has to compete with other countries in achieving educational standards and productivity increases, human capital policy to be adopted depends on
focus on soft skills. From this perspective, it is essential that the country assesses the stock of human capital and willingness for innovativeness in synthesising the above aspects towards increase in competency and governance. Some of these objectives have been spelt out by the Seventh Five Year Development Plan (MONE, 2008b) and looking at the progress made especially in the recent years, it may be said that the achievement in respect of enrolment in higher education has been high but the focus on S&T and soft skills has been weak, given the country’s dependence on technology imports.

In conclusion, the disparity in educational attainment and in productivity between the developing and advanced countries lays in differential knowledge generation and use. HEIs have been spearheading knowledge creation and transfer through various strategies in the globalised era. Investment in human capital has showcased the critical role of education in economic development and trade in human resources through strategic alliances has resulted in diffusion of knowledge and innovativeness. For a country like Oman which has initiated universal education with an emphasis on knowledge-based economy, higher education has a daunting role to play in generating workforce towards achieving global competitive advantage. In this, emphasis on the soft component of human capital becomes crucial. Since the contribution of human capital to economic growth is well established we would like to disaggregate human capital into hard and soft components to evaluate how the development of the latter will speed up the process of knowledge development. The HEIs have the responsibility to develop the soft skills of students so that they would be competitive at the workplace. HEIs in Oman have to concentrate on the development of soft component of human capital through partnership programmes for better employability of students.

In understanding the role of education in economic development, the status of educational planning within that of economic planning requires to be assessed, for it is the nature of educational planning that impact on the quality of higher education. Chapter two critically assesses the different aspects of educational planning along with its approaches to bring in the relevance of human capital theory in inducing strategic directions in education development.

2. REVIEW OF RELATED LITERATURE

The first part stressed the importance of human capital in knowledge development and this chapter examines the role of human capital in educational planning. While human capital itself is an approach to economic development, approaches to human capital development focus on training to improve business, technical and soft skills of employees. As Foss (2008) points out, development of human capital takes place through a continuously supportive process which stimulates and empowers individuals to acquire knowledge, values, skills and understanding they require at the workplace. In the past, education was considered as a consumption good, in that its primary function was one of facilitating the lifelong learning (European Commission, 1995). Hence, the approach to educational planning has to focus on both lifelong learning and acquisition of knowledge and sustainable education development results. The chapter reviews literature on educational planning and human capital development, with special emphasis on measurement of human capital and how it can be augmented through soft skill teaching and training at institutional level or workplace.

2.2 Approaches to educational planning

Educational planning aims at tuning education standards to the demands of globalisation in achieving the multiple goals of growth and development. It focuses on the importance of forecasting and the advantages of qualitative indicators in addition to quantitative aspects toward establishing a viable developmental plan. The relevance of decentralised decision making and implementation process involve interactive and rational planning models. Planning involves application of systematic analysis toward education development that meets the needs of the society. It establishes relationship between general planning mechanisms and educational
policy (OECD, 1980). Educational planning (within the ambit of general planning) is concerned primarily with future development and embodies the skills of anticipating, influencing and controlling the nature and direction of the change. It deals with the consequences of active intervention which will change the present into something better in the future. Further, it is closely linked not only with policy making but also with decision making and determines appropriate goals and prepares for the change. The overall strategy has to be concerned with sequence, consistency and probability (Forojalla, 1993).

The approaches to educational planning emphasise on development of human resources along with other resources so that the planning goals are realised. The screening approach was mooted by Arrow (1973) and others, while the signalling approach was enunciated by Spence (1973). Becker (1975) commented on the human capital approach and also on credentialism. Lazear (1977) and Gullason (1989) consider the consumption value of education. This approach is similar to the social demand approach wherein willingness to pay emerges as the sole criterion for individual demand for education. Webster (1970) reviews demand for places, manpower requirements and rate of return approaches to educational planning. Forojalla’s (1993) approaches cover the nature of human resources, social demand and manpower requirements. We propose to integrate all these approaches and group these under four function-oriented approaches so that the treatment becomes comprehensive for comparison. In addition to human capital approach, other approaches of willingness to pay, screening and manpower requirements will be examined as to their relevance to augment educational development.

2.2.1 Human capital approach

Knowledge is an inherent part of human capital development and involves knowing about facts and collecting information to do something. In continuation of section 1.3, issues like know-what, know-why, know-how and know-who can be considered as different stages of knowledge development (OECD, 2000). ‘Know-what’ refers to knowledge about facts and is close to the process of information capable of being broken down into bits and communicated as data. ‘Know-why’, which is crucial for technological development, refers to scientific knowledge of principles and laws of nature in the human mind and society. Production and reproduction of ‘know-why’ is often managed by specialised institutions like research laboratories. ‘Know-how’ is the ability to do something and is related to the skills of production workers and the ability to perform actions more generally. The sharing of know-how creates networks and when networks are formed between research teams and laboratories, ‘know-who’ assumes information about ‘who know-what’ and ‘who know-how to do what’ (OECD, 2000). Know-how and know-who are basically tacit knowledge and therefore difficult to quantify and measure. Know-what and know-why are easily codifiable while know-how and know-who indicates learning process that involves social practices. Know-who is socially embedded knowledge which is difficult to be transferred through formal channels of information (OECD, 2000). Promotion of skills and learning capabilities to exploit the above aspects of knowledge leads to up-gradation of human capital through formal education, continuous and lifelong learning and training to match labour supply and demand in terms of skill requirements.

The concept of human capital was first proposed by Jacob Mincer (1958), later developed by Theodore Schultz (1961) and Gary Becker (1962). According to them, human capital Human capital is the stock of valued skills, knowledge and insights, controlled by an individual wherein the attributes become valuable in the economic context. This stock may yield labour and management services or entrepreneurship. Human capital has plays a part similar to that of physical capital like machinery or factories. been defined as the knowledge, competency, attributes and skills embodied in individuals facilitating the creation of personal, social and economic well-being (OECD, 2001a). It is intangible and hence estimates of its stock are constructed indirectly. It is embodied in individuals and cannot be disposed of or sold to others. It consists of hard component which is the cognisable technical skill and also the non-cognisable soft skill which is personalised.
According to OECD (2001b), investment in human capital becomes critical to develop both these components. Investment in human capital fosters technological change and in turn is affected by modern knowledge and technology changes. Innate ability, acquired knowledge through formal education and competency acquired through training on the job are the components of human capital (Blundell et al., 1999).

Human capital has been treated as a stock of assets yielding future cash flows. However, it could be substitutable by other forms of capital, especially in a neo-classical set-up. In modern endogenous growth theory, where technical change takes place within an organisation, human capital acts upon other factors and facilitates growth of indigenous technology, as well being augmented in the process. Human capital may be industry or firm specific, referring to skills or knowledge useful only to a single trade or employer and general, useful to all employers (Becker, 1993). According to Collins (1971), this approach is similar to technical-function analysis wherein education augments economic productivity directly. It is formal education which provides the necessary specific or general skills required for highly skilled jobs, accounting for increase in educational attainment. Technological progress changes the skill requirements for jobs continuously. Human resources have been contributing to creation of wealth in many countries and hence this approach toward educational planning emphasises the contribution of human capital to economic development. The present study is interested more in training and human capital development at the workplace.

2.2.2 Other approaches

The second approach to educational planning considers that what is important is the intrinsic or consumption value of education (Alstadsaeter, 2004; Forojalla, 1993; Webster, 1970). The approach is to be distinguished from the social demand approach wherein anticipated future demand for education from students and parents is estimated as stemming from private investment (Williams, 1974). Because it is demand-oriented, it can be construed that education fulfils the consumption aspect more than investment. The consumption approach indicates the role of non-pecuniary returns to education focusing on the willingness of individuals to pay for different levels of education. This suggests that instead of maximising lifetime income, the individual tries to maximise lifetime utility from education (Oosterbeek and van Ophem, 2000). While lower levels of education can be termed as consumption ‘bads’, higher levels constitute consumption ‘goods’. When human capital and consumption approaches are combined, Kodde and Ritzen (1984) find that the demand for education will be greater than in human capital approach, owing to direct utility gain through consumption demand.

The third approach centres on the so-called screening model (Arrow, 1973), which assumes that education has no inherent social value. Instead, the system provides a method of sorting students through a filtering process. By this method, the most able students are placed in the most difficult and best remunerated jobs. In this approach, output of the system is assessed through ranking, where the quality of the ranking is based on the capacity to perform high quality jobs. Education may act as a signal or a device for unobservable ability wherein firms sort out information about ability from education and students choose a particular educational level to signal their ability to potential employers (Bedard, 2001). The signalling model predicts a higher high school dropout rate in region that contains a university whereas the human capital model predicts no difference at all (Quiggin, 1999). However, under signalling, education certifies which people would have greater ability but it does not tell in what way that occurs, because schooling may not significantly reinforce that ability in any direct manner (Sakamoto and Kim, 2006). Though education may be associated with productivity, it may not directly cause it. Rather, the association between education and productivity stems from the individual’s ability and trainability (Sakamoto and Kim, 2006). As education may be the primary screening device which employers value most, it certifies who requires lower training cost based on the ability and trainability. Changing the distribution of education may change who
gets the better jobs but distribution of wages may not be affected. Hence, according to this model, education has little to do with equalisation of wage distribution and reduction of poverty.

The concept of ‘credentialism’, similar to that of screening, indicates that the degrees earned by the students convey information about their abilities and capacities. This suggests that the earnings of graduates will exceed those of high schoolers not because productivity of the college graduates is raised, but because more productive students move over to colleges (Becker, 1993). However, when the employers consider only the certificate of the prospective candidates, they tend to focus on getting the most qualified personnel resulting in less qualified people not being selected for the jobs, even though they may be eligible for the same. This process, if continued, may lead to mismatch between qualification and wages owing to supply-demand divergences and may result in ‘over-education’ or ‘under-employment’ situations. The difference between screening and credentialism is that while employers hire workers with credentials, the required credentials have little or nothing to do with any direct skills and actual earning capacity, whereas under screening, workers with credentials will be more productive than those without credentials.

It has been observed that higher education students have at least some interest in the labour market outlook when they choose education (de Grip and Heijke, 1998). As a remedy for the poor match between the educational system and the labour market, the manpower requirement approach was initiated by OECD in the 1960s (van Eijs, 1994). In this, planning begins once GDP target growth is fixed and manpower requirements in various occupations and educational qualifications required for these occupations are determined. According to International Labour Organisation (Forojalla, 1993), there are 45 occupational categories under four classes of university degree or equivalent; secondary education with one-three years of training following higher school certificate; secondary plus technical training for one or two years at certificate level but below a diploma and full primary education plus practical training. Labour requirements, when compared with flow of graduates will provide the required training needs which will enable the actualisation of GDP target. However, the matching process in the labour market becomes problematic and hence the approach has to be more flexible to take into account the reliability of forecasts. Under this approach, there has to be a match between education and labour market (Dekker et al., 1993), wherein labour market data are incorporated in many information products for vocational and educational purposes.

Further study becomes a way to avoid unemployment and a higher degree will increase the opportunities in the labour market. The employers who demand labour have to know about the nature of workforce to fill up the vacancies in that the workers will have the specific knowledge and skills towards achieving increased productivity. Manpower development becomes the building stock for enhancement of human resources through formal education and training (Abegaz, 1994). The assumption of educational attainment determining productivity (human capital theory) is relaxed under this approach since the matching process is concerned with allocation of workers with different educational backgrounds over jobs in which different skills are required (de Grip and Heijke, 1998). Where there is a mismatch between the acquired and required skill level of the workers, this indicates the existence of under or over-education of the workers.

2.2.3 A critique of the approaches

Educational planning has become an important tool in generating different educational attainment levels not only to match the manpower requirements but also in the enhancement of productive capacity of the organisation and the economy. Therefore, investment in education has to yield a rate of return such that investment is justified as in any other sector. If investment in education is expended just for its consumption without any impact on the returns, the country’s overall investment programme becomes less productive. The willingness to pay for education is justified only when education returns it back. Though education can be considered as a lifelong learning process, unless it yields adequate
earning capacity, the learning process will be flawed or dependent on subsidisation by others. We construe that the investment component of education has much to contribute to development over that of the consumption component.

As regards screening, the approach in rejecting the association of education (beyond a certain point) to higher productivity maintains that increasing the number of people in higher education will result in lower standards and the usefulness of academic achievement will stand reduced. As contrast to human capital theory, education has little to do with productivity or equity and in regards to the poor people, screening will diminish their disadvantage against those where wealth and birth status make higher education easier. Under signalling, even though employers may initially lack information on the productive abilities of the workers they hire, they will acquire the information in due course of time. If education does not improve productivity and identifies productive workers only, then it will become less related with earnings as job experience accumulates. We may construe that when education becomes an effective screen, the better educated will become more productive and will earn more even after the employers acquire more information. When there is emphasis on worker productivity, the signalling component of the return to education becomes small.

If credentialism is the rule, the required credentials will have little or nothing to do with the actual productivity on the job. The screening approach contends that workers with credentials are more productive than those without credentials. However, the human capital theory explains more of the variance in outcomes such as wages and earnings than screening.

The relationship between human capital and growth suggests that increase in productivity becomes the major factor in innovation and competitiveness. Hence, increase in the quantity and quality of the human capital stock gains momentum as recommended by the Lisbon strategy in 2000. The OECD Jobs Study (OECD, 1994) emphasised investment in human capital and extension of lifelong education. Psacharopoulos and Patrinos (2002) have compared returns on education for three decades for many countries with estimates on both private and social returns. The annual rate of return on upper secondary education averaged 16.4 percent for women and 14.9 percent for men in 1995 when compared to 13.6 percent returns to business capital in European Union (OECD, 1998). Above the threshold level, every year of schooling and one percent increase in investment in human capital contributes to 0.6 percent of GNP (Lleras, 2004). At the micro level, there is evidence that education attainment and soft skill development are primary determinants of individual income and labour market status. It has been observed that an additional year of schooling increases wages by around six percent in the European countries like Italy and can increase up to nine percent in cases of under-regulated labour market. A year of training (including soft skills) increases wages as much as by five percent (Fuente and Ciccone, 2002).

Countries which had devoted a sizeable portion of their GDP (say around six percent in each on health and education) have witnessed rapid growth of skill formation and augmentation of human capital (OECD, 2006). Further, an increased share of expenditure on higher and tertiary education has ushered in the knowledge-based economy. It can be argued that growth in knowledge complements basic factors of production in improving their productivity and enhancing their acquired competitive advantage. In countries where investment in education has been below the desired level (such as in Africa), technological achievement and productivity growth have been slow. Because of this, not only has the rate of effective utilisation of the basic factors slowed down, but their integration with other factors has become less efficient.

One of the main critiques of human capital approach relates to the lack of substitution among various groups of workers and it may be that fixed coefficients of employment forecast may fail to consider the impact of technology on the skill up-gradation of different groups and the need for predictions may be a source of error. The best way will be to relax some of the assumptions of human capital theory like educational background only as
determining productivity. It can be argued that individual’s productivity will be closely related to the quality of the matching process between education and the job. It has been reported that the returns on training in soft or fundamental skills are higher when compared to that on business or technical skills (Woodhall, 2001). As school enrolment rates increase, average incomes may stagnate with increasing unemployment rate. By improving the quality of education, it may be possible to endow human capital, both in its hard and soft components with an orientation toward lifelong learning thus transforming the firms into learning organisations. The present study is concerned with the organisations that improve the quality of human capital through specific interventions.

2.3 Measurement of human capital

Measurement of human capital will indicate not only its contribution in the production process, but also its role vis-à-vis other resources. The different measures of human capital include cost-based, income-based and educational-based measures (OECD, 1998). Inputs into the human capital production process including cost of bringing up and educating people form the basis for the cost-based approach. The investment cost of education would include the opportunity cost of wages foregone while studying, while future returns will indicate the difference in the income stream accruing to persons with higher qualification. In the income-based approach, earnings of individuals will be influenced by acquired skills and education. In the education approach, human capital is based on literacy rates, enrolment rates and mean years of schooling. Defined differently, human capital may be considered as the present value of expected future returns or as the accumulated sum of past investment or as a sum of individual’s capabilities expressed in some common unit of account.

Early measures of human capital were more concerned with demonstrating the country’s wealth in terms of monetary value of both human and physical capital (Bassanini and Scarpetta, 2001). Later on, human capital became a variable to explain economic growth and a potential policy instrument. Human capital contributed to economic growth at the macro level and produced spillovers toward enhanced development of individual capacity (Le et al., 2005). Measurement of human capital may have limitations contributed by changes in technology, socio-economic conditions, changes in schooling and changes in work ethics (Murray, 2005). When human capital envelops soft skills, it has to consider not only educational attainment but different levels of soft skill development also, which may have a larger say in productivity increase.

Mulligan and Sala-i-Martin’s (1995) labour income-based measure attempts to obtain an index value rather than a monetary value of human capital. One of the advantages of this measure is that by netting out the effect of physical capital, variation in quality and relevance of schooling across time and space are pinpointed. Further, the elasticity of substitution across workers can vary and the method does not assume equal amounts of skills on workers with equal amounts of schooling. However, the model may fail when wages vary for reasons other than changes in the marginal value of human capital. The assumption of zero-schooling workers are identical always and everywhere and that different levels of schooling are perfect substitutes is open for debate. The model neglects the contribution of informal schooling, on-the-job training and health in concentrating only on formal schooling.

Jeong modified Mulligan and Sala-i-Martin’s model by considering the industrial labourer as classified by ILO rather than no schooling labour as numeraire. According to Jeong (2002), industrial labourers who supply their physical effort with little skill are more comparable than other types of workers. In this case, human capital can be defined as the ratio of aggregate labour income to the average income of the industrial labourer. It may be added here that industrial labourers have the same human capital across countries and contribution to human capital will be proportional to wage rates. According to this, rich countries have two to three times more value of human capital when compared to poor countries.
The estimated rate of return could be grossly overestimated because individuals differ in education and other characteristics. Becker’s (1993) empirical analysis suggests a strong correlation between ability and education. Even granting for adjustments in differential ability like rank in class, IQ, parents’ education, personality, communication ability, motivation and family upbringing, it can be proved that private rate of return would be more than 10 percent and there would be a marked earnings differential between college and high school graduates (Becker, 1993). Further, relationship between investment in education and on-the-job and vocational training, health and other human capital would also affect earning differentials. The gain from college education can vary depending upon urban or rural status, graduate or dropout status, race and sex even within a given demographic group.

The human capital theory explains interpersonal and interregional earnings differentials, the relationship between age and earnings and effect of specialisation on skill. Specific investments are expended for hiring costs to execute training and because of this unemployment may be greater among unskilled than skilled workers. College students on the whole tend to be more able than high schoolers but gains from college education will vary amongst different groups. Thus, the concept is relevant not only to micro investment in education, on-the-job training and other skills and knowledge by individuals and firms but also in understanding macro changes in inequality, economic growth, unemployment and foreign trade.

Following Mulligan and Sala-i-Martin (1995), we can measure the value of human capital as ratio of aggregate labour income to the wage of the uneducated. To support this argument we will have to assume that wages need not change for reasons other than changes in human capital and uneducated may be perfect substitutes for other labourers. In the aggregate production function, production depends on total human capital and non-human capital in the economy (Mulligan and Sala-i-Martin, 1995). This is similar to the model proposed by Lucas (1988) where the concept of capital is broadened to include human capital also, as contrasted to attribution of growth to existing stock of human capital which generates innovations and improves a country’s ability to imitate and adapt new technology.

Human capital is related to labour force and as such includes all productive aspects of education, on-the-job training, physical and mental fitness and the quality of matching process between workers and firms (Murphy and Saleh-Isfahani, 2003). Because different people have different skills, it may not be possible to simply add all human beings to compute human capital. People who are more productive have to be given a larger rate. According to Jorgenson and Fraumeni (1992), a machine’s productivity is instrumental in its quantitative performance whereas human capital has to be quality-adjusted sum of the labour input. For example, employing a zero-schooling worker (base) implies that the productivity and wage for other educational qualifications may differ across different environments owing to changes in aggregate stocks of physical and human capital and other inputs. In other words, individual productivity depends not only on the individual stock of capital but also on the available stock of other inputs. The author aggregates the level of skill of every individual by computing the stock of human capital of all workers with certain years of schooling and move over different educational attainment status of the labour force aged 25 to 65 years with the following categories (ILO, 1972):

0. No schooling
1. 0-4 years of elementary school
2. 5-8 years of elementary school
3. 1-3 years of high school
4. High school graduate
5. 1-3 years of college
6. College graduate or more.

In our analysis in chapter seven on estimating changes in the quality of human capital stock, we will be adopting a similar yardstick to measure changes in the quality of human capital stock, wherein the baseline will be that of high schooler. Human capital computed using earnings per person may show a very strong correlation with labour income and skill formation (Jeong, 2002).
categories, wage for each category has to be taken to be the average weekly earnings as against earnings of those with no schooling.

Mulligan and Sala-i-Martin (1995) have constructed measures of human capital in the US for six census years. They assign different weights for different workers because of the fact that schooling in different places under different times has different qualities. Further, different types and quantities of schooling have different relevance in different places over a period of time. The important contribution of the authors lies in allowing for variable weights to capture the schooling quality and its relevance. The benchmark is a zero-schooling worker and the measure of income requires the assumption of perfect elasticity between zero-schooling workers and the rest. Since labour income incorporates both human and physical capital, higher physical capital would mean higher labour income. If labour income is divided by wage of a zero-schooling worker, the effect of physical capital can be separated. Human capital has been found to be positively related to average years of schooling. It is found that efficiency was increasing in US schooling though the phase at which the wages rose with schooling varied over time (Mulligan and Sala-i-Martin, 1995). However, there have been cases where some states in the US had low human capital stock for higher schooling. Movements in the relative productivities of different workers showed that in 1980s human capital growth was larger than that of schooling. This leads us to the different strategies to be adopted to develop human capital so that not only productivity levels but also the knowledge endowment of the society can be improved.

2.4 Human capital development through soft skills

Measurement of human capital and its critical role in the labour market induces the organisations to employ quality labour input for competitive advantage. In this context, it is soft skill formation techniques that assume criticality in improving the quality of human capital. We will define soft skills and establish their growing importance in this section, while its classification is explained in the next chapter. Soft skills refer to the cluster of personality traits, social graces, language proficiency, personal habits and teamwork. Since the focus of the thesis is on soft skills, we shall consider this aspect in some detail. Though the concept of soft skills is of recent origin, it was Dale Carnegie who spearheaded its crucial significance in his 1936 book ‘How to win friends and influence people’ and set the motion for soft skill training and development. Even today Dale Carnegie training system is practised world over in order to improve skill endowments. Where skill shortage is witnessed, it is more so in the case of soft skills and the employers will be very happy to have ‘aesthetic labour’ that could look and do right. In modern-day business courses, soft skill component like personal development, effective communication and leadership qualities and problem solving skills are incorporated into the curriculum so that when the students come out of their graduation, they will possess the necessary soft skills the companies look for. Soft skills not only empower hard skills and create new opportunities, but also help to advance personal development and ethics in professionalism. Stasz et al. (1996) and Fleischer and Dressner (2002) have emphasised the importance of soft skills for new recruits and in any workplace and how employees progress after the initial appointment.

The term ‘soft skill’ has two origins according to Simpson (2006). The first originated from employers identifying the need for non-traditional skills which relate to the individual and how they interact with others. Owing to the changing nature of business and industry where soft skills play a dominant role and when unemployed people have to be inducted into employment, the target groups have to be identified with specific skills which are different from hard skills (Dash, 2001; Gorman, 2000). The interventions of the European Social Fund (ESF) projects in assessing the progress made by beneficiaries in not being defined by hard targets gave credence to the emergence of soft skills through the distance travelled measure.

According to Simpson (2006), soft skill is an ability or competence, either inherent or acquired which can be repeatedly performed. It is a skill which can be verified and assessed
through its performance only and can be demonstrated, learnt, taught, trained or coached but acquired only by performing them and can be improved through reputation and practice. Moss and Tilly (2001) view soft skills “as skills, abilities and traits that pertain to personality, attitude and behaviour rather than to formal or technical knowledge”. These skills refer to a person’s psychological traits, social graces and other behavioural patterns like motivation, communication, team spirit and self-confidence. The importance of the soft skills emerges from the demand by employers looking into non-technical skills in the individuals which facilitate interaction with others (Schick, 2000). The other reason for their emergence is the need for soft outcomes where the progress of the individuals is described as ‘distance travelled’. In the absence of soft skills people get fired when they do not show for work or show up late. Even if they show up they are not ready to work because they are either sleepy or hung over. They may be improperly dressed, hostile to supervisors, disobeying direct orders, lacking in production and being rude to customers (Fan et al., 2005).

Of the two approaches of sustainability in soft skill endowment (Hillmer, 2007), the stand-alone model of skill development uses the approach of training and providing opportunities to develop soft skills through specific courses that are carefully planned for this purpose. Embedding soft skills in the teaching and learning activities across the curriculum or workplaces is the precinct of another model. Each element of soft plan skills is spelled out in the learning outcomes and then translated into the instructional. This is followed by implementing several teaching and learning activities. Employees are assessed as to the progress they make in theoretical knowledge, know-how (in which circumstances to use specific knowledge or adopt specific attitudes), show-how (the ability to use knowledge and skills or adopt specific attitudes) and demonstration in work. Toward achieving this, they develop competencies at the workplace as suggested by Maguire and Hogan (2004) through acquiring interpersonal, personal, business and technical skills required to work effectively with others. The next chapter will discuss the soft skill methodology in detail.

In sum, since education and economic development are closely associated, educational planning has to function as an instrument in achieving improvement in productivity, with due importance shown to non-economic aspects. A knowledge-based economy has to turnout scientists capable of innovating and human capital theory becomes relevant in this case. The higher the level of education and more technical the training, productivity will be higher. Higher productivity levels along with higher educational attainment will lead to innovativeness, thus resulting in competitive advantage for the country.

Under willingness to pay approach, education is termed as consumption rather than investment and under manpower requirements approach, the chances are that the planning mechanism will be influenced by politicians and bureaucrats and delineation of workers appropriate for specific jobs may be problematic. Though screening identifies productive workers, when credentialism creeps in, the association between educational attainment and worker productivity is impaired. Hence the human capital approach which has been empirically validated in many countries forecasts investment in education so as to get returns from economic development. The soft component of human capital may be difficult to be learned unlike that of its hard component. However, it may be developed through different learning methods like experiential learning. Also, through training it may be possible to develop soft skills and this has to be the focus of higher education in validating the human capital theory. The next chapter will introduce the concept of soft skills and explain how they can be measured. The chapter develops a methodology to assess the prevalence of different soft skills, exemplifying their importance in human capital theory and economic development.

3. METHODS OF THE STUDY

3.1 Introduction

Development of human capital is time consuming and a when educational planning
strategies and economic growth prospects change, the importance accorded to human capital also changes. The experience of the advanced countries has shown that higher the level of investment on education, higher has been the contribution of human capital and when compared with that of physical capital, the rate of return on human capital has been higher (Becker, 1993). The fact that human capital has assumed a better status than physical capital and that under an endogenous technological regime which instigates augmentation of both the factors, human capital assumes the role of the leading factor. Human capital is proxy by educational attainment; however, in the service oriented world, mere educational attainment is no guarantee for employability and hence interest on soft components of human capital has ushered in a new field for research.

The concept of soft skill and its measure developed in the third chapter is employed to generate a soft skill framework for empirical testing in Oman. Section 4.2 identifies the research areas of the study – the problem of soft skill measurement and its application. Section 4.3 presents the research questions that become relevant for the methodology. Based on the questions, the objectives and propositions are listed in section 4.4. Section 4.5 discusses the broad research approaches in social science research. Section 4.6 elaborates the research design wherein qualitative and quantitative methods are described along with quasi-experimental design. The theoretical framework is constructed through development of skill wheel, distance travelled, soft skill index, human capital qua lity and the focus group analysis. Section 4.7 explains the sample design wherein data collection procedures and practical issues encountered in sample selection are discussed. The institutional and individual sample structure is presented in the section. Section 4.8 explains data analysis which includes data triangulation, the regression method to showcase the relative contribution of hard and soft skills and the ethical issues in research. Section 4.9 concludes, pointing out the limitations of the study.

3.2. Statement of the research questions

Since human capital plays a crucial role in the production process when compared to physical capital and is composed of both hard and soft skills and owing to the recent emphasis on soft skills by many organisations, this study focuses on the role and significance of soft skills. Hence the research question to be posed would be:

- What is meant by human capital and what are its components?
- Soft skill is personal and subjective and not only enables personal development but also leads to interaction with other people in given situations.
- What is meant by soft skill and how soft skill grouping may be accomplished?
- Soft skills endowment will be different in different skill categories or functions and would vary according to the emphasis shown either to personal, interpersonal or situational soft skills in different organisations as indicated by a skill wheel. The research question to discuss this would be:
- What type of treatment the higher education institutions in the region give to soft skill development?
- The individual soft skills may be rated by scores and based on the weightage of each soft skill, an overall index to denote the relative significance of the soft skills can be constructed.
- How may soft skills be measured and an index constructed?
- Distance travelled indicates the attainment of hard outcomes (better employability through accomplishment of soft outcomes which can be measured in terms of enhancement of soft skill in the post-intervention period when compared to the before intervention period). It indicates the movement to better employability consequent on the acquisition of soft skills. The skill wheel is constructed accordingly.
- How is distance travelled measured and assessed?
Intervention programmes like training, coaching and mentoring influence soft skill acquisition and the different sources of acquisition may be from family, schooling, higher education and workplace. At the work place, training, experience, ideastorming, business reading and mentoring may enhance the intensity of soft skill acquisition. The impact can be assessed by comparing before and after intervention scenarios. Following are the research questions to discuss these issues.

- How soft skills are acquired and what are the different sources of their acquisition?
- What is the relative contribution of various soft skill enhancement sources across different categories?
- What is the impact of various intervention programmes to enhance soft skills? The relative contribution of soft skill as contrast to hard skill may be assessed in terms of regression analysis where performance of an institution will be compared as before and after intervention. Experience and promotion are embedded in hard skill.
- What is the relationship between soft skill endowment and performance/productivity?

Since soft skill study is subjective, qualitative data have been collected in addition to quantitative data. The research design chosen has been quasi-experimental. Pre and post-intervention scenarios are compared with reference to the sample groups to assess the impact of intervention programmes. The analysis includes use of regression technique to bring out the significance of soft skills and narratives to illustrate the practice of several soft skills.

### 3.3. Objectives

Being one of the first studies on the measurement of soft skills for a region like Oman, the study has the following objectives:

1. To study the interaction between soft skills and hard skills components of human capital.
2. To study the importance of soft skills and to measure their contribution to the improvement of human capital quality and also to productivity;
3. To attempt measurement of soft skills and construction of a soft skill index in respect of high and low skill groups especially in banking and oil sectors.
4. To evaluate the contribution of training on the performance of the specific establishments.

The propositions with regard to the research questions to be considered would be:

1. Requirement of soft skill will vary according to the skill groups or functions.
2. The relative contribution of soft skill vis-à-vis hard skill improves after intervention
3. Changes in situational soft skills are more prominent than in personal or interpersonal soft skills
4. Hard outcomes depend on soft outcomes for distance travelled to be realised
5. Leadership, communication and teamwork are the major training courses that impact all the three soft skill groups.
6. Training, mentoring and experience are major sources of soft skill acquisition in the workplace.

### 3.4. Research design

#### 3.4.1. Quasi-experimental research design

There are different types of research designs- experimental, quasi-experimental, descriptive, surveys, observational, relational and causal (Berg, 2003). In experiments, we have control over the variables and can establish the causality. But these are expensive and time consuming and hard to generalize with small sample size. Quasi-experiments are very similar to true experiments but use naturally formed or pre-existing groups. A treatment group is compared with the pre-training situation to assess its performance over the years. For
example, if we wanted to compare senior and junior managers or the reference group with the general group regarding training impact, it is impossible to randomly assign subjects to either senior or junior (naturally formed groups). Therefore, this can not be a true experiment. When one has naturally formed groups, the variable under study is a subject variable (in this case - position) as opposed to an independent variable. As such, it also limits the conclusions we can draw from such studies (Berg, 2003). If we were to conduct the quasi-experiment, we would find that seniors had more training as compared to the juniors. We might conclude that being senior or reference group member thus results in having a higher quantum of training. But other variables might also account for this result. It might be that repeated exposure to day-to-day organisational problems has caused the difference in training impact. Perhaps more of the seniors had training in their early years as compared to the younger group due to increased awareness of the organisational issues. The point is that there are many differences between the groups that we can not control that could account for differences in our dependent measures. Thus, we must be careful concerning making statement of causality with quasi-experimental designs.

If an institution wants to test the effectiveness of a new training programme, it might decide to implement the programme on one group of employees and use a comparable group (no training programme) as a control. As the employees are not shuffled and randomly assigned to work different positions, the study has pre-existing groups. After a few months of study, we could then see if the training had better performance in the treatment group when compared to the pre-training situation. The results are again restricted due to the quasi-correlational nature of the study. As the study has pre-existing groups, there may be other differences between those groups than just the presence or absence of a training programme. For example, the training programme may be in a significantly newer, more attractive atmosphere or the manager from hell may work in respect of non-training situation. Either way, if a difference is found between the two situations it may or may not be due to the presence or absence of the training programme. With the exception of no random assignment, the study looks similar in form to a true experiment. As no random assignment exists in a quasi-experiment, no causal statements can be made based on the results of the study.

In observational research, involvement of the researcher with the group of study results in detailed analysis of its behaviour, but the problem of subjectivity and ethical issues may occur. In the case of surveys, questionnaires or interviews may be used depending on the nature of sample and quantification of the results. Since the research questions relate to assess the soft skills before and after the intervention programmes, quasi-experimental and qualitative methods have been used to assemble and analyse the data in this study. The use of quasi-experimental methods in the examination of this experience allows us to get a better understanding of the perspective of the study participants grouping them into treatment and control groups. One of the benefits of qualitative research is that it describes and analyses individual and collective social actions, beliefs, thoughts and perceptions (McMillan & Schumacher, 2001). The goal of this research study was acquisition of information related to the thoughts, perceptions and beliefs of individuals that participated in the training programmes. Qualitative studies are important for theory generation, policy development, training practice improvement and action stimulus (McMillan and Schumacher, 2001). Many goals can be accomplished using a qualitative research method; however, it was the goal of improvements in training practice that served as the impetus for selecting a qualitative research design for this study.

Case studies are characterised as being descriptive, focusing on the case and accommodating a variety of disciplinary perspectives (Merriam, 2001). Case studies are differentiated from other types of qualitative research in that they are intensive descriptions and analysis of a single unit or bounded system (Smith, 1978). The study involves determining the number of people involved and the amount of time for observations wherein the case is a single entity, a unit around which there are boundaries (Merriam, 2001). Case studies help us to
understand the processes of events and programmes in discovering context characteristics that will shed light on an issue or object (Sanders, 1981). Merriam (2001) states that insights gleaned from case studies can directly influence policy, practice and future research. By analysing the data for emerging themes and patterns, the data collection process was examined repeatedly to ensure the data was providing the most accurate picture from the perspective of the participants. Once the research method was selected it was necessary to select the data collection instruments. In qualitative case studies, interviewing, observing and analysing documents are commonly used to collect data (Merriam, 2001). Individual interviews were used as the primary data collection instruments for this study. Thus, we have used a mix of quasi-experimental (pre and post-training) and qualitative survey method (questionnaires for the general group of 120 and interviews for the reference group of 40).

In the quasi-experimental and qualitative method, we consider the demand and supply sides of soft skills which have to match each other for market perfection and optimal employment at the organisation level. The demand for soft skills will depend upon the functional requirements and expectations of the employers, technological domain contributing its own demand. The government and private policy may revise the skill requirements of particular jobs over the years. Further, labour market characterisation and human capital development may also exercise their markings on the soft skills market (Anderson et al., 1979; Gribbons and Herman, 1998). The personal traits, training, learning-by-doing, role analysis, following benchmarks and the necessity for interaction with others will determine the supply side of the balance sheet. Given these factors, we have then analysed the pre and post-training scenarios so as to assess the development of soft skills and how the organisations are able to bridge the skill gap toward achieving increased productivity and competitive advantage.

The pre and post-intervention scenarios require longitudinal data from the same respondent at two periods of time and analysing these data through regression analysis is intended to focus on the changes in the contribution of hard and soft skills over a period of time due to the intervention programmes. While assessment of qualitative data shows the status of soft skills in different institutions, comparing the performance of both hard and soft skills through the regression analysis pinpoints the relative contribution of soft skills in the performance of an individual which otherwise would have been problematic only with qualitative data. Hence, the research design employs this technique so as to quantitatively test the significance of soft skills and their impact on own and company’s development. The quasi-experimental-type narratives and the regression results complement each other in bringing out the essence of soft skill measurement on the one hand and how it has been nurtured and developed on the other hand.

3.4.2 Theoretical construct

This section extends the concept of soft skill as explained in chapters two and three by conceptualising it into three categories of personal, interpersonal and situational and constructing a skill wheel and the distance travelled methodology. The soft skill wheel as explained in figure 4.1 may have different ramifications for different categories of workers in different work cultures. Not only the soft skill requirements will be different for different skill groups but also in different functional attributes. Because of this, the significance of soft skills will depend upon the specificities related to the individual, institution or location. Hence, this study constructs a soft skill index based on the incidence of the different skills in different skill groups. The intensity of the soft skill index indicates the nature of employability and competence of the workers in achieving the goals of the organisation. The transformation from basic to core and from core to advanced skills is indicated as ‘distance travelled’ as developed in the third chapter.
Soft skill index, constructed by the combined effect of the three skills indicates value addition to the particular individual in skill endowment. Since the index is made up of three skills which are crucial for overall job requirement (some of them may not be that much required for particular jobs), the scores in each skill is aggregated to obtain the index. If many skills are the most sought after, the index considers all those skills.

### Table 1: Hypothetical soft skill index

<table>
<thead>
<tr>
<th>Skill group</th>
<th>Weightage</th>
<th>Maximum score</th>
<th>Actual score*</th>
<th>Index (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal</td>
<td>33.3</td>
<td>5</td>
<td>3.5</td>
<td>70</td>
</tr>
<tr>
<td>Interpersonal</td>
<td>33.3</td>
<td>5</td>
<td>2.9</td>
<td>58</td>
</tr>
<tr>
<td>Situational</td>
<td>33.3</td>
<td>5</td>
<td>3.0</td>
<td>60</td>
</tr>
<tr>
<td>Overall</td>
<td>100</td>
<td>5</td>
<td>3.1</td>
<td>62</td>
</tr>
</tbody>
</table>

* Hypothetical score where weights are equal

Since the focus is on the above three skills the differences in group weightage may be due to difference in employee categories (such as senior or junior managers), work culture or location. In case if they are of equal weightage to the groups the above illustration shows how the soft skill index can be computed. The index...
constructed before and after the intervention expresses distance travelled (as in figure 4.1) as rate of growth in the index. For instance, if the combined soft skill score increases to 2.85 as a result of training when compared to 2.65 in the case of non-training cases, the index increases to 57 (2.85 divided by five into 100 since the maximum score is five) after intervention when compared to 53 (2.65 divided by five and multiplied by 100) before, the rate of growth in the index is about seven percent (57 minus 53 = 4 divided by 53). For different categories and intervention modules, the varying growth in the soft skills indicates the relative importance of particular soft skills and also training programmes in particular timeframes. Apart from skill wheel and the consequent distance travelled mode, soft skill development may also take place as a result of following the examples of the reference groups and narratives besides institutional analysis which exhibit the characteristics of model skill development. Though a score of five may indicate a 100 percent accomplishment theoretically, it may not be possible in real world, given the dynamic nature of competition and ever-increasing demand for high soft skill score. Hence it is assumed that the maximum score is subject to dynamic changes and as and when intervention programmes take place targeted at increasing the maximum limit. Also subjective judgements of individuals and these may vary over time and between groups.

Once the distance travelled is assessed, contribution of soft and hard skills before and after the intervention programmes would establish their relative strength in the individual’s profile. Further, when soft outcomes emanate as a result of intervention programmes, the quality of human capital stock available with the institutions would also be improved. Taking the higher secondary schooler as the base, changes in quality of human capital may be assessed for higher educational levels combining both soft and hard skills.

3.5. Sample design

3.5.1 Data collection

While an empirical research style has been adopted for the study, the different data expresses distance travelled (as in figure collection methods pertain to a combination of questionnaires, personal interviews, focus group approach and personal observation. Primary data collection uses surveys, experiments or direct observations, while secondary data collection is conducted by collecting information from a diverse source of documents or electronically stored information. We have used a mixed type of data collection to accommodate the subjective nature of soft skills. A questionnaire is a data-gathering device that obtains answers or reactions from a respondent to pre-arranged questions presented in a specific order (Malhotra, 2004). A questionnaire is the main means of collecting quantitative primary data. A questionnaire enables quantitative data to be collected in a standardised way so that the data are internally consistent and coherent. Questionnaires are flexible and adaptable to a variety of research designs, populations and purposes. Questionnaire surveys depend on the frankness of the subjects' responses and need to be designed and carried out carefully so that they provide a genuine reflection of the attitudes and beliefs of the respondents. We have used both open and closed type questions providing balance between depth and authenticity. For exploring feelings, attitudes and behaviour types, open-ended questions are more appropriate and where time, subject or topic is sensitive and objectivity is required, closed-type questions are appropriate.

The questions have to be easy to read and relevant to the subject under investigation. As a first step in questionnaire design, we had specified the information needed from the target respondents in mind, taking into account their educational level, position and experience. The language used and the context of the questions has been familiar to the respondents. Questions that are appropriate for postgraduate workers may not be appropriate for those with only a high school education. Further, questionnaires that fail to keep in mind the characteristics of the respondents, particularly their educational level and experience, lead to a high incidence of uncertain or no opinion responses. It has to be decided whether a question is necessary and whether more than one question is needed to obtain the information in an unambiguous way.
Respondents may not always be able to answer the questions posed to them. They have been helped to overcome this limitation by keeping in mind the reasons people typically cannot answer a question. Questions have been designed to aid recall depending on the research objectives. A question that employs aided recall attempts to stimulate the respondent's memory by providing cues related to the event of interest. While most individuals are willing to participate in a survey, this sense of cooperation may vanish if the questions require too much effort to answer. Sensitive information was obtained in the form of response categories rather than asking for specific figures.

Unstructured questions are open-ended questions that respondents answer in their own words and we have used them where the respondents were willing. They are also referred to as free-response or free-answer questions. Open-ended questions are good as first questions on a topic (Malhotra, 2004). They enable the respondents to express general attitudes and opinions that can help us to interpret their responses to structured questions. Open-ended questions allow the respondents to express their attitudes or opinions without the bias associated with restricting responses to predefined alternatives. They have been useful in identifying underlying motivations, beliefs, and attitudes. The disadvantages of unstructured questions relate to recording error, data coding and the added complexity of analysis. In personal or telephone interviews, successfully recording verbatim comments depends entirely on the recording skills of the interviewer. Interviewer bias is introduced as recording skills of the interviewer. Interviewer bias is also reduced, given that these types of questions work very well in self-administered conditions. Respondent cooperation was improved since the majority of the questions were structured. An itemised rating scale (5-point) has a number or a brief description associated with each response category. The categories are typically arranged in some logical order and the respondents are required to select the categories that best describe their reactions to whatever is being rated. The respondents are asked to indicate their degree of agreement by checking one of response categories or ratings. To validate the nature of responses, the questionnaire was pre-tested in a pilot survey to improve its authenticity. All aspects of the questionnaire, including question content, wording, sequence, form and layout, question difficulty and instructions have been tested (Martin and Polivka, 1995).

We have also made use of interview method of data collection especially in the case of in-depth analysis of reference groups. Interviewing is one of the most common methods for collecting data in qualitative research. Interviews allow the respondents to provide rich, contextual descriptions of events. But the process of interviewing is time-consuming and the quality of data often is dependent on the aptitude of the interviewer. Face-to-face interviews have a distinct advantage of enabling the researcher to establish rapport with potential participants and therefore gain their cooperation. These interviews yield highest response rates in survey research. They allowed the author to clarify ambiguous answers and when appropriate, seek follow-up information (Leedy and Ormrod, 2001). Telephone interviews are less time consuming and less expensive and the researcher has ready access to anyone who has a telephone or mobile. Disadvantages are that the response rate is not as high as face-to-face interview, but considerably higher than the mailed questionnaire. Computer-assisted personal interviewing is a form of personal interviewing, but instead of completing a questionnaire, the interviewer brings along a laptop or hand-held computer to enter the information directly into the database. This
method saves time involved in processing the data and saves the interviewer from carrying around hundreds of questionnaires. However, this type of data collection method can be expensive to set up and requires that interviewers have computer and typing skills. We have used telephonic interviews wherever found necessary.

The focus group approach which we have adopted to elicit information from the reference groups, is a special type of group in terms of purpose, size, composition, and procedures (Krueger, 1994). A focus group is typically composed of five to twelve participants (our group has five) who may be unfamiliar with each other and conducted by the author. These participants have been selected because they have certain characteristics in common that relate to the topic of the focus group. The author created a permissive environment in the reference groups that nurtured different perceptions and points of view without pressuring participants to vote, plan or reach consensus. The group discussion was conducted several times with similar types of participants to identify trends and patterns in perceptions. Careful and systematic analysis of the discussions provided clues and insights as to how soft skill and its development is perceived. The discussion was relaxed, comfortable and often enjoyable for participants as they shared their ideas and perceptions. Group members influenced each other by responding to ideas and comments in the discussion.

Questionnaires, interview and focus group analyses have been used to improve the quality of survey-based quantitative evaluations by helping generate evaluation hypothesis and strengthening the design of survey questionnaires and expanding or clarifying quantitative evaluation findings. These methods tend to be open-ended and have less structured protocols (data collection strategy has been changed by adding, refining, or dropping techniques or informants). They also rely more heavily on interactive interviews as respondents may be interviewed several times to follow up on a particular issue, clarify concepts or check the reliability of data. They use triangulation to increase the credibility of their findings where multiple data collection methods to check the authenticity of their results have been used. Lastly, their findings are not generalisable to any specific situation or population; rather each case study produces a single piece of evidence that can be used to seek general patterns among different studies of the same issue.

3.5.2 Practical decisions

This section intends to explain the process of sample selection and the problems encountered in the selection and survey. The author has compared establishments which have high soft skill component of human capital with those having a lower level to bring in the importance and measure of soft skills in different skill groups. In Oman, of the six major sectors – retail, automobile, telecommunications, tourism, banking and oil, soft skill requirement seems to be high in sales, banking and tourism sectors. Soft skill requirement was not found to be high in oil companies; automobiles and telecommunications present a similar picture but as contrast to oil, the gap between requirement and endowment seems to be lower. After sifting through available information, it was decided to select the banking sector to represent high soft skill requirement and endowment and oil companies to indicate relatively low levels. To assess whether there would be differences to soft skill orientation between the banks or the oil companies, sample institutions representing highly-oriented and another lowly-oriented have been selected. Further, as among the banks and the oil companies, soft skill requirement and endowment will be different for different skill groups like senior and junior managers, it was decided to do sampling within these institutions. Hence, this study concentrates on these two skill categories in banking and oil companies and the total sample size is 120 as follows:

a) Relatively high soft skill (senior managers) in banking sector 30
b) Relatively high soft skill (senior technicians) in oil sector 30
c) Relatively low soft skill (junior managers) in banking sector 30
d) Relatively low soft skill (junior technicians) in oil sector 30
A pilot survey was conducted so as to verify the existence or awareness of soft skills in the Omani economy and to refine the questionnaire so as to include the essentials of soft skill development. The pilot survey had the objective of narrowing down the sectors to banking and oil and covers 10 samples each in the two sectors. To identify the above four levels amongst the skill groups; random sampling was adopted wherein 30 respondents in each of the four samples was selected for the Part A questionnaire, which is described below.

Based on the final survey of 120 samples in the two sectors, 10 respondents each in the two banks and two oil companies was identified as references, giving the in-depth sample size as 40 to give representation to both high and low soft skill groups. A detailed in-depth interview was conducted to elicit information on soft skill development because of intervention from the 40 respondents. Among these respondents five each in the two sectors was considered as reference groups for obtaining qualitative data. The selection of reference group members from the intervention group is based on their better scores when compared to others and their willingness to participate in the in-depth investigation.

In-depth (reference group) sample size

I. Banking (two banks)
   a. Junior managers 2x5 = 10
   b. Senior managers 2x5 = 10

II. Oil (two companies)
   a. Junior managers/technicians 2x5 = 10
   b. Senior managers/technicians 2x5 = 10

Total = 40

Through interviews, personal rapport was established since the group was small while understanding of the respondents’ behaviour relating to training and related issues was made possible. The narratives involved case study approach wherein personal views of select participants were obtained to illustrate their opinion about soft skill development. However, the narratives paraphrased subjectivity and may not be generalised. The questionnaires were mostly psychometric in scaling relation with productivity and performance. Face-to-face personal interviews was accomplished in view of large number of questions asked and also taking into consideration the longer time required to fill in the questionnaires. The questionnaire has several sections dealing with personal, organisational and soft skill development aspects. Aspects included in the questionnaire were on different educational levels, training and experience differentiation and the broad categories of hard and soft skills. Each soft skill group (personal, interpersonal and situational) was divided into many sub-skills and the respondents were asked to rate their score in each of the sub-skill. Care has been taken to distinguish between the judgement about the development of the individual and a judgement about contribution toward work performance. In this, personal development is of utmost importance to the individual, though company’s development is also captured when ‘performance’ of individual is assessed as in the regression analysis. While development of the individual was assessed by ratings of the appropriate soft skills in the skill wheel, the employees were asked to indicate the nature of their contribution to company’s development in terms of productivity, the earnings capacity of the individual taken as proxy for it. The regression analysis assessed both these developments in order to bring out the relative importance of soft as against hard skill component of human capital. Personal and company’s development are inseparable in so far as performance is concerned. The scores in the 5-point scale were rated as before and after the intervention programmes wherever it was required so. Through interviews and case studies, specific narratives have been obtained from the respondents. Through cross-checking with the peers, the narratives have been moderated by the author as regards controversial opinions, language and content.
Data from the use of questionnaires information in respect of 120 general sample respondents spread over the following eight categories (24 trained and 36 non-trained senior managers and 34 trained and 26 non-trained junior managers) have been collected.

Figure 2 Sample distribution

<table>
<thead>
<tr>
<th>Pre-intervention sample-2005 (120)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-intervention group-2006 (60)</td>
</tr>
<tr>
<td>Intervention Group- 2006 (60)</td>
</tr>
</tbody>
</table>

Through questionnaires, personal and telephonic interviews, electronic mail and focus group approach information has been collected and case studies and narratives from the 40 reference (five each in the above eight categories) group members. Personal observation has also been resorted to in eliciting information in respect of narratives from the participants. The reference year has been 2006, the baseline being 2005.

After the general sample was contacted, they were given the questionnaires and later through personal interviews and contact, the questionnaires were filled in between May to July, 2007. Options were given to them either to write down their ratings or the interviewer would note down the ratings based on the assessment of the respondents. The data collection techniques chosen were appropriate and linked to key research questions and predictions. The respondents were aided to recall information as to the nature of intervention programmes undergone during 2006 and their perception regarding soft skill augmentation owing to training, mentoring and coaching. The narratives from select participants were also obtained. From the general list, the willing-reference group members’ information was collected at a later date (between August and November 2007) convenient to them through personal interviews and focus group approach. Since in the case of the 40 reference group participants, second and repeat visits were made to collect the information for the in-depth study, same scoring method has been adopted to the before and after intervention scenarios. Narratives and case studies for the reference group were obtained, in certain cases from the same respondents who provided the general sample narratives. Information on training policies by the four institutions was collected by visiting frequently and meeting the appropriate decision makers. The human resource, training and personnel managers were of much help and provided the particulars. Besides, some of the general managers and directors were also contacted to elicit policy decisions concerning their institutions.

As regards the selection of higher education institutions to assess their involvement in soft skill development, of the many universities and colleges which have been started recently in Oman, field survey was conducted.
during July-August of 2008. We have selected the state-run university (HEI 1 to represent university education), a private engineering college (HEI 2 to represent technical education), a private arts college (HEI 3 to represent general education) and a business college (HEI 4 to represent business education) in empirically finding out the nature of treatment meted out by these institutions on soft skill development. Apart from collecting information about the HEIs, the deans (and a few faculty) of the institutions were contacted as to evaluate their treatment of soft skills in higher education in Oman.

3.6. Data analysis

Apart from secondary data collected from the government agencies and the institutions, primary data were collected in respect of various training and other intervention programmes, besides data on employment, educational qualification, experience and promotional avenues. These were collected from annual reports, brochures and account reports of the respective institutions. The narratives of managers and participants of training programmes were sourced from the respective sample respondents through an in-depth survey. Particulars on skill development in the workplace and impact of different training programmes were obtained from the participants after due cross-checking with the concerned management and co-workers. In all these, the author canvassed the questionnaire to the respondents and the information was directly filled in by the respondents wherever it was feasible, otherwise written down by the author. In a few cases, some of the reference group members acted as the informants to collect information from other employees of the sample institutions.

3.6.1 Data triangulation

Triangulation enabled to decrease, negate or counterbalance the deficiency of a single strategy, thereby increased the ability to interpret the findings (Denzin, 1989). Cohen and Manion (1994) define triangulation as an attempt to map out and explain the richness and complexity of human behaviour by studying it from more than one standpoint. Triangulation provides a more detailed and balanced picture of the situation since it is a method of cross-checking data from multiple sources to search for regularities in the data. Triangulation is simply using different methods to research the same issue with the same unit of analysis, thus cross-checking one result against another and increasing the reliability of the result. Contradictory results often bring up important problems with question design, as well as fundamental issues surrounding researcher understanding of a topic. According to Denzin (1989), triangulation involves elements of time, space and person. With regard to time, data was collected on the same phenomenon at different points of time (not longitudinal) to validate the congruence of that phenomenon across pre and post-training points of time. In space triangulation, data collection for the same phenomenon at different locations was undertaken so that multi-location consistency takes place. Collection of data of at least two of three persons and testing for consistency among them in the workplace involves person triangulation. As a matter of fact, the regression analysis to assess the contribution of soft and hard skills at the workplace of different managers has triangulation as the objective. Productivity, as achieving the desired level of own and company development and soft skills, in terms of scores have been triangulated after cross-checking with peers for any discrepancies and in keeping with the general norms.

3.6.2 Regression analysis

Ordinary least square linear regression analysis was employed by using longitudinal data to bring out the relative influence of hard and soft skills on performance, where performance is the job achievement according to the particular employee in improving the image of the institution and one’s own standing. Improvement in human capital quality due to any intervention will improve performance. As mentioned in section 3.2, a low level of job achievement had a score of less than one, a low medium level achievement a score of one to two, a medium level achievement a score of two to three, a high level of achievement a score of three to four and a very high level of
achievement a score of four to five in the scale 1-5. Distance travelled (section 3.4.2) was measured based on both soft and hard outcomes as a result of acquisition of soft skills due to various intervention programmes. The soft skill index indicated changes in relative skill endowment in the changing scenario. Further, evaluation of the effectiveness of training programmes conducted by the particular organisations and soft skill endowment (hard skill notwithstanding) of the employees was accomplished through the analysis of a regression model. The reference period will be 2006, with 2005 being used for comparison. In order to assess the contribution of soft skill along with hard skill, a multiple linear regression equation was fitted

Performance = function of (hard skill + soft skill)

This can be expressed in a regression equation

\[ Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \epsilon \]

where

- \( Y \) = performance, the dependent variable, indicating contribution to one’s own and company’s development, realised through the interplay of hard and soft skills and measured as an actual score in the scale 1 to 5.
- \( \beta_0 \) = constant (intercept)
- \( \beta_1 \) and \( \beta_2 \) = regression coefficients of explanatory variables \( X_1 \) and \( X_2 \)
- \( X_1 \) = assessed individual score in soft skills (aggregation of personal, interpersonal and situation skills) in the scale 1 to 5
- \( X_2 \) = assessed individual score in hard skill endowment in the scale 1 to 5
- \( \epsilon \) = error term

The share of each worker to the total in respect of dependent and independent variables was considered for easy comparison and generalisation. The model has the usual assumptions: the disturbance term \( \epsilon \) having zero value and are homoscedastic and not auto correlated and independent variables being non-random and linearly independent. It has two regression equations, one for the pre-training and another for the post-training stages to assess the relative contribution of skills before and after the intervention programmes. The specific assumptions are that the hard and soft skill endowments of the employees in a particular category are aggregated and each employee’s share in the total gives the percentage share in the respective skill in the total sample. The percentage share of each employee in total sample performance was regressed on the percentage share in respective skills to assess their contribution. Performance indicates the extent to which an employee realises one’s own development and also contributes to organisational development. Improvement in performance through the combined effect of soft and hard skills indicates increase in an employee’s earning capacity and also improved contribution to organisational productivity through the human capital theory. The soft skill index of an employee indicates the extent to which it has been possible to achieve this improvement in performance, so captured in the regression analysis.

The performance index was taken to indicate the rate of growth in productivity or earnings capacity. Productivity is indicated by the earning capacity of the employee, which can be proxied in terms of achievement of own and company’s development. How the increase in the earning capacity or incentives and awards after the intervention (training) when compared to before-intervention will be determined by the different skill indices. The educational attainment (hard skill) index was constructed taking the baseline value of 100 in the case of higher secondary worker, the wage index increasing over the subsequent higher education levels. The index value may differ depending on the productivity levels of different education levels in given situations and for our analysis, the following values seem to be appropriate, wherein a
postgraduate with training and mentoring capabilities is 40 percent more productive when compared to a higher secondary worker. This is similar to the approach of ILO (section 3.2) wherein if no-schooling is treated as the baseline, the quality of human capital improves over subsequent years of education which assumes a linear rate of growth over subsequent education levels as noted below.

The following assumptions of human capital index is made to assess the changes in human capital stock as a result of intermix of both hard and soft skills

<table>
<thead>
<tr>
<th>Human Capital Level</th>
<th>Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Higher secondary (HS)</td>
<td>100</td>
</tr>
<tr>
<td>Higher secondary (HS) + Training</td>
<td>105</td>
</tr>
<tr>
<td>Higher secondary (HS) + Training + Mentoring</td>
<td>110</td>
</tr>
<tr>
<td>Graduate</td>
<td>115</td>
</tr>
<tr>
<td>Graduate + Training</td>
<td>120</td>
</tr>
<tr>
<td>Graduate + Training + Mentoring</td>
<td>125</td>
</tr>
<tr>
<td>Postgraduate</td>
<td>130</td>
</tr>
<tr>
<td>Postgraduate + Training</td>
<td>135</td>
</tr>
<tr>
<td>Postgraduate + Training + Mentoring</td>
<td>140</td>
</tr>
</tbody>
</table>

Source: adapted from ILO, 1972

The soft skill index was constructed juxtaposed to the corresponding hard skill for the different groups. This indicated the changes in the human capital stock in respect of the given institutions. The rating of the scores involved subjective judgement and the assessments were related to the age and category of employees on the same scale. Necessary steps were taken to ensure that different institutions make comparable judgements. This is a tricky issue and yet underlies the quantitative assessments. There are difficulties in this type of qualitative assessment and hence we strike a compromise between admitting the difficulties and not being seen to have collected shaky data.

3.6.3 Ethical issues

In any social science research involving human participants, including questionnaires, surveys, focus groups and other interview techniques and research involving human data or records, ethical concerns are strongest where these data are gathered directly from the subjects and ethical approval is usually required (Diener and Crandall, 1978). The Nuremberg War Crimes Trial following World War II brought to public view the ways German scientists had used captive human subjects as subjects in gruesome experiments. In the 1950s and 1960s, the Tuskegee Syphilis Study involved the withholding of known effective treatment for syphilis from African-American participants who were infected. Events like these forced the re-examination of ethical standards and the gradual development of a consensus that potential human subjects needed to be protected from being used as guinea pigs in scientific research (Love et al., 1999). Ethical issues invariably revolve around right to privacy or non participation, right to anonymity, right to confidentiality and right to expect experimenter responsibility (Beauchamp et al., 1982). We are to be honest if possible, but if we have to mislead people we have to debrief them immediately after their participation.

The principle of voluntary participation requires that people are not to be coerced into participating in research. This is especially relevant where researchers had previously relied on captive audiences for their subjects. Closely related to the notion of voluntary participation is the requirement of informed consent, which means that prospective participants must be fully informed about the procedures and risks involved in research and must give their consent to participate (Beauchamp et al., 1982). Ethical standards also require that researchers not put participants in a situation where they might be at risk of harm (physical or psychological) as a result of their participation. As regards privacy of research participants, research guarantees the
participants confidentiality and they are assured that identifying information will not be made available to anyone who is not directly involved in the study. The stricter standard is the principle of anonymity which means that the participants will remain anonymous throughout the study and even to the researchers themselves. The anonymity standard is a stronger guarantee of privacy, but it is sometimes difficult to accomplish, especially in situations where participants have to be measured at multiple time points (pre-post study). When training programmes may have beneficial effects on the intervention group, persons assigned to the no-treatment control may feel their rights to equal access to services are being curtailed and hence this aspect has been considered.

Where records are in the public domain or where the subjects are no more, ethical considerations still are relevant but such research does not normally require ethical approval. Research using personal information or samples stored from previous research (either initially or when a proposal is revised) and the use of biological samples that are anonymised or that consisting of surplus tissue from routine operations need ethical approval. We are aware that any research which constitutes or could be interpreted as constituting, an encroachment on personal privacy requires careful ethical consideration. Care has been taken to maintain the names of the respondent institutions and individuals anonymous and not to encroach into their personal privacy in keeping with the international norms of research ethics. The narratives of the select respondents have been in their words and since all of them were either junior or senior managers or technicians, their narratives have been in English. The author has edited them for grammar and language.

The researcher is responsible for ensuring that the data collected and cases developed are accurate representations of each participant. Doheny-Farina (1993) emphasised that the results of a study are based on what the researcher brings to the research. The author is aware of the influence he has on the respondents and the context of the study. This study was designed to ensure that the impact on the informants and the research environment is non-detrimental and as minimal as possible. The identity of informants, the institutions and the training systems for each participant is protected and there will be no damage to any of the institutions, participants or trainers as a result of this study. The training community, professional development community and the communities of origin for the informants will benefit from gaining greater insights into how to create successful training courses to meet the needs of trainees. All informants were assured that their identities would remain confidential and that the information they provided during this study would have no bearing or influence on their performance appraisal. A member check system was established to ensure that the researcher accurately portrayed the views of the informants. The informants were informed that they could access the transcribed interview prior to the final analysis of the data. Any questions about any portion of the interviews were addressed with each of the study participants and clarifications in relation to the data were noted in the transcriptions. All of the participants felt they were accurately portrayed in the interviews and no corrections to transcripts were requested. Several steps were taken to ensure the informants had a sense of comfort and legitimacy related to this research study.

Beyond personal interests, the research benefits by way of providing the necessary information the participants required for a clear understanding of soft skills and in not wasting their time and effort in unnecessary endeavours. Since the author is responsible for all the information provided in the thesis, care has been taken to ground the questions and narratives in theory and not to divulge any information that may hurt the feelings of the participants or the institutions. Further, care has been taken to see that no psychological discomfort results in the participants and not to deceive the participants about the aspects of the research that might influence the willingness to participate in the survey and no discomfiture resulted in them.

4. SUMMARY AND CONCLUSION

Structural changes in countries like Oman have caused increased demand for up-to-date skills and competencies in the workplace.
The contribution of knowledge in production has been on the increase which necessitates the continual upgrading of the skills and competencies of the workforce toward achieving increased productivity. OECD (2001) has argued that the growth of the knowledge economy, prompted by demand for new types of goods and services and increasing globalisation of economic activities and technological changes have necessitated new workplace competencies which are complementary to technical skills. We have seen that personal, interpersonal and situational skills are essential for personal and organisational development. These skills materialise through training, coaching, mentoring and experiential learning.

Soft skills not only empower the workforce in advancing career development and personal growth, also they create new opportunities and go beyond money motivation. When the skill base and affective goals undergo changes, the workplace registers improvements in the quality of human capital stock as mentioned in the sixth chapter. Hence, employers focus on soft skill enhancement along with improved technology, product development and market linkage. For the latter to improve, the hard outcomes have to be improved through soft outcomes. The purpose of soft skill training is to make it more accessible to those who require it and to promote adaptability and employability, at the same time maintaining employee retention. This chapter presents an overview of the findings of the study and discusses the lessons learned from the research and the contribution made to knowledge.

4.1 Findings and Conclusions

a. What is meant by human capital and what are its components?

Human capital approach to educational development (on the lines of Becker, 1993) was the appropriate strategy to be followed, wherein socio-economic development becomes a function of investment in human capital. Human capital, like physical capital is a factor in the production process and consists of both soft and hard skills. In that chapter, soft skills were defined as the soft component of human capital, which includes generic and transferable personal, interpersonal and situational skills that are essential to complement hard skills toward better employability. Employability indicates the achievement, understanding and personal attributes of individuals that make them more likely to gain employment and be successful in their chosen careers. Not only gaining better employment opportunities, but more importantly, succeeding in one’s career and achieving competitive advantage in the labour market are the objectives of employability. This can be realised only with the enhancement of soft skills. Empirical analysis suggests a strong correlation between ability and education. Whereas hard skills are cognisable and easily measurable, soft skills are intangible and difficult to measure since they involve personal and subjective attributes.

b. What is meant by soft skill and how soft skill grouping may be accomplished?

Soft skill is an ability or competence and can be either inherent or acquired which can be repeatedly performed. It can be verified and assessed through its performance only and can be demonstrated, learnt, taught or coached but acquired only by performing them and improved through learning. Simpson (2006) and Hillmer (2007) speak of the criticality of soft skills in any teaching and training programme toward achievement of lifelong learning.

Based on studies by ECOTEC (1998) on life, attitudinal and transferable skills; European Social Fund projects (Balgobin et al., 2004) on skills wheel and distance travelled; Moss and Tilly’s (1995) study on interaction and motivation skills in black men’s employment in the US; Heckman and Rubenstein (2001) study on general education development programme and measurement of soft skills in the US and studies by Motah (2007) and McMurtrey et al. (2008) on the necessity of soft skills in the workplace in any profession validate the importance of soft skills. Competency levels of employees would improve when they are able to acquire interpersonal skills, intrapersonal attitudes, business understanding and technical skills to complement workplace learning. As
discussed, soft skills were grouped into personal, interpersonal and situational skills, wherein personal skills include punctuality, language, enterprise and motivation (abilities which help in personal development), while innovativeness, mentoring and taking responsibility develop the competence of the individual toward organisational development. In interpersonal skills, recognising the worth of others and respecting them, communicating effectively with team members, conflict management and decision making enable the individual to be creatively thinking under diverse capacities and aid in team excellence and organisational competency. Situational skills are developed when both personal and interpersonal skills become critical, wherein learning, planning, goal setting, negotiations, empathy, time management and reliance assume utmost importance in any situation.

c. What type of treatment the higher education institutions in the region give to soft skill development?

The different training programmes conducted by the sample institutions on leadership, communication, negotiation, team building, emotional intelligence and customer care explain the significance of the intervention programmes. The training and development policies of the institutions capture the vital differences in soft skill orientation and development.

d. How may soft skills be measured and an index constructed?

e. How is distance travelled measured and assessed?

Soft skill measurement has been accomplished through the concepts of skill wheel and distance travelled in the third chapter, indicating how much progress an employee is able to make in achieving hard outcomes through accomplishing soft outcomes (Balgozin et al., 2004; Dewson et al., 2000). Hard outcomes include transfer to a preferred place or position, promotion, foreign visits, participation in seminars, publication of papers, appointment as coach or mentor, awards, incentives, membership in committees, obtaining new qualifications and being given more responsibility and accountability, which are easily quantifiable. Soft outcomes are qualitative and indicative of the progress made toward achievement of the hard outcomes and signify improved time keeping, effective team building, improved communication and presentation skills, low sickness and absence from work, positive attitude and so on. These indicators will in turn improve the hard outcomes of the employee in achieving better employability and integration into the labour market. When this is accomplished, what is called ‘distance travelled’ occurs, being a measure of value-added success for both the individual and the institution.

In a skill wheel which consists of five circles pinpointing scores in a 5-point scale, if an employee scores nil in all the skills (which is not likely), then his score will be at the centre of the circle meaning nil. When the score is on the first inner circle line, it is equal to one. When the performance is evaluated as on the second inner circle line, it equals two and so on. An employee who performs such that is awarded a score of five in all the skills, then the scoring will be positioned on the outer circle line.

f. How soft skills are acquired and what are the different sources of their acquisition?

g. What is the relative contribution of various soft skill enhancement sources across different categories?

Discussion on the sources of soft skill acquisition is undertaken in the seventh chapter on reference group analysis, wherein workplace emerges as the main source, followed by higher education institutions, school and family in that order. Regarding the different intervention programmes contributing to soft skill enhancement, mentoring occupies the first place, followed by experience, on-the-job training, prior training, idea storming, business reading and sponsored external training. When these programmes are delivered in terms of training, coaching or mentoring, experiential learning plays a critical role in skill enhancement. The outcomes of these intervention programmes include personality development, leadership, effective decision making and overall improvement in competence. This aspect has
been brought to light by the various narratives of the participants.

h. What is the impact of various intervention programmes to enhance soft skills?

The impact can also be looked in terms of experiential learning exercises which enable the sample respondents to enhance their soft skills and contribute to personal and institutional development. Learning at the workplace, which stems out of soft skill endowment and results in its enhancement in turn takes place through work processes and is motivated by challenges and by consulting or working alongside others (Eraut, 2007a). Learning styles depend on the nature of intervention programmes and reflect how far personal development and group actions would be effective in achieving the required level of competence (Fidler, 2008). Competence represents the totality of knowledge, skills and abilities that are essential for professional work. Kolb’s (1984) typology of learning styles is based on the concept of experiential learning, which is derived from the manner in which an employee tends to grasp new information and the methods that he or she tends to use when processing new ideas. Experience leads to observation and reflection, followed by concept formation, wherein new ideas and concepts may guide choices for new experiences. In all these courses of events, soft skills play a crucial role as illustrated by the case studies and narratives.

i. What is the nature of relationship between soft skill endowment and performance/productivity?

The regression analysis in the sixth chapter compares the pre and post-training scenarios in respect of different categories to assess the relative contribution of soft skills relative to hard skills in respect of performance (proxy for productivity) of the respondents. Narratives in the fifth, sixth, seventh and eighth chapters on the training programmes express not only the individual opinion and assessment of various soft skills that have been imparted, but also their impact on individual performance and improvement in the quality of human capital.

With these answers, the objectives of the study are being probed into and before looking into the implications of soft skill development and experiential learning in terms of differences in importance and acquisition types and the relative contribution of different intervention methods in policy analysis, an overview of the thesis is presented in the next section, summarising the eight chapters.

4.2. Conclusions

The study besides highlighting the importance of soft skills at the workplace, presents a mechanism through which soft skill development can be attempted by institutions that show interest in soft skill orientation. The findings reveal that the banks have a better soft skill orientation than the oil companies, where higher levels of capital investment, revenue and employee strength are associated with higher soft skill orientation. To keep employees motivated and productive they have to be motivated by the management through various incentives and intervention programmes. The skills gap is not limited just to banks or oil companies. Effective skills development depends on opportunities to practise soft skills with support and guidance, encouraging reflection and subsequently development-oriented learning. This study has been undertaken to specify the factors that have crucial role to play in the training and development programmes of banks and oil companies in Oman with reference to motivating the employees toward better employability and productivity in lines with human capital theory.

Training on leadership, time management, team work and negotiations have enhanced not only personal, but also interpersonal and situational skills areas, but the main focus in the sample institutions has been on effective personal development and problem solving aspects. Courses on communication, presentation and customer care have enhanced principally the interpersonal skills, while courses on situational analysis, emotional intelligence and time management have augmented situational skills. Business coaching sessions have led to development of coaching and mentoring capabilities and also enhancement of hard skills. Acquisition of leadership qualities has given an
insight into the understanding of intricacies of management. Conflict avoidance facilitates difficult coping mechanisms and learning from others. Teamwork has enabled observation and motivation leads to critical thinking and enterprise capability. Overall, the impact of the intervention programmes indicates a mix of learning and experience wherein posing questions relate to response behaviour and communication relates to adaptation to different types of persons and statuses.

We have traversed into a new area where literature on soft skill development in the region is very scarce and not wholesome. An attempt has been made to develop a methodology pertaining to skill enhancement in sample banks and oil companies in the form of skill index and distance travelled which may be applied in circumstances requiring skill enhancement in organisations and where there is skill gap. Future research has to dwell on the standardisation of soft skill endowment and competency levels therein in workplaces according to different work categories and positions so as to yield a soft skill measure such that like intelligence quotient or emotional intelligence quotient, soft skill quotient may be assessed not only at the time of recruitment, but also during promotion, transfer or any other hard skill demonstration. If this is achieved, the purpose of this research study will amply be justified.

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