# **Human Resources Development in the Context of Challenges of Globalization with Reference to Teacher Education in Bangladesh**

# Md. Motaharul Islam\* Md. Asraful Alam\*\*

#### Abstract

Purpose of this investigation is to study the Human Resources Development in the context of challenges of globalization with reference to Teacher Education in Bangladesh. A study of this kind would highlight the dimensions, which can be manipulated to upgrade the human resources development in teacher educators working in institutes of teacher education to rapidity in contest of international threats. This may also help in planning the resources to be tapped and utilized in its optimum level. The present study aimed at identifying certain variables related to human resource development in teacher educators working in Teachers Education Institutes. This study determines the effect of human resource development climate, performance appraisal, induction in-service education and training needs of teacher educator with impact of gender, experience, age wise difference, organizational difference, working in unisex or coeducation, service stature difference. Populations of the study were teacher educators working in the eleven institutes in the two greater divisions of Dhaka and Rajshahi. Two hundred and twenty three male and female teacher educators responded to the researcher's questionnaire. The demographic portion of the instrument was developed to sort out the demographic information. Major findings of the study revealed, that gender wise, experience wise, age-wise difference, organizational difference, working in unisex or co-education, service stature difference have a significant impact on the variables HRDC, PERAP, INS and training needs.

Key Words: Human, Development, Climate, Globalization. Education, Resources, Teacher,

Educator

**Acronyms:** APO : Asian Productivity Organization

**HRDC**: Human Resources Development Climate,

**INS** : Induction in-Service education

**OJT** : On-the-Job Training

**OCTAPAC**: Openness, Confrontation, Trust, Autonomy, Pro-activity,

Authenticity & Collaboration

**PERAP** : Performance Appraisal

TN : Training Needs

<sup>\*</sup>Assistant Professor, Open School, Bangladesh Open University

<sup>\*\*</sup>Senior Administrative Officer, ASA University Bangladesh

#### Introduction

Human resource development, education, management and teacher education in context of challenges of globalization with reference to teacher education in Bangladesh are highlighted. Human resource development (HRD) has been an important area of research practice. The purpose of HRD policy is the development of Human Resources. In a widely cited paper, (Sriyen, 1997) found human resource development as the process of increasing knowledge, skills, and the capacity of people in society. In economic terms, it could be described as the accumulation of human capital and its effective investment in the development of an economy. In political terms, human resources development prepares people for adult participation in the political processes particularly as citizens in a democracy. From the social and cultural point of view, the development of human resources helps people to lead richer and fuller lives, less bound by tradition.

The challenge of development is to improve the quality of life. Most of the economists argue that it is the human resources of a nation, not its physical capital or its natural resources that ultimately determine the character and velocity of its economic and social development. Not gold but only men, can make a nation a great and strong.

According to late Professor Frederick Harbison of Princeton University, Human beings are the active agents who accumulate capital, exploit natural resources, build social, economic and political organizations, and carry forward national development (Michael, 2000). Clearly, a country which is unable to develop the skills and knowledge of its people and to utilize them effectively in the national economy will be unable to develop anything else. Dag Hammarskjold stated, "Fundamentally man is the key to all problems, not money. Funds are valuable only when used by trained, experienced, and devoted men and women. Such people on the other hand can work miracles even with small resources and draw wealth out of a barren land", cited in UN report 1995. For example Americans have captured U A E Economy due to their developed Human Resources. Countries which have recognized and paid particular attention to developing Human Resources well in time, have been able to bypass different stages of industrialization and to make technological "leaps" to confront globalization.

Therefore, more than ever before, we need to plan for the future, which requires us to take stock of our current situation and to find ways to combat global threat (Sriyen, 1997). The fusion of computing and communication has broken the bonds of cost, time and distance launching an era of global information networking – communication change economic competition, empowerment and culture, inspiring global conversation. Today knowledge is being depersonalized, deteritorialized and globalized. It is being taken out of its traditional context and disseminated by new media of communication. The emergence of Internationalization is favored by the fact that our societies are now organized around knowledge production, having evolved from an industrial development mode into a communications development mode.

The reason for the increased importance of HRD in achieving socioeconomic development lies largely in the emergence of knowledge work, technological advancement and the demand for information and their relationship to globalization is supported by Drucker (1992). One major

trend with implications for HRD is globalization. It is fostered not only by technological change and the continually falling costs of communication and transport but also by the decisions of developing countries like Bangladesh to embrace market oriented development strategies and to open their countries increasingly to the world economy. Competitiveness of both nations and enterprises will be on an international basis. World-wide competition has increased and resultantly the velocity of economic change has accelerated and the process of development has become less predictable. A key contributor in this regard is the knowledge and skills of the workforce. In fact the education and skills of the workforce will be the key competitive weapon for the rest of the 1990s as well as for the 21st century (Thurow, 1992). Many of the rich economies in Asia are reviewing their education systems with a view to make the changes needed to produce creative individuals who will increasingly add value to the economy.

#### **Statement of the Problem**

Present study was designed to explore for the Human Resources Development in context to challenges of globalization with reference to Teacher Education in Bangladesh.

# Significance of the Study

Principal institutional mechanism for developing human skills and potentials is the formal educational system. A country may have well defined policy infrastructure, facilities, well equipped laboratories and libraries, but it can hardly achieve its educational goals unless it has committed and competent teachers. In recent years considerable concern has been felt in the sphere of teacher education, regarding quality of teachers and instructional material. Very specifically findings of this research may reveal the challenges implementing Human Resources Development Program in teacher training/education institutions. It requires coping with change in a positioned constructive manner.

Teacher training/education institutions must be redesigned so as to be consistent with human resource development and help create a congenial atmosphere, observing international standard. The major concern in the teacher education course should be educational excellence, for which institutes for teachers education must be, human resources development driven. The research in human resource development in institutes for teacher education, would go a long way in making the institutes, human resource development oriented. The research studies on human resource development in Bangladesh are very rare and far behind (actually HRD is a new subject in Bangladesh's Education System). So far, few studies to the knowledge of the researcher have been carried out in Bangladesh involving the study of the variable human resource development climate (HRDC), performance appraisal (PERAP), induction in-service education (INS) and training needs (TN) of teacher educators.

Hence the present investigation is on "Human Resources Development in context of challenges of globalization with reference to Teacher Education in Bangladesh.". A study of this kind would highlight the dimensions, which can be manipulated to upgrade the human resource development

in teacher educators working in institutes for teachers' education to velocity with global threats. This may also help in planning the resources to be tapped and utilized in its best optimum level. The present study aims at identifying certain variables related to human resource development in teacher educators, working in institutes for teacher's education.

# **Objectives of the Study**

The objectives of the study were to:

- 1. Study the difference in perception of human resource development climate of teacher education.
- 2. Study the difference in perception of performance appraisal of teacher education.
- 3. Study the difference in perception of in-service education of teacher education.
- 4. Study the difference in perception for training needs of teacher education.
- 5. Study the correlation between human resources development climate; performance appraisal, in-service education and training needs.

## **Hypothesis of the Study**

For this study the following hypothesis are developed which are also to be tasted.

- **Ho1** Teacher educators belonging to different gender do not differ in their perception of human resources development climate.
- **Ho2** Teacher educators belonging to different gender do not differ in their perception of performance appraisal.
- **Ho3** Teacher educators belonging to different gender do not differ in their perception of teacher educators training needs.
- **Ho4** Teacher educators belonging to private and public sector do not differ in their perception of performance appraisal.
- **Ho5** Teacher educators belonging to private and public sector do not differ in their perception of teacher educators training needs.
- **Ho6** Teacher educators working in unisex and co-education institute do not differ in their perception of human resource development climate.
- **Ho7** Teacher educators belonging to different level of teaching do not differ in their perception of performance appraisal.
- **Ho8** Teacher educators belonging to different age groups do not differ in their perception of performance appraisal.
- **Ho9** Teacher educators belonging to different level of experience do not differ in their perception of human resource development climate.
- **Ho10** Teacher educators belonging to different level of experience do not differ in their perception of teacher educators training needs.
- **Ho11** There is no significant relationship between human resource development climate and training needs in the perception of teacher educators.

# Methodology of the Study

Methodologies used for the present study are described step by step in detail below:

- 1. Human Resource Development Climate (HRDC) Questionnaire: This questionnaire was developed and standardized by Rao and Abraham (1990) at Xavier's Labor Relation Institution, Jamshedpur Centre (XLRI). It comprised of thirty eight items to be responded on a 5 point scale as 4-almost always true, 3-mostly true, 2-sometimes true, 1-rarely true, 0-not at all true. Noor Jehan (2007) modified the questionnaire and reduced the number of items upto 35, the reliability of the tool was established to be 0.71. The validity was established by taking the square root of reliability and it was 0.87. Thus the tool is found to be reliable and valid. Researcher used the modified questionnaire. The questionnaire further need not to be standardized as it is being used in India, Pakistan which culturally are almost the same.
- 2. **Performance Appraisal Effectiveness (PERAP) Questionnaire:** Performance appraisal effectiveness questionnaire is developed and standardized by Rao and Abraham (1990) at the XLRI centre, it consists of two parts and 33 items to be responded on 5 point scale. Investigator adapted the tool from Noor Jahen (2007) modified the tool and reduced the number of items to 25. This questionnaire has been revalidated by calculating the validity and reliability coefficients. The reliability computed was 0.73 and the validity was 0.84 and the tool is found to be reliable and valid.
- 3. **Induction In-Service Education Scale (INS):**Is originally developed by Rao and Abraham (1990) at the XLRI centre. It consists of 25 items to be responded on a 5 point scale. The investigator adapted this questionnaire from Noor Jahen who modified the tool and reduced the number of items up to 22. The score of reliability was 0.58 and the validity was established 0.76, thus tool is found to be reliable and valid.
- 4. **Training Teacher Educators Training Needs Assessment Scale:** Teacher educator training needs assessment scale is developed and standardized by Nilavar (1992). It consists of 214 items which is further modified by Noor Jehan N. Ganihar (2007) who further reduced the number of items to 90. The reliability of the tool was established to be 0.72 and the validity was found to be 0.86. Researcher has adapted the modified tool.

In addition to above scales for getting the demographic information about the respondents a demographic section was attached with scale which included questions about gender, working organization, working in uni-sex and coeducation institutes, teaching level, age group, level of experience and service stature. The researcher administered the instrument personally and gathered the data from two greater divisions of Dhaka and Rajshahi. The research design of the study is reflected in the Table -1

Serial No.	Variable studied	Tools used	Sample	Statistics used
1	Human resource development climate of teacher	Human resource	Eleven teacher	Descriptive
	education/training institutes	development climate questionnaire	education/ training institutes in greater	t-test ANOVA
2	Performance appraisal effectiveness of teacher education /training institutes	Performance appraisal effectiveness questionnaire	two division of Dhaka and Rajshahi	Post Hoc Pearson's correlation
3	Induction in service education of teacher education/training institutes	In service education scale		
4	Training needs of teacher education/training institutes	Teacher educator training need assessment scale		

Table -1 Research design of the study

#### **Data Collection**

Data through survey questionnaire were personally collected by researchers from eleven institutes working in teacher education for government and private sector in two greater divisions of Dhaka and Rajshahi. With the cooperation of teaching faculty members out of 350 questionnaires, 223 were received back. The remaining didn't respond in spite of repeated visits.

## **Analysis of Data**

Editing of survey response for detection and correction of errors and omissions was performed to achieve optimum standards of data quality. Initially data was entered in SPSS 13 version, Statistical Package for Social Sciences for analysis. Research hypothesis developed to study the challenges of HRD were tested statistically. Researchers used t-test as suggested by (Phillips, 1992) the difference between z and t distributions is negligible beyond the sample size of 120, two are virtually identical

(Cooper and Emory, 1995). Furthermore, t-test was performed to analyze difference between values of two independent data set and response of every case for respective variables. Independent samples t-test was performed to analyze difference between mean values of two data sets concerning respective variables. Value of t was selected based on Levene's F test for equality of variances. Analysis of variance (ANOVA) test was performed to analyze difference among the mean values of more than two groups concerning the respective variable. The study was analyzed keeping in view the impact of seven independent variables (gender, working organization, working in unisex and coeducation institutes, teaching level, age group, level of experience and service stature) upon the dependent

variables and further relationship among the HRDC, PERAP, INS and Training needs was analyzed by using Pearson's Correlation.

**Hypotheses Nature of testing** Test used numbers Ho1 to Ho4 Significant difference between two groups Independent Sample was to be tested "t" test Significant difference among more than two ANOVA + Post hoc + Ho5 to Ho8 groups was to be tested LSD Relationship between the variables HRDC, Ho9 to Ho11 Pearson's correlation PERAP, INS and training

Table-2 Statistical tools required for testing the Hypothesis

## **Education and Human Resources Development**

Education is a social process responsible for changing individual's collective behavior and should be used as the foundation on which one would build a strong nation, self-sufficient in economy, non-corrupt in character and scientific in thinking (Noorjehan, 2007). Today education is defined as enterprise of the 21st century with the emergence of globalization and increasing global competition. Bangladesh is determined to respond positively to emerging needs, opportunities and challenges of globalization.

Development of human resources is unequivocally the first pre-requisite for both individual success and collective national progress. Human resource development recognizes the paramount need to utilize the human resources fully and relates education to the needs and aspirations of the people. It strives to bring the benefits of education to the disadvantaged classes of the population, to create a climate of discipline and hard work and to assist in the demand for educational expansion and improvement of quality. If a country is to advance, the capacities of men and women the human resources, (physical, mental and spiritual) are to be developed extensively (Zaidi, 2006).

Education is universally accepted as the most critical element in the human development recipe. It has a strong correlation with the overall social and economic development of a country (Shah, 2003). Men and women should be able to form a judgment of their own role on economical or political issues as social individuals. Education has a far-reaching influence on the nation's economic headway. HRD is integrated with the economic growth of the nation as this growth bases completely on individual's creativity (Shami, 2006). Bangladesh is faced with a very serious shortage of such intermediate category of technical manpower in every sector of life. The number of institutions in the country imparting this type and level of training is small and their standards are low. It is interesting to note that Human Resources quality is available in the best form, the flaw is only in its development process.

## Management and Human Resources Development

Every organizational setup should have an administrative wing, which is otherwise called the 'managerial aspect of education'. Management implies tactful administration of men, material and

money (Desimone *et al.*, 2002). It is a social process, which is designed to ensure the cooperation, participation, intervention and innovative involvement of others in the effective achievement of predetermined objectives. It includes all executives, supervisory and administrative personnel in various fields of activities. If management is in the process of achieving their objectives through the work of others, then it requires a systematic allocation of work to people, in order to realize the objectives smoothly and efficiently (Edward, 2007). An appraisal of the basic principles of organization and management will therefore be helpful in understanding the concept of management. A more popular classification of managerial function includes planning, organizing, coordinating, directing, staffing, communicating and budgeting the activities (Desimone *et al.*,2002).

## **Teacher and Human Resources Development**

With all the economies of the world slowly going global it becomes essential that our most precious national resource - the human resources should be properly geared for this globalization. Globalization can be discussed in various perspectives such as socio-cultural political and economics. Economists define it as the free movement of goods, services, labor and capital across borders. World Bank defines globalization as freedom and ability of individuals and firms to initiate voluntary economic transactions with residents of other countries (Raja, 2005). If our nation is to compete successfully in this competitive environment, our human resources must be developed, trained and become experts in all the necessary areas. In order to increase the productivity of the nation, we have to increase the productivity of each individual. According to Joshi (1994) to improve the quality of human input and to bring about the desired productive behavior in the work force, we have to improve the following personal and organizational characteristics:

- Work attitudes and aptitude
- Knowledge and skill
- Opportunities.

These characteristics need to be inculcated in the individual from the moment that he begins his work. Instead of simply speaking of changing attitudes and skills, it would be more economical that they were taught the right attitude and ways from the very beginning (pre-job training). The responsibility, therefore, lies on the shoulders of the teachers today. The main input for a prosperous, happy and healthy nation is good education. Education is basically designed to fulfill the basic human needs and as an activity that sustains and accelerates economic development. Educational activities provoke and facilitate change in prevailing sociopolitical conditions and suggests alternatives by generating a clearer understanding of political and social rights which is an explosive force in its own way. It looked upon education as a tool to be a feeder into the economic stream rather than as a reservoir of knowledge, in terms of earning potentials rather than learning potentials.

Universally it is acknowledged that there can be no economic growth without a trained labour force. The power in manpower comes from education. One of the functions of education is to

determine, even to forecast, the skills required in an economy, to design the best processes of transmitting those skills and to ensure that, once acquired, those skills are properly deployed and used. The percentage of unemployment in a country is, therefore, a reflection not only of its industrial system but also of its education. If this input does not meet the required quality, how can output be of the desired quality standard? For the liberalization of the Bangladesh economy, a trained and skilled work force is a prerequisite. Japan had made primary education compulsory over a hundred years ago, establishing another example of the relationship between education and productivity. This example applies to many developed countries as well, because the development never takes place by a push button. This will only be possible if the total education system is managed properly and a systematic growth is incorporated into it.

## **HRD Challenges and Issues**

1. Strengthening Primary and Secondary Education: Primary and secondary education provides the basic skills of literacy, numeric, communication and problem solving and develops those attitudes which are necessary for the workplace. These skills and attitudes enable the people concerned to acquire job specific knowledge and skills. They are the foundation for further education and training, which has become increasingly important, with fast changing technology, rapid obsolescence of knowledge and the intense competition of the globalize marketplace (ILO, 1996). Good quality primary and secondary education of at least ten years will equip students with the required level of literacy and numeric capability as well as the higher order skills, for example, learning how to learn problem solving, in order to work in medium and high level manufacturing jobs.

Strengthening primary and secondary education with reference to the contents related to practical life, is a key HRD challenge in the developing countries of Asia including Bangladesh, with a special stress to the intellectual growth.

In many developing countries, more can be done to improve the quality of primary school education. Crucial to the quality of schools appears to be the qualifications, experience and knowledge, level of education of teachers and more and better textbooks and study material. The pupil-teacher ratio should also be improved. (Education Commission of the States, US, 1994).

2. Upgrading the Basic Education of the Workforce: Virman (2000) says the crucial factor in technology transfer is the capability and extent of human beings to receive, assimilate and absorb the new technology is dependent upon one's general education and training. This adds new value to the innate qualities of an individual. A sizeable proportion of the workforce of many developing countries like Bangladesh is poorly educated, without basic literacy and numeric skills. People's ability to adapt to changing production methods and technologies is severely constrained without reasonable basic education. (UNDP Human Development Report 1996, p. 105). This applies to agriculture, manufacturing and other industrial activities. There is strong evidence that education increases the productivity of national work force. A study of twenty countries reveals that educated workers are more achievement oriented, more self reliant, more adoptive to new situations, and above all more trainable. These qualities are imparted directly by the educational process (Sudar & Singh, 1994).

A national effort will be needed to deal with the poor education level of the workforce. Paper presented at the ILO (1996) Workshop on Employers' Organizations supports the concept that basic literacy and numeric skills should be taught to those without a sound foundation in primary schooling. The literacy and numeric skills of those with primary education should be upgraded to a secondary school level. If it is not ensured at the point of entry into the job, at least it must be met through frequent in service trainings. Such upgrading scheme should be opened to those who have mastered basic literacy and numeric skills. Hence it is needed to be considered as a life long process to put life to the social system at large. Human resource's best application is in education process as the widest canvas of life is covered here. So it is the basic of Good Education. Let us put some light onto the concept of good education starting from the very basic definition of Education which the most briefly reflects as a process which modifies human behavior.

3. Expanding and Improving On-the-Job Training (OJT): Training by companies is cost-effective, efficient and task oriented. Such training, which should be structured and planned, can be on or off the job. Training is believed as learning related to present job; (John, 2005), so it should be linked to the companies strategic plan and be based on a training needs analysis. Much of the training is done by large companies. Successful companies around the world devote about 4% of their payroll for training. Developing countries may wish to use this as a benchmark and work towards it, because they need more qualified work force as a supplement to their lower technology status. To this end, they may wish to expand the pool of trainers in their countries. It also helps to minimize the gaps between fresh graduates and rankers.

On-the-job training (OJT) is a training mode used by companies and organizations that focus on creating opportunities for employee's learning, with the long-term goal of becoming a learning organization, hence, such can be labeled as 'learning oriented organization'. (Leys et al. 1992) describe them as organizations which create (on-the-job) learning. Such organizations encourage and motivate employees to attain new knowledge and skills and develop their capacity (Tiepkema, 2000). Organizations use OJT because it provides the specific skills needed for job performance and make the employee sustainable in the new environment of an organization passing through certain development stages. Unlike other training systems, it enables the enterprise to quickly change the skills required if there are changes in technology, work processes and product lines. OJT is a good training option for smaller companies as well. The Asian Productivity Organization (APO) conducted a research project from 1990-1991 on HRD in twelve Asian economies in the 1990s which included a firm level survey of corporate HRD policies and practices (APO, 1993). The survey of firms in eight developing economies viz.; Hong Kong, India, Indonesia, South Korea, Nepal, Pakistan, the Philippines and Taiwan revealed scope for improvement and expansion of OJT. For example, in Hong Kong formal and systematic training was neglected in local firms. About a third of the companies surveyed, carried out OJT according to a company wide plan. 36% conducted OJT only on the initiative of each division and 27% conducted OJT only when necessary (It was very occasional). A small number of companies did not have OJT. OJT was not widely done. Where practiced, OJT was conducted only in each division and not according to a company wide plan. In Bangladesh more than 65% of the companies surveyed, did not have any corporate policy for HRD (ILO Report, 1996). The majority of employees acquired skills and knowledge by self learning and observing. OJT as enterprises in Bangladesh need to be improved. A national programme to improve and expand OJT, involving the government, enterprises and the relevant training bodies, is worth looking into.

- 4. Expanding and Strengthening Scientific and Technological Manpower: International Institute for Management Development concluded that some Asian developing countries intend to or are already upgrading into high technology and knowledge intensive manufacturing. Foreign advanced technology is difficult to access and is costly. Developing countries like Bangladesh embarking on high technology manufacturing need to develop indigenous research and development (R& D) capability. They need to expand tertiary education and more importantly to train more scientific and technological manpower, in addition to their integrated academic qualification. Bangladesh needs to move towards the innovation phase of their economic development. Virman (1999), believes R&D plays a crucial role in any technology transfer, absorption, assimilation and up gradation R&D is also in the forefront in development leadership in the competitive market, and in the long run pays a better return on investment.
- 5. Upgrading Skills in the Service Sector: With changes in technology, the skill and knowledge components of the human resource have to be constantly upgraded, otherwise the assimilation or absorption process is weakened .The Technology Atlas (United Nations Economic Social Commission for Asia and Pacific—UNESCAP) defines various stages of sophistication of increasing human abilities starting from operating, setting up, repairing and reproducing to adapting, improving and innovating abilities (Virman, 1999). As a developing country Bangladesh needs to industrialize further, the size and contribution to output and employment of the service sector will need to increase. ILO (1996) paper cites, liberalization will also increasingly affect the service sector. Thus competencies that are rare, unique, non-imitable, and nontransferable help achieve competitive advantages and facilitate business success (Lepak & Snell, 1999). Boxall & Steeneveld (1999), says competencies are developed internally to create a talented workforce.

The major ingredient in service quality is attitude, knowledge and skills of workers. The upgrading of service skills is an issue for many developing countries which lack a solid educational ground. Training programmes should be tailored to enhance the capacity of the workforce in terms of above quoted qualities.

6. Continuing Education and Training: Education and training is the main key to progress from one level of development to another, supported by Sriyen (1997). The rapid obsolescence of knowledge and the fast change in technology, demand for continuing education and training on the part of all employees whether they are managers, supervisors or rankers among file workers. Greater attention needs to be paid to continuing education and training in many developing countries where every step will provide a ground to the next and every component will be linked with other. Continuing education and training will have to be looked at holistically and systematically and improved and expanded. Supported by Rehman (2008) training makes the environment conducive for change in the organization (in positive direction) so the forward looking organizations view trainings as a valued investment. Government training agencies, employers' organizations, education and training institutions and trade unions, should be involved in the exercise to review the existing situation with

regard to continuing education and training and to map out its future development, cited in ILO Paper (1996). It will be a highly innovative idea if trade unions are involved in worker's value addition through on job trainings.

7. Adapting Education and Training to the Market Economy: The education and training system of countries in transition to a market economy was designed for, a command economy. Under such a system, basic education was of a high standard but subsequent training was too specialized (Michael, 2000). Adult education and training was neglected since workers were expected to be in one job throughout their working life while even if it is true and justified, training is needed for producing quality in their relevant field of production. Other subjects such as economics, management science, law and psychology were ignored or underemphasized, although these are required for better working environment (Zaidi, 2006). Such a socialist education and training system was inadequate for the needs of the market economy which is being set up. Reform of the education and training system is needed according to the emergency needs of the relevant sector.

The above is not a comprehensive list of the HRD challenges/issues confronting Bangladesh. Rather these are some of the basic challenges/issues confronted socially and economically, by the country. There cannot be one single solution to each of the HRD challenges/issues. However the experience of other countries in dealing with these HRD challenges/issues will be useful. The principles and approaches behind their best practices will be useful in the quest for measures to deal with these HRD challenges/issues.

# **Elements of Human Resources Development**

The following are the elements of human resources development discussed in detail:

- human resource development activities are to be the joint responsibility of various target functionaries, such as managers, govt. functionaries and in case of education, teachers and parents as well.
- reducing direct recruitment by retraining and, redeployment of existing manpower, so as to encourage professionalism with a reasonable uplift to the status of a professional approach specially required in education.
- placing emphasis on human resource development strategies which would suitably match the individual and organizational needs, with special reference to teacher education where trainees are enjoying double role as a student and as a teacher also this magnifies the significance of professional needs to be addressed on priority.
- using training as the main human resource development strategy; utilizing performance and potential appraisal not only as mechanisms for deciding rewards and punishments but as an effective tool for development, as a trained individual a teacher in this case has also to lead his / her students to an optimum possibilities of innovation and creativity which will be impossible without quality development considered in training scope.
- making jobs more meaningful and providing challenges and intrinsic motivation so that
  they become the strongest motivators, as without proper motivation both at teachers and
  students end, canvas of creativity cannot be widened.

- encouraging, adopting and experimenting with new interventions aimed at human resources development and liberally encouraging research and to find new horizon for mental caliber of trainee teachers.
- conducting regular audit of the effectiveness of the personnel and human resource development systems, so that this system is obliged to be economically viable and practical.
- arranging for a continuous exchange of ideas with eminent professionals, so that the
  development process covers wider canvas and involves mutual interest and
  understanding.

## **Dimensions of Human Resources Development**

Human resource development is considered the key to higher productivity, better relations and greater profitability for any organization. Iqbal (2007) says human productivity is crucial for growth and survival of organizations. As far as the dimensions/components/sub- systems of human resource development are concerned, mechanisms of human resource development have been designed in different ways and various thinkers and professionals have offered divergent views, Rao (1988) suggests that human resource development sub-systems comprise performance appraisal, potential appraisal, career planning, training, performance coaching, organization development, employee welfare, rewards, qualities of work life and human resource information system. Pareek (1983) refers to performance appraisal, feedback, counseling, potential appraisal, career advancement, career planning and training as dimensions of human resource development. Varadan (1987) traces human resource development mechanism into performance appraisal, role analysis, organization development and quality circles. Though there is diversity among these arguments, but one can trace out that on some of the dimensions there is unanimity of opinion among the experts. Improvement in human productivity is crucial to a country like Bangladesh where the rate of investment has already been low and falls. Therefore organizations need to develop employees to enhance productivity.

#### **Human Resources Development Components**

Jayagopal (1988) proposed a comprehensive framework for human resources development program, comprised upon four major areas with nineteen functions under them. and also suggest a dense network of interconnections between these functions. That framework was thrashed and most necessary components are Manpower Planning, Recruitment, Selection and Placement, Training and Development, Performance Appraisal, Job Rotation, Wage and Salary Administration, Career Planning and Development, Organization Development, Quality Circle, Human Resources Information System.

## **Human Resources Development Climate and Organizational Climate**

Human resources development climate is an integral part of organizational climate. It can be defined as perceptions the employee can have on the developmental environment of an organization. This developmental climate will have the following characteristics (Rao and Abraham, 1986):

- a tendency at all levels starting from top management to the lowest level to treat the people as the most important resource
- perception that developing the competencies in the employees is the job of every manager/supervisor
- faith in the capability of employees to change and acquire new competencies at any stage of life
- a tendency to be open in communications and discussions rather than being secretive (fairly free expression of feelings)
- encouraging risk-taking and experimentation
- making efforts to help employees reorganize their strengths and weakness through feedback
- a general climate of trust
- a tendency on the part of employees to be generally helpful to each other and collaborate with each other; team spirit
- tendency to discourage stereotypes and favoritism
- supportive human resource development practices including performance appraisal, training, reward management, potential development, job-rotation career planning etc. (Rao and Abraham, 1996).

It is possible to work out the profile of an organization on the basis of these tendencies. Organizations differ in the extent to which they have these tendencies, some organizations may have most of these tendencies, some others may have only a few of these and very few will have most of these tendencies.

Human resource development climate contributes to the organizations wellbeing and self-renewing capabilities resulting in increasing the enabling capabilities of individuals, team and the entire organization.

### **Elements of Human Resources Development Climate**

Human resources development climate can be further grouped into three-broad categories;

- \* general climate
- \* OCTAPAC culture
- \* human resources development mechanisms.

To begin with the general climate items focus on the importance given to human resources development by the top management and line managers, in general. The OCTAPAC items deal with the extent to which Openness, Confrontation, Trust, Autonomy, Pro-activity, Authenticity and Collaboration are valued and promoted in the organization. The items dealing with human

resource development mechanisms measure the extent to which human resource development mechanisms are implemented seriously. These three groups were taken with the following assumptions:

- a supportive climate overall is important for human resource development to be effectively implemented. Such supportive climates consist of not only top management and line management's commitment but also good personnel policies and positive attitudes towards development;
- an integrated look at human resource development and efforts to use as many human resource development mechanisms as possible will result in the successful implementation of human resource development. These mechanisms include: performance appraisal, potential appraisal, career planning, performance rewards, feedback and counseling training, employee welfare for quality work life, job-rotation etc.
- OCTAPAC culture is essential for facilitating human resource development. Openness is present when employees feel free to discuss their ideas, activities and feelings with each other. Confrontation involves bringing problems and issues into the limelight with a view to solving them, rather than hiding them for fear of hurting or getting hurt. Trust is taking people at face value and believing them. Autonomy is the freedom to allow people to work independently with responsibility. Productivity is encouraging employees to take initiative and risks. Authenticity is the tendency of interdependencies, to be helpful to each other and work as teams. Collaboration is required so the employees can cope up with the changes and upcoming trends in an organization.

## **Enabling Factors for Human Resources Development Climate**

The following factors work as an enabling force for the enhancement of human resource development climate (Rao and Abraham, 1998):

- Top Management Style and Philosophy.
- Personnel policies.
- Human Resources Development Instruments and Systems.
- Self-renewal Mechanisms.
- Attitudes of Personnel and Supportive Attitude on the part of Human Resource Development and Personnel policies.
- Commitment of Line Managers, Organization.

It combines the two most motivational elements of appraisal, namely goal setting and personal development. To maximize motivation and performance improvement, this would be the most promising way forward.

### **Concepts of Training Needs Assessment**

"Need is the gap between current and desired (or required) results, or (stated another way) the gap in results between "what is" and "what should be" (Kaufman, 1994, p. 14) as further endorsed by Watkins and Kaufman (1996). According to them needs are three in number i.e. the gaps can be in outcome, in output, and in product, when results are defined at mega, macro and micro levels

respectively. On the other hand "gaps in means", means refer to methods (processes) and resources (inputs), are called quasi needs, which are best considered in terms of closing the gaps in results.

A training need can be defined as the gap between the requirements for skills and knowledge inherent in the job and those possessed by the current jobholder. It is vital that this gap is adequately analyzed to establish exactly what training is required. *Figure -1 presents training needs analysis*.

Figure-1

Requirements of the job

-Training Needs- current jobholder

It is misleading to imply that training needs analysis should take place only at the level of the job. A thorough analysis starts with an attempt to assess total organizational training needs in the context of:

- o management's plans for the future of the organization;
- o the current organization structure;
- o current expectations about the use of employees;

## Sample of the Study

Following table represents the sample of study:

Table No. 3

Groups	Subgroups	Male	Female	TOTAL
Organization	Private	34	78	112
	Public	21	90	111
Т –Ехр	Below 5	12	76	88
	5-10	19	51	70
	11-15	9	16	25
	Above 15 yrs	15	25	40
Level of teaching	B.Ed	29	80	109
	M.Ed.	26	88	114
Age	Below 35	26	83	109
	35-50	25	82	107
	Above 50	4	3	7
WINST	Uni sex	38	78	116
	Coeducation	17	90	107
Status	Permanent	23	122	145
	Contract	19	28	47
	Visiting	13	18	31

# **Analysis and Interpretation of Data**

After the data had been collected it was processed and analyzed using SPSS 13.0 software. The data collected from teacher education/training institutes with regard to human resources development climate, performance appraisal, induction in-service education and teacher education/training needs at the teacher education/training institutes were analyzed with reference to the objectives and hypothesis. The data have been subjected to the following statistical analysis namely descriptive statistics, t-test one way analysis of variance (ANOVA) and post hoc least significant difference (LSD). The result of statistical analysis have been summarized, tabulated and interpreted appropriately as followings:

## 1. Human Resources Development Climate

Visiting

The means and standard deviations of the samples of teacher educators are presented in Table-3, the results in the table reveal that on human resource development climate teacher educator above the age of 50 years have the highest mean score (107.14) and the lowest mean score (79.74) is for the teacher educators working on contract.

	No.	Mean	SD
Gender (Male)	55	92.8909	19.13565
Female	168	84.0893	20.85905
Organization (Public)	111	82.0811	23.87663
Private	112	90.4018	16.18444
WINST (Uni-sex)	116	81.431	18.67676
Co-education	107	91.4953	2.69531
Level of teaching (B.Ed)	109	84.3303	19.69492
M.Ed	114	88.1053	21.64859
Age (Below 35)	109	85.6972	21.34917
35-50	107	85.4673	19.50632
Above 50	7	107.1429	22.10904
T-Exp(Below 5 yr)	88	83.5682	23.85386
5-10yr	70	84.7286	12.88963
10-15yr	25	85.52	17.44783
Above 15yr	40	95.325	24.42612
Status (Permanent)	145	85.5862	19.95
Contract	47	79.7447	25.10627

31

99,2903

8.10429

Table-4 Scale for human resources development climate

## 2.Performance Appraisal

The results in the following Table 4 reveal that in the scale for performance appraisal, the highest mean score (62.72) is for male and the lowest (49.96) is for teacher educators having teaching experience 10 to 15 years.

**Table- 5 Scale for performance appraisal** 

	No.	Mean	SD
Gender (Male)	55	62.7273	15.3739
Female	168	55.0357	17.5236
Organization (Public)	111	54.2252	20.286
Private	112	59.6161	19.2911
WINST (Uni-sex)	116	55.181	15.4434
Co-education	107	58.8318	19.0151
Level of teaching (B.Ed)	109	55.055	15.6908
M.Ed	114	58.7281	18.6145
Age (Below 35)	109	59.6606	15.977
35-50	107	54.1495	17.3177
Above 50	7	57	30.271
T-Exp(Below 5 yr)	88	59.9318	18.1715
5-10yr	70	57.9571	10.8927
10-15yr	25	49.96	16.1309
Above 15yr	40	52.9	22.9858
Status (Permanent)	145	58.4897	17.1007
Contract	47	54.234	17.9846
Visiting	31	53.7419	16.8305

## 3.Induction and in service education scale

The results in the following Table 5 reveal that in the scale for induction and in service education, the highest mean score (55.01) is for male and the lowest (42.42) is for teacher educators having teaching experience above 15 years.

20.4704

16.4542

14.4366

31.7555

No. Mean SDGender (Male) 55 55.0182 15.5653 Female 168 48.5238 15.108 48.7339 14.3898 Organization (Public) 111 Private 112 51.4561 16.3405 WINST (Uni-sex) 116 52.0183 13.689 Co-education 107 48.5701 16.0859 Level of teaching B.Ed) 109 44.4286 27.0977 M.Ed 114 50.4545 16.0258 Age (Below 35) 54.2571 10.9765 109 35-50 107 49.72 09.72334 42.425 Above 50 7 20.5325 T-Exp(Below 5 yr) 88 49.5 11.3318 70 5-10yr 50.8037 18.9555 10-15yr 25 52.2483 13.3461 Above 15yr 40 48.5106 16.2973

Table-6 Scale for induction and in service education

## 4. Training needs

Status (Permanent)

Contract

Visiting

Visiting

The results in the following Table 6 reveal that in the scale for training needs, the highest mean score (186.42) is for age above 50 years and the lowest (170.44) is for teacher educators having teaching experience from 10 to 15 years.

145

47

31

42.6452

43.7387

50.5089

181.17

	No.	Mean	SD
Gender (Male)	55	184.818	34.726
Female	168	177.137	33.4542
Organization (Public)	111	173.064	33.4189
Private	112	184.737	33.4265
WINST (Uni-sex)	116	182.459	31.0836
Co-education	107	175.059	30.213
Level of teaching (B.Ed)	109	186.429	89.8978
M.Ed	114	181.83	34.2164
Age (Below 35)	109	176.043	27.9541
35-50	107	170.44	25.7796
Above 50	7	183.475	44.9478
T-Exp(Below 5 yr)	88	173.164	32.144
5-10yr	70	185.393	34.6576
10-15yr	25	177.848	34.3526
Above 15yr	40	183.085	34.8836
Status (Permanent)	145	178.419	30.3148
Contract	47	176.874	35.8665

31

**Table-7 Scale for training needs** 

#### Conclusion

The present study was designed to explore the challenges of human resource development to pace with globalization with reference to teacher education/training institutes in Bangladesh. The impact of age groups, gender, and level of teaching, work experience, working in uni-sex and coeducation, service stature and working in public or private organization were analyzed with the perspective of human resource development climate, performance appraisal, in-service education and training needs of teacher educators. The purpose of this study was to inform educational planners, administrators and experts to devote time and sincere efforts to enhance the human skills and potentials through promoting the developmental aspects of human resources that account for the growth and development and prosperity of the nation. The study also aimed at analyzing the four variables in developing the human resource development in teacher education institutes. Target population in this study was all the teacher educators working in teacher education/training institutes of Dhaka and Rajshahi. The data was collected from 223 teacher educators working in twin cities Dhaka and Rajshahi, working under eleven teacher education institutes.

On the basis of the analysis of the study following conclusions are drawn:

- Gender affects the perception of HRDC, PERAP and INS among the teacher educators because the male educators have comparatively wider social circle.
- It shows that gender does not affect the perception of training needs of teacher educators, as all are equally aware of the significance of training.
- Teacher educators working in private institutes are ahead in their perception of HRDC and PERAP when compared to teacher educators working in public institutes, because in private sector people enjoy much liberty in planning and decision making.
- Working in private or public institutes does not affect the perception of INS and training needs among the teacher educators, as the environment in both cases reflects similar results for both genders.
- There is no effect upon the perception of PERAP and INS of teacher educators while working in uni-sex or co-education institutes. It shows that the need of the professional development is felt in teacher education in all cases.
- Teaching at M.Ed or B.Ed level does not have any effect on the perception of HRDC, PERAP and INS of teacher educators and the set programs have not properly been enriched.
- Teacher educator's perception of training needs at M.Ed level is more positive than at B.Ed level as at the higher education level the deficiencies and short comings are clearer to the trainees and trainers.
- Teacher educators belonging to different age groups do not significantly differ in the perception of PERAP, INS and training needs as both areas are equally related to improvement and progress.

- Teacher educators having experience below 5yrs have more positive perception for PERAP as they are aware of their deficiencies and short comings.
- Teacher educators having experience above 15yrs have more positive perception for INS as rich experience gives them more clear approach about professional development.
- Teacher educators above 15yrs of experience have positive perception towards training needs because experience is also a sort of learning directly from the real situation.
- Visiting teacher educators have significantly different perception of HRDC, being a bit unconcerned about internal environment.
- Permanent teacher educators have more positive perception for PERAP and INS, because of spending more time in teacher education and exposing themselves directly to the problems.
- Teacher educators as a permanent faculty have different perception of training needs passing out many groups of trainees and having a vision of significance of training.
- There is a relationship in the perception of HRDC in PERAP, INS and training needs because of inter connectivity of each component along with the other. In short we can say they are inter-linked for the up rising of the organization.

#### Recommendations

After an extensive and exclusive research, it becomes obvious to make the points of the deficiency of the system understudy and to point out the possible steps as remedies to the flaws of the system. These suggested steps are denoted as "Recommendations". Regarding the study under process, following strategies are recommended for further improvements:

- 1. Keeping both the genders of teaching and training community, a balanced approach is required to be applied towards engaging training personnel with equally strong perception about HRDC and where deficiency is found special input needs to be provided to the trainers, irrespective of the gender to meet the flaws.
- 2. Regular performance appraisal needs to be introduced as a common practice in female teacher educators, so that their perception gets confirmed. The foundation of all these types of development is to strengthening the primary and elementary education, in general with special stress to gender balance.
- 3. To meet the need identified in the above recommendation, the most urgently required step is to upgrade the basic qualification required to get into teaching profession, so that the people with clearer and sharper perception can adapt this profession and training needs are easily to be assessed.
- 4. Co-education system in teacher training institution needs to be encouraged as to develop an educational and training environment in which no gender specific features are preferred, rather a complete human approach covering special male and female psychological features

- are to be considered .In public sector it is proposed to induct female teachers at least up to grade V.
- 5. Induction in-service training is required equally by both public and private sectors. There is a constant need for professional growth confirming the global needs of development. In school management sector the service structure needs to be redefined so as to encourage such training by giving weightage to it for promotion of teachers. At the time of the entry into training institutions for B.Ed. and M.Ed. programs, some earlier work needed to be specified for developing research orientation and innovative capabilities amongst the new comers, through specially designed professional exercises emphasizing upon continuing education and training.
- 6. It is obvious that training needs for both private and public sector educators are perceived equally, so the system of education needs to take the responsibility of defining training needs as required in global perspective, adapting education and training to the market economy.
- 7. For positive and rational performance appraisal a clear and comprehensive, parameters based, sketch of evaluation must be defined to make the results of perception more scientific.
- 8. The teacher educators having more experience and consequently showing more interest in HRDC can positively be utilized as the central work force for identification of the development issues and suggest workable remedies for the OJT.
- 9. If some teachers do qualify for being posted as teacher educators, by virtue of their trend, tendency and aptitude along with the required basic qualification they must, compulsorily, be put into a special training environment for a defined period of time before they are directly involved in teacher training. So as to meet the demands of market economy the teachers needed to be made value added professionals. It will require introducing an efficient apprentice system in famous school systems, during the final term of the training program. The emerging trend in modern educational management is clearly towards the adoption of human resource philosophy. Rather than viewing the achievement of the organizational and human needs and of the employees' needs as separate and exclusive events, supporters of the human resource philosophy contends that these needs are mutual and compatible. One need not be gained at the expense of the other. With all the economics of the world slowly going global it becomes essential that our most precious national resource, the human resource should be properly geared for this globalization. If our nation is to compete successfully in this competitive environment, our human resources have to be developed, trained to be and made into experts in all the necessary areas. In order to increase the productivity of the nation, we have to increase the productivity of each individual.

#### References

- Andreas, R., Frese, M. and Utsch. A. (2005). Effects of Human Capital and Long Term Human Resources Development and Utilization on Employment Growth of Small-Scale Business: A Causal Analysis. J. Entrepreneur Theory and Practice. 171
- Arya P. and Tandon B.B. (1991). Human Resource Development New Delhi; Deep and Deep Publications.
- Ashton, D. and Sung, J. (2002) Supporting workplace learning for high performance working, Geneva, International Labour Organization (ILO).
- Abernathy, V.C. (2000). A Descriptive Case Study of a Florida School of District's Human Resource Management Development Plan; Preparing New Principals Programme, Dissertation Abstracts International, 61(6), December p.2111-A
- Ali, S. F. (1992). Impact of training on GMP and quality study of a micro culture. Paper presented at the proceedings of 14th Asian congress of pharmaceutical sciences, Pakistan Pharmacist Association, Lahore. 247
- Ali, S.F. (1999). Development of human resource for pharmaceutical manufacturing: A training perspective. Paper presented at the proceedings of international workshop on total quality management of drugs.
- Al-Khamis, F.A. (2001). Human Resource Development in Saudi Arabia; The College of Technology, Role in Supplying Skilled Manpower to the Private Sector. Dissertation Abstracts International, 62(5) November, P.1814-A
- Al-Khayyat, R. (1998). Training and development needs assessment: a practical model for partner institutes. Journal of European Industrial Training, 22(1), 18–27. Retrieved January 30, 2006, from Emerald database.
- Al-Khayyat, R. M. and Elgamal, M. A. (1997). A macro model of training and development: validation. Journal of European Industrial Training, 21(3), 87–101. Retrieved January 30, 2006, from Emerald database.
- Asian Productivity Organization. (1993). Asian Dynamism through Human Resource Development, Tokyo.
- Azhar, S. and Batool, S. M. (2004). Education and the HR Challenge. Human Resource Development Network. Pp. 3-5.
- Badal, A (2000) A study Assessing the Effectiveness of a Performance Appraisal System for Elementary School Administrators. Dissertation Abstracts International, 61 (6), December, pp. 2372-A, 2374-A.
- Barbour, J.A. (1996) The Outcomes of Teacher Training Workshop on Parent Education Focusing on Reading with Children, Dissertation Abstracts International, 57(4), October, P.1566-A
- Barmblett, P.C (2000) An Analysis of New Teacher Programmes, Dissertation Abstracts International, 60 (3), September, p.824-A
- Bhatia, B.S, Verma, H.L., Garg, M.C. (1997) Studies in Human Resource Development, Emerging Dimensions of HRD Role and Orientation. New Delhi; Deep and Deep Publications.
- Bigham, G.D. (2000) Preferred Leadership Frames of Taxes and Appraisal System. Dissertation Abstracts International, 60 (11), May, p.3848-A
- Bolton, M. (1995) Assessment and Development in Europe: Adding value to individuals and organization, Maidenhead, McGraw Hill.

- Boxall, P. and Steeneveld, M. (1999). Human resource strategy and competitive advantage: A longitudinal study of engineering consultancies. Journal of Management Studies
- Byrd, R.L, (1999) What Should Beginning Teachers Know and be Able to do Following Their Pre-service Preparation? Dissertation Abstracts International, 62 (5), November, p.1515-A.
- Chandra, R (2005): Education and Challenges of Globalization. Kalpaz publication, Delhi.
- Chapman, D.D (2001) Performance of Training Performance Measurement: A Comparative study of North Carolina Training Professionals and Non-Training Managers. Dissertation Abstracts International, 61 (10), April, 2001, p.3852-A.
- Chen, Yu-Shu. (2001) The Experiences o Participating in Continuing Professional Development: A Study of Human Resource Development Professionals in Taiwan. Dissertation Abstracts International, 61 (11), May, p.4254-A.
- Cheney, D. (2002, September 09). Resurrecting the economy: From time to time, insight presents verbatim transcripts of significant statements by the nation's leaders. These Are Excerpts from Remarks Made by Vice President Richard Cheney on August 07 to the Commonwealth Club of California at the Fairmont Hotel in San Francisco. *Insight on the News*, 18, 32+. Retrieved April 11, 2005, from Questia database, http://www.questia.com
- Chunn, G. C. and Thacker, C. (1993, February). A manager's role in developing and reinforcing strong training. Corrections Today, 55, 48+. Retrieved April 7, 2005, from Questia database, http://www.questia.com
- Claire, V. 2006. Researching human resource development: emergence of a critical approach to HRD enquiry. International Journal of Training and Development. 10(1):1360-3736.
- Clough, C.E. (1991) Improving Staff Development in South Country. Community college District, California. Dissertation Abstracts International, 62 (7), January, p.2387-A.
- Coe, P.F. (2002) The Practices and Perspectives of Teachers Trained in a Comprehensive Staff Development Model: Ten Years later. Dissertation Abstracts International, 62 (7), January, P.2387.A
- Deringer, M.L. (1999) The Impact of a Professional Development Programme Codeveloped by Middle School Teachers and School Teachers and College Faculty: A Qualitative Study of Teacher-Initiated Change. Dissertation Abstracts International, 50 (10), April, p.3790A.
- Desimone, R. L., Werner, J. M., and Harris, D. M. (2002). Human resource development (3rd ed.). Harbor Drive, Orlando: Harcourt College. Dickerson, G.E (2002) The Institutionalization of Educational Reform: sustaining an Effective Educational Programme. Dissertation Abstracts International, 63 (1), July, p.35-A.
- Dillon, A.S. (2001) University Supervision of Student Teachers: A Comparison of Traditional and Alternative Models. Dissertation Abstracts International, 61 (12), June, pp.4736-A, 4737-A.
- Draper, M.C (1999) A Study of the Reflective Practice of Pre-Service Teachers in their Final Internship. Dissertation Abstracts International, 59 (11), May, pp.4107A, 4108A.
- Dreyer, J.M. (2002) Teacher Training for Outcome-Based Education in South Africa. Dissertation Abstracts International, 63 (1), July, p.106-A.
- Drucker, F. P. (1992). Managing for the future: Dutton, Truman Talley Books Duran, M. (2001) Examination of Technology Integration into an Elementary Teacher Education Programme; One University's Experience. Dissertation Abstracts International, 61 (7), January, p.2664-A.