EVALUATION OF TEACHER EDUCATION PROGRAMS BY STUDENTS AND GRADUATES

by

Vali Mehdinezhad

UNIVERSITY OF TURKU
TURKU 2008

Vali Mehdinezhad

EVALUATION OF TEACHER EDUCATION PROGRAMS BY STUDENTS AND GRADUATES

Academic Dissertation

To be publicly discussed, by due permission of the Faculty of Education at the University of Turku, in lecture hall Cal 2, building Calonia, Vänrikinkatu 2, on June 27th, 2008, at 12 o'clock

Supervisors:	Professor Juhani Peltonen University of Turku
	Professor Erno Lehtinen University of Turku
Pre-examiners:	Professor Jaakko Luukkonen University of Oulu
	Professor Roger Säljö University of Gothenburg, Sweden
Custos:	Professor Juhani Peltonen University of Turku
Opponent:	Professor Jaakko Luukkonen University of Oulu

ISBN 978-951-29-3612-0 (pdf)

UNIVERSITY OF TURKU
Faculty of Education
Department of Teacher Education in Rauma
Research Report

Vali Mehdinezhad

EVALUATION OF TEACHER EDUCATION PROGRAMS BY STUDENTS AND GRADUATES

Abstract

The purpose of this research was to do a repeated cross-sectional research on class teachers who study in the 4th year and also graduated at the Faculty of Education, University of Turku between the years of 2000 through 2004. Specifically, seven research questions were addressed to target the main purpose of the study: How do class teacher education masters' degree senior students and graduates rate "importance; effectiveness; and quality" of training they have received at the Faculty of Education? Are there significant differences between overall ratings of importance; effectiveness and quality of training by year of graduation, sex, and age (for graduates) and sex and age (for senior students)? Is there significant relationship between respondents' overall ratings of importance; effectiveness and their overall ratings of the quality of training and preparation they have received? Are there significant differences between graduates and senior students about importance, effectiveness, and quality of teacher education programs? And what do teachers' [Graduates] believe about how increasing work experience has changed their opinions of their preservice training?

Moreover the following concepts related to the instructional activities were studied: critical thinking skills, communication skills, attention to ethics, curriculum and instruction (planning), role of teacher and teaching knowledge, assessment skills, attention to continuous professional development, subject matters knowledge, knowledge of learning environment, and using educational technology. Researcher also tried to find influence of some moderator variables e.g. year of graduation, sex, and age on the dependent and independent variables.

This study consisted of two questionnaires (a structured likert-scale and an open ended questionnaire). The population in study 1 was all senior students and 2000-2004 class teacher education masters' degree from the departments of Teacher Education Faculty of Education at University of Turku. Of the 1020 students and graduates the researcher was able to find current addresses of 675 of the subjects and of the 675 graduates contacted, 439 or 66.2 percent responded to the survey. The population in study 2 was all class teachers who graduated from Turku University and now work in the few basic schools (59 Schools) in South-West Finland. 257 teachers answered to the open ended web-based questions. SPSS was used

to produce standard deviations; Analysis of Variance; Pearson Product Moment Correlation (r); T-test; ANOVA, Bonferroni post-hoc test; and Polynomial Contrast tests meant to analyze linear trend. An alpha level of .05 was used to determine statistical significance.

The results of the study showed that:

A majority of the respondents (graduates and students) rated the overall importance, effectiveness and quality of the teacher education programs as important, effective and good.

Generally speaking there were only a few significant differences between the cohorts and groups related to the background variables (gender, age).

The different cohorts were rating the quality of the programs very similarly but some differences between the cohorts were found in the importance and effectiveness ratings. Graduates of 2001 and 2002 rated the importance of the program significantly higher than 2000 graduates. The effectiveness of the programs was rated significantly higher by 2001 and 2003 graduates than other groups. In spite of these individual differences between cohorts there were no linear trends among the year cohorts in any measure.

In respondents' ratings of the effectiveness of teacher education programs there was significant difference between males and females; females rated it higher than males. There were no significant differences between males' and females' ratings of the importance and quality of programs.

In the ratings there was only one difference between age groups. Older graduates (35 years or older) rated the importance of the teacher training significantly higher that 25-35 years old graduates.

In graduates' ratings there were positive but relatively low correlations between all variables related to importance, effectiveness and quality of Teacher Education Programs.

Generally speaking students' ratings about importance, effectiveness and quality of teacher education program were very positive. There was only one significant difference related to the background variables. Females rated higher the effectiveness of the program.

The comparison of students' and graduates' perception about importance, effectiveness, and quality of teacher education programs showed that there were no significant differences between graduates and students in the overall ratings. However there were differences in some individual variables. Students rated higher in importance of "Continuous Professional Development", effectiveness of "Critical Thinking Skills" and "Using Educational Technology" and quality of "Advice received from the advisor". Graduates rated higher in importance of "Knowledge of Learning Environment" and effectiveness of "Continuous Professional Development".

According to the qualitative data of study 2 some graduates expressed that their perceptions have not changed about the importance, effectiveness, and quality of training that they received during their study time. They pointed out that teacher education programs have provided them the basic theoretical/formal knowledge and some training of practical routines.

However, a majority of the teachers seems to have somewhat critical opinions about the teacher education. These teachers were not satisfied with teacher education programs because they argued that the programs failed to meet their practical demands in different everyday situations of the classroom e.g. in coping with students' learning difficulties, multi-professional communication with parents and other professional groups (psychologists and social workers), and classroom management problems. Participants also emphasized more practice oriented knowledge of subject matter, evaluation methods and teachers' rights and responsibilities. Therefore, they (54.1% of participants) suggested that teacher education departments should provide more practice-based courses and programs as well as closer collaboration between regular schools and teacher education departments in order to fill gap between theory and practice.

DEDICATION

To:

All Teachers
&
Faculty of Education, University of Turku
&
My family, especially my spouse (Masoumeh) and daughter (Sanam)

ACKNOWLEDGEMENTS

Certainly, many great people have contributed to this production and I owe my gratitude to all those people who have made this dissertation possible and because of whom my graduate experience has been one that I will cherish forever.

My deepest gratitude is to my advisor, Professor Juhani Peltonen. I have been amazingly fortunate to have an advisor who gave me the freedom to explore on my own and at the same time the guidance to recover when my steps faltered. He taught me how to question thoughts and express ideas. His perceptive guidance, constructive advices and his great patience helped me overcome many crisis situations and finish this dissertation. I hope that one day I would become as good an advisor to my students as Professor Peltonen has been to me.

I am deeply grateful to Professor Erno Lehtinen for the discussions that helped me sort out the technical details of my work and also for giving me advices of the dissertation format. I also hope that one day I would become as good an advisor to my students as Professor Lehtinen has been to me.

The members of my dissertation committee, Professor Roger Säljö and Professor Jaakko Luukkonen have generously given their time and expertise to better my work. I thank them for their contribution and their good-natured support.

I am grateful too for the support and advice from all Faculty of Education faculties and staffs. I am grateful to many persons who shared their memories and experiences, especially the Masters' Degree Teacher Education Students and Graduates and also the librarians at the University of Turku who assisted, advised, and supported my research and writing efforts over the years.

I would also like to acknowledge of Jake Mcmullen who has provided ongoing support with the language check of my dissertation.

Most importantly, none of this would have been possible without the love and patience of my family. My immediate family, to whom this dissertation is dedicated to, has been a constant source of love, concern, support and strength all these years. I would like to express my heart-felt gratitude to my spouse (Masoumeh) and daughter (Sanam). I warmly appreciate the generosity and understanding of my family.

Finally, I appreciate the financial support from Ministry of Sciences, Research & Technology of Iran.

Mehdinezhad/

CONTENTS

LIST OF TABLES & FIGURES

1 Introduction

1.1 Challenges of Teacher Education

Undoubtedly, teachers have a strong influence on learning, and good teachers ideally produce good learners with the knowledge, values, attitudes and behaviors for running responsible citizenship. Teachers equip learners with life skills that promote personal and societal development. They are directly responsible for carrying out the primary goal of quality education for all, and education is often correlated, directly or indirectly, with economic development, health, and peace.

In Finland, the responsibility for providing education to prospective teachers at primary and secondary schools was transferred to universities in 1971 (Niemi, 2005). The basic principles of teacher education have emphasized teachers' work in a broad pedagogical and societal framework (Committee report, 1975):

1. All teacher education for comprehensive and upper secondary schools should be academic and carried out in universities.
2. Teacher education should be unified for different teacher categories.
3. The initial education of future teachers must give a common and broad qualification to all teachers and this common background can then be flexibly complemented by in-service education.
4. Pedagogical studies should be developed in such a way that teachers are prepared to be educators in the broad sense of this concept and they should be able attend to their pupils' socio-emotional growth. Teachers should have a pedagogically optimistic attitude towards their work that is grounded in the latest research. Theoretical and practical studies as well as subject matter and pedagogical studies should be more successfully integrated.
5. Teacher education should include societal and educational policy studies (Niemi & Jakku-Sihvonen, 2005, pp. 51-52).

Over a period of time during the 1970's and 1980's, a fairly strict core curriculum was set by the Ministry of Education. It unified teacher education in all universities and raised the common standards. It also made teacher education somewhat inflexible to react to local and contextual needs. In the 1990's, in the context of the general decentralization of governance, the universities were given more freedom to profile their programs. Teacher education was placed in a better position to take local needs and the strengths of individual universities into account. It also became possible to link teacher education with each university's own strategic aims (Tella, 1996).

According to decrees issued in 1979 and 1995, all prospective teachers have to complete a master degree. In terms of the new Bologna process, this degree is equivalent of the second cycle degree in the European higher education area. Primary teachers (class teachers), have science of education as their major, and this degree requires completion of a master's thesis. The topics of the thesis may be highly school-related, and very often they are action research projects. Secondary school teachers (subject teachers), complete a major in their academic teaching subjects and a minor in pedagogy. The educational studies of subject teachers have been completed either as a one year block or concurrently with their academic studies in their major field (Niemi & Jakku-Sihvonen, 2005).

In continuation, the Ministry of Education (2001) submitted a development program teacher education", which considers the changing and expectable needs of teacher education. In the program, one can find a proposal for a core curriculum of teacher education studies. These aspects of teacher competence (see chapter 3) are used as the basis for the evaluation of teacher education programs carried out in this study

This study was focused on the primary school teacher education at the University of Turku. In association with providing training for prospective teachers, the department of Teacher Education was founded in 1974 as part of Faculty of Education at the University of Turku. Also in this year the Rauma Teacher Seminar, originally founded in 1896, was merged with the University and becoming a Department of Teacher Education. The overall target of teacher education at the University of Turku is described as follows: it provides a theory- embedded discipline- based education of high quality with the ultimate goal of educating future teachers whose personal educational philosophy consists of a solid theoretical foundation, rigorous expertise, resourcefulness and critical reflection skills necessary for continued success and development in the teaching profession and in the teaching community. Throughout university education, personal development is encouraged; communications skills and active learning skills are fostered" (Faculty of Education web site, 1).

1.2 Evaluation of Teacher Education Programs

In the 1990s, the Ministry of Education of Finland conducted two large teacher education evaluation projects with international experts (Buchberger et al, 1994; Jussila & Saari, 2000; see also Kansanen, 2003). In addition, several evaluation projects were conducted in various subfields of teacher education. The results were not unexpected, and the ensuing recommendations soon led to various reforms. Some of the problems seem to be long lasting and depend on the solution of more general problems in society as a whole. In general, more co-operations are suggested. First, more contact is required within the faculty of education and among the departments in the faculty. A greater part of both the classroom teacher education program and the subject teacher education program may be organized jointly. A practical problem is the large numbers of students that can easily lead to unsatisfactory arrangements. This kind of co-operation, however, is becoming increasingly common. Second, closer co-operation is needed among the faculties of education and the subject departments. This need has frequently been the object of attention. Lack of co-operation has been caused by unresolved practical problems, competition for resources, and differences in opinion regarding the status of one's own discipline (cf. Jussila & Saari, 2000). Recommendations have been made to establish and strengthen co-operative bodies. In the area of research, co-operation could be increased in the field of project studies, and subject teachers might also choose subject didactics themes for their Masters' theses, while professors on both sides could act as supervisors in such projects. The selection of students for teacher education studies has also been the object of experimentation that has had promising results.

Buchberger et al, in a study about graduates who graduated from the University of Jyväskylä, showed that the programs consisted of very useful elements so that graduates have been very well prepared for the teaching profession. They felt that they could acquire a broad and theoretically based repertoire of teaching competencies. They also felt that teacher education at the University of Jyväskylä helped the personal as well as professional development in becoming open-minded teachers, and being flexible it professionals. In another study at same university, Vähäpassi showed that the master's degree class teacher graduates were usually well satisfied with their work and more than 87 percent of them had found employment as class teachers (Hämäläinen et al, 1996).

In another study, Niemi and Tirri (1997) investigated the readiness of Finnish teachers for the teaching profession as provided by their teacher education. The effectiveness of teacher education can be seen mainly in the readiness of the didactical skills of the teachers and in their willingness to develop in the profession. According to the authors, these goals provide teachers with a good basis, but they point out that in future we should develop teacher education to improve teacher preparation for a collaborative working culture and in the use of open learning environments.

The follow-up study conducted by the Higher Education Evaluation Council (Saari, 2003) showed that university teacher trainers and students felt that the best content areas in pedagogical studies in terms of implementation included knowledge of the learning process, planning and assessment skills, pedagogical use of ICTs and dealing with ethical responsibility in teaching work. The views of teacher trainers and students differed in terms of the pedagogical use of ICTs. Students were not as satisfied with the ICT skills provided by teacher education as teacher trainers. Based on a follow-up, more than 80 percent of respondents felt that the situation was good. Teacher trainers were almost equally satisfied with the way in which previous work experience was taken into account in selection procedures. Students' views were somewhat different: about 60% of them felt that previous work experience was taken into account properly in selection procedures. Conversely, university teacher trainers and students felt that dealing with multicultural issues, abilities to solve conflicts, and prevention of exclusion were poorly implemented in pedagogical studies. Students were more dissatisfied with elements concerning learning difficulties and guidance skills compared with teacher trainers. Teacher trainers and students in vocational teacher education and training felt that knowledge of the learning process and achievement of planning and assessment skills were the best implemented elements. Teacher trainers felt that the skills objective for curricular design and the objectives of the pedagogical use of ICTs had been well implemented. However, students were not quite so satisfied with the achievement of these objectives. Prevention of learning difficulties, prevention of exclusion and dealing with multicultural issues were considered by teacher trainers and students to be the most poorly implemented elements of teacher education.

According to Jussila and Saari, (2000) the state and quality of teacher education are either evaluated in connection with institution and field-specific evaluations or through evaluations specifically focusing on teacher education.

Responsibility for such evaluations rests with the Higher Education Evaluation Council. Evaluation was seen as a topic of general importance at Finnish universities at that time. The previous evaluation of Finnish teacher education was carried out in 1992-94.

The evaluation in 1992-94 was ambitious and consisted of four phases: self-evaluation of the departments of teacher education, site visits by the appointed evaluation team to the departments, international evaluation and a national evaluation seminar. The results were published in two reports (Kasvatusala kohti tulevaisuutta, 1994; Buchberger et al, 1994). The first report emphasizes the importance of preserving and further developing a university based teacher education. The report accentuates the need of developing the curriculum, elaborating on the criteria for the recruitment of student teachers, and further developing the evaluation of teacher education. The international review team focused its report on a number of problems: for instance, the need for improving the integration of different elements constituting the content and structure of teacher education, different problems concerning the relationship between subject studies and educational studies for subject matter student teachers, and what is considered as a proportionally low share of subjects like psychology and political science in teacher education programs. In continuation, in 1998 the Finnish higher education evaluation council appointed a committee to plan a re-evaluation of Finnish teacher education during 1998-99 (Pro Memoria 10/6/1998). The aim was to evaluate how the results of the previous evaluation (1992-94) have affected the development of teacher education (Hansen, 1999).

The Ministry of Education (2001) document about evaluation and feedback emphasizes that anticipation of teacher education and training needs and the evaluation of university and polytechnic teacher training have indicated several points where further development is needed and evaluations show that there are clear differences in how the status and value of teacher training are perceived in different universities and polytechnics. Some of them regard teacher training as an important mission, others accord it a secondary status. Such valuations influence not only resource allocation, but also the inclination to develop teacher training. They also influence the recruitment base in admissions.

According to Niemi (2000, p. 8) although teacher education [in Finland] has succeeded in many respects, there are still many problems which need to be taken seriously. These needs are apparent between academic disciplines and educational

departments, normal schools and teacher education departments, local schools and university schools, teacher education institutions and local communities. Niemi also says: "At the level of the person, we are concerned especially with matters to do with the competence that makes a subject capable of speaking and acting that puts him or her in a position to take part in the process of reaching understanding and thereby to assert his own identity. In the research on evaluation of the effectiveness of teacher education, the studies have not focused so much on the general competencies which teachers may be assumed to have, but rather on teachers' and beginning teachers' personal interpretation of what the teaching profession means to them, and how they would like to develop as teachers. At this level, the studies have focused very much on the initial and continuing processes of teachers' professional identities. If teaching is regarded as an ethical profession, the development of teachers' commitment and responsibility are important aims for teacher education" (Niemi, 2000, p. 8).

Finnish teacher education has been evaluated many times over the past 15 years. These evaluations have proven useful in the efforts to develop teacher education, and some issues are still under discussion. The results of these evaluations have highlighted many strengths of teacher training in Finland. Class teacher education is one of the most popular study programs available at Finnish universities.

In direction of this mission, the effectiveness, importance and quality of existing programs of the Departments of Teacher Education (in Turku and Rauma), were evaluated. Without valid information about past and present program effectiveness, it will be difficult for the faculty to examine, analyze and pursue relevant programs for future graduates.

However, it is necessary answer to the question "how can valid evaluation information about programs be found?" Is it enough to collect feedback from current students or do we need feedback from graduates who already have work experience in the field?

There has been renewed interest in teacher education evaluation. For example, (Diez, 1998, pp. 2-3) provides information on how teacher education programs can gather evidence of effectiveness and on the benefits of this process. Diez describes the stories of several teacher preparation programs that undertook reform by:

> Clarifying the outcomes of their programs, developing performance assessment processes to develop and document the development of

> student learning outcomes, developing strategies to involve faculty across the institution and in P−12 schools in the reform effort, and designing an evaluation plan to guide continuous improvement efforts.

Katz (1981) has responded to this question. Katz stresses the importance and value of feedback through follow-up studies and referred to the NCATE standard as a base for acceptable teacher education programs. She noted that according to NCATE, "the maintenance of acceptable teacher education programs demands a continuous process of the graduates of existing programs". As well, The National Council for the Accreditation of Teacher Education (1977, p. 10) and other agencies urged educational institutions to conduct follow-up studies of their graduates.

> Maintenance of acceptable teacher education programs demands a continuous process of evaluation and modification of the graduates' existing programs, as well as long-range planning. The faculty and administrators in teacher education evaluate the results of their programs not only through assessment of graduates, but also by seeking reactions from persons involved in the certification, employment, and supervision of its graduates.

According to Church (2001, p. 3) students/graduates feedback and evaluation of provision are an essential part of the quality assurance process (QAP). It is a crucial factor in ensuring and/or maintaining student satisfaction, and the QAP highlights the need for dialogue between teaching teams and their students. "There should be an evaluation of the effectiveness of the measures taken to maintain and enhance the quality and standards of provision. Reviewers will be particularly interested in the effectiveness of evaluation and use of quantitative data and qualitative feedback in a strategy of enhancement and continuous improvement ''.

Other authorities such as Felder et al (1981) gave their views on the role and need of follow-up studies by pointing that schools, colleges and departments of education must cope with the problems of evaluating their programs. According to them, those evaluations should focus on finding out whether program graduates are performing effectively on the job.

Thus, as a general rule, teacher education programs rely on graduates for a continuous stream of information to improve programs. One area in which information is sought is the perceptions of the extent to which programs have provided the knowledge base and instructional skills that are essential for success in teaching (Andrew, 1997; Baker & Andrew, 1993; Kochman, 1996; Pike, 1993; West, 1987). When responding to follow-up surveys, teachers who continue in their field offer opinions regarding their preparation for teaching, make recommendations for

improvement, and validate some or all of the current practices of the teacher education institution from which they graduated.

1.3 Aims of the study

The aim of this study is to evaluate the quality, importance and effectiveness of instruction received by students and graduates of Departments of Teacher Education (in Turku and Rauma), at the Faculty of Education, University of Turku. The study is also dealing with the validity of course and program evaluations: the aim is to better understand how the evaluation of teacher education is dependent on the different amount of work experience as a teacher. In addition the aim is to learn more about how different professional orientations might influence teacher's opinions and expectations about quality teacher education. Results from this study can assist institutions of teacher education in developing program evaluation methods.

2 A Review of Evaluation and Quality Assurance Studies

2.1 Students' and Graduates' Feedback

2.1.1 Students' feedback and quality assurance

Student ratings are an old topic in higher education. More than one hundred years have passed since students at the University of Washington filled out what were arguably the first student rating forms (Guthrie, 1954). Almost as long a time has passed since researchers at Purdue University published the first research studies on student ratings (Remmers & Brandenburg, 1927). But student ratings are not yet a stale topic. Teachers still talk about them, researchers still study them, and most important, students still fill out the forms—millions of them every year—in college classes throughout the countries (Kulik, 2001).

Marsh and Dunkin (1997) noted that the Education Resources Information Center (ERIC) database contains over 1300 entries dealing with student ratings of teaching performance. They suggest that the bulk of the research undertaken in this area supported the continuing use of students' ratings of teaching effectiveness as well as advocating further scrutiny of the process.

According to Leckey and Neill (2001, p. 25) although quality assurance is broader than students' evaluations of teaching effectiveness, the collection of this information is important for several reasons:

- it can be used as diagnostic feedback for academic staff to assist them in the enhancement of the quality of their teaching performance,
- it can provide a measure of teaching effectiveness for use in administrative decision-making;
- it can inform students and assist their decision-making when selecting a course of study;
- it can be used to inform research on teaching

Student rating and feedback can be obtained in many ways other than through the administration of formal questionnaires. These include casual comments made inside or outside the classroom, meetings of staff–student committees and student representation on institutional bodies, and good practice would encourage the use of all these means to maintain and enhance the quality of teaching and learning in higher education. However, surveys using formal instruments have two advantages: they provide an opportunity to obtain feedback from the entire population of students; and they document the experiences of the student population in a more or less systematic way.

One could obtain student rating and feedback using open-ended questionnaires. These might be particularly appropriate on programs in education,

the humanities and the social sciences, where students are often encouraged to be sceptical about the value of quantitative methods for understanding human experience. Nevertheless, the burden of analyzing open-ended responses and other qualitative data is immense, even with only a relatively modest sample. The process of data analysis becomes quite intractable with larger samples unless there are a limited number of response alternatives to each question that can be encoded in a straightforward way. The use of quantitative inventories to obtain student feedback has therefore been dictated by organizational constraints, particularly given the increasing size of classes in higher education.

Most of the research evidence has been concerned with students' perceptions of the quality of the teaching that they receive or their more global perceptions of the academic quality of their programs. Much less evidence has been concerned with students' level of satisfaction with the teaching that they receive or with their programs in general. Consumer theory maintains that the difference between consumers' expectations and perceptions determines their level of satisfaction with the quality of provision of a service. This assumption is embodied in American instruments such as the Noel-Levitz Student Satisfaction Inventory and also in Harvey's (1997) student satisfaction methodology. (Indeed, one could, in principle, modify the Course Experience Questionnaire (CEQ) to measure students' expectations when embarking on a programme as well as their subsequent perceptions of its academic quality.) This approach was extended by Narasimhan (2001) to incorporate the expectations and perceptions of teachers in higher education as well as those of their students (Richardson, 2005).

2.1.2 Validity and Reliability of Students' and Graduates' Feedback

Some of the early research, as well as some of the recent research, has focused on the psychometric aspects associated with student evaluations of faculty. Psychometric aspects of student evaluation have issues related to both reliability and validity. Included within these different research streams addressing the reliability and the validity of student ratings of faculty are controlled experiments and field studies (Young et al, 1999).

Results from studies assessing the stability of classroom performance indicate that evaluations of faculty provided by students are stable across considerable periods of time. For example, Marsh and Overall (1981) had students (N = 1, 374) evaluate faculty at the end of a course and evaluate the same faculty again one year

later. These investigators found a median stability coefficient of 0.83 across 100 courses based on an interval of one year.

The validity of student ratings for classroom performance has also been assessed from several perspectives. Unlike reliability which is a necessary but insufficient condition for assessing student evaluations, validity focuses on the utility of student evaluation. Validity assesses the degree to which student evaluations of teaching performance in the classroom setting reflect actual teaching performance as exhibited by a faculty member. To establish the validity of ratings for classroom performance of instructors provided by students, such ratings must be related to other criteria purported to measure teaching performance in the classroom setting. Literature addressing the validity of student evaluations for assessing the classroom performance of faculty has examined several criteria, both perceptual and objective (Ibid, 1999).

Additional support for the stability of ratings comes from cross sectional studies. In these studies, different cohorts of students provide the current-student and alumni ratings. The cross-sectional design is weaker than a longitudinal design, because the different cohorts of students base their ratings on different experiences with a teacher. Feldman (1989c) reviewed results from six cross-sectional studies. He found an average correlation coefficient of .69 between current-student and alumni ratings. By Cohen's standards (1977), this is a remarkably high correlation.

A review of empirical studies indicates that students' ratings can provide reliable and valid information on the quality of courses and instruction. Such information can be of use to academic departments in constructing normative data for the evaluation of teaching and may aid the individual instructor in improving his or her teaching effectiveness.

Numerous investigators reported acceptable stability and internal consistency of ratings; responses apparently were not biased by a particular experience atypical of a course. Research findings suggest that the criteria used by students in their ratings of instructors had much more to do with the quality of the presentation of material than with the entertainment value of the course per se. Such attributes as preparedness, clarity, and stimulation of students' intellectual curiosity were typically mentioned by students in describing their best instructors. Correlations between course rating and grade received, when observed at all, tended to be small, and several studies suggested that such correlations resulted from greater interest in the course by the students receiving better grades, rather than from a "reward effect".

Other correlates of student ratings which were noted were; majors tended to rate courses more highly than non-majors in some cases; students required to take a course sometimes rated it lower than those for whom it was an elective; upper class students occasionally gave higher ratings than underclassmen; and experienced or higher ranking instructors usually received higher ratings than did their less experienced colleagues (Costin et al, 1973).

2.1.3 Uses of Rating Systems

In the past twenty years, the collection of student ratings of instructors and courses has become the most common form of instructional evaluation in institutions of higher education. Seldin (1993) reports that nearly all colleges and universities collect and use student ratings of instruction. Student ratings are widely used by faculty to improve their teaching and courses and by administrators to make personnel and program decisions. During this period of time, hundreds of research articles have been written discussing the "validity" of student ratings. Greenwald (1997) summarizes this research by noting that "the validity of student rating measures of instructional quality was severely questioned in the 1970s. By the early 1980s, however, most [experts] viewed student ratings as valid and as worthy of widespread use". Seldin's surveys on teaching evaluation (1993a) show just how widespread rating systems have become. About 29 percent of American colleges reported using student ratings to evaluate teaching in Seldin's 1973 survey, 68 percent of colleges reported using them in his 1983 survey, and 86 percent reported using them in his 1993 survey. During recent years practically all finnish higher education institutions collected abundant student feedback, but it is not always systematically used in developing programs (Liuhanen, 2008).

Rating results are also being used today in more ways than ever before. Colleges originally set up rating systems to serve two purposes: to help administrators monitor teaching quality and to help teachers improve their teaching (Guthrie, 1954). Today, ratings serve many purposes. Administrators and administrative committees use ratings in hiring new faculty, in annual reviews of current faculty, in promotion and tenure decisions, in school accreditation reviews, in selecting faculty and graduate students for teaching awards and honors, and in assigning teachers to courses. Faculty members use ratings when trying to improve their teaching effectiveness, in documenting their effectiveness internally and

externally, and in monitoring the performance of their graduate student assistants. Graduate student instructors use ratings in developing their teaching skills and in documenting these skills on job applications. Student groups use the ratings in selecting courses and in selecting teachers for awards and honors.

Marsh (1984) states that the validity of student ratings has been sufficiently well established that the focus of student evaluation research has shifted more recently to methodological concerns and the study of specific background characteristics which might harm validity. In continuation, Marsh (1987) concluded that student ratings are clearly multidimensional, quite reliable, reasonably valid, relatively uncontaminated by many variables often seen as sources of potential bias, and are seen to be useful by students, faculty, and administrators. The literature that has been published over the subsequent period has confirmed each of these points and has also demonstrated that student ratings can provide important evidence for research on teaching. The routine collection of students' evaluations does not in itself lead to any improvement in the quality of teaching (Kember et al, 2002). Nevertheless, feedback of this nature may help in the professional development of individual teachers, particularly if it is supported by an appropriate process of consultation and counseling (Roche & Marsh, 2002). Students' evaluations of teaching (SET) increase the use of systematically specific interventions aimed at improving teaching (Hativa, 1996).

After about hundred years of research on the use of student evaluations of programs effectiveness in educational institutes, it can safely be stated that the majority of researchers believes that student ratings are a valid, reliable, and worthwhile means of evaluating programs (for example, Centra, 1977, 1993; Cohen, 1981; Koon & Murray, 1995; Marsh, 1984; 1987; Marsh & Dunkin, 1992; McKeachie, 1990; Murray et al, 1990; Ramsden, 1991; Seldin, 1984; 1993). In fact, Marsh (1987) contends that student evaluations are the only indicator of program effectiveness whose validity has been thoroughly and rigorously established.

Further arguments supporting the use of student ratings include:

- Feedback from student ratings can help to improve instruction (Cohen, 1980; Marsh & Roche, 1993; Menges, 1991; Overall & Marsh, 1979). However, we note that some authors who are supportive of the use of student ratings nonetheless argue that they alone will not automatically improve teaching and sustain that improvement without other types of feedback (Seldin, 1989, 1993; Tiberius et al, 1989; Wilson, 1986). L'Hommedieu et al, (1990) argue

that methodological weaknesses in existing studies generally attenuate rather than exaggerate effects of feedback, i.e. the effect of feedback on teaching improvement may be even greater than that posited in the literature.

- The use of student ratings increases the likelihood that excellence in teaching will be recognized and rewarded (Aleamoni, 1981; McKeachie, 1979).
- Student ratings have been shown to be positively correlated with student learning and achievement, i.e. students rate most highly those instructors from whom they have learned the most (Aleamoni & Hexner, 1980; Centra, 1977; Cohen, 1981; McKeachie, 1990; Murray, et al, 1990). Nonetheless, Deny (1979) and McCallum (1984) state that critics of student ratings cite the fact that these correlations are only moderate (or widely varying) in arguing against their validity.
- Students and faculty generally agree on what are the components of effective teaching and their relative importance (Feldman, 1976b, 1988). This is used to counter the view that students cannot accurately evaluate teaching because students and faculty cannot agree on what constitutes good teaching.

The best evidence of agreement between student and alumni ratings of teachers comes from a longitudinal study by Overall and Marsh (1980). The fourteen hundred students in this study filled out end-of-term evaluation forms in all the courses they took during a three-year period. One year after the students graduated and one to four years after the students completed these courses, the students again filled out evaluation forms on their courses. The end-of-term ratings in one hundred courses correlated .83 with the follow-up ratings, and the median rating at the two times was nearly identical.

More generally, the published research literature leads one to the following conclusions: (Richardson, 2005, pp. 409-410)

- Student feedback provides important evidence for assessing quality, it can be used to support attempts to improve quality, and it can be useful to prospective students.
- The use of quantitative instruments is dictated by organizational constraints (and in distance education by geographical constraints, too).
- Feedback should be sought at the level at which one is endeavoring to monitor quality.

- The focus should be on students' perceptions of key aspects of teaching or on key aspects of the quality of their programs.
- Feedback should be collected as soon as possible after the relevant educational activity.
- It is feasible to construct questionnaires with a very wide range of applicability.
- Two groups are problematic: postgraduate research students and distance-learning students. Curricular innovations might make it necessary to reword or more radically amend existing instruments. In addition, any comparisons among different course units or programs should take into account the diversity of educational contexts and student populations.
- Response rates of 60 percent of more are both desirable and achievable for students who have satisfactorily completed their course units or programs. Response rates may well be lower for students who have failed or who have withdrawn from their course units or programs.
- Many students and teachers believe that student feedback is useful and informative, but many teachers and institutions do not take student feedback sufficiently serious. The main issues are: the interpretation of feedback; institutional reward structures; the publication of feedback; and a sense of ownership of feedback on the part of both teachers and students.

In sum, the importance of student evaluation of instruction and instructors cannot be overemphasized. A survey conducted in the early seventies by the American Council on Education, and reported by Payne and Hobbs (1979), showed that about 36 percent of the over 600 institutions included in the sample reported that student ratings have provided information purposely for summative evaluation at the departmental level. Another survey showed that about 86 percent of American Association of Colleges for Teacher Education (AACTE) schools in the U.S. used student ratings (Riggs, 1975) as a means of evaluating teaching. McKeachie (1969a, 1969b) indicates that evaluations by students, the consumers of the instruction, provide the best criteria of teaching quality. Research studies indicate that rating feedback helps teachers improve their teaching performance. The studies also suggest that student feedback is especially useful when rating results are coupled with consultation on improvement strategies.

Higher education students, as consumers of the educational process, provide feedback to instructors and to professors about course content and classroom

behavior at the conclusion of the course. It is hoped that this feedback, as provided by students, is used by instructors and professors to shape future instructional efforts in the classroom setting.

In fact, it has been stated that the most frequently utilized method for evaluating teaching performance is systematic student ratings (O'Hanlon & Mortensen, 1980). It has been found to be most frequently used over other evaluation methods such as peer evaluation, evaluation by administrators and self-evaluation. Feedback from student evaluations should lead to the improvement of instructional quality as reflected in either subsequent student evaluations or course performance.

2.2 What do the studies tell us about students' and graduates' feedback?

Before answering this question, it is important to answer some sub-questions, e.g. how can rate the educational institutes' programs? In what "areas" do they use students/graduates' ratings? What are the "purposes" of using students/graduates' ratings? The level of general ratings as such is not very interesting and can not be compared with other studies or the results of this study because populations, institutions and measurement instruments are different. In spite of that, the previous studies provide us with interesting information about how students have emphasized and evaluated different aspects of teacher training programs.

According to Ayres (1989) 75 percent of teacher education programs use follow-up surveys to get an indication of student satisfaction, program quality and skill perception. Ingersoll and Kinman's findings (2002) suggest the usefulness of students/alumni [follow-up] surveys in identifying factors related to intention to continue teaching. In that study, student teachers' perceived knowledge and ability predicted their certainty of plans to teach in the future. Scores on scales of teaching skills, classroom management skills, knowledge of children, and technology skills were all highest among respondents who indicated a strong intention to teach.

These studies show that students' evaluations about their teacher education programs do not reflect only the quality of these programs but also the motives and future plans of the students. However, graduates' evaluations and satisfaction with their academic studies, and their goals and expectations for the future provide valuable information to faculty and administrators in maintaining and enhancing the

quality of students' education at an institution. These studies also provide the mechanism to ascertain the development of broad academic and nonacademic skills that students are expected to possess by the end of their studies at the universities. In addition to identifying strengths and weaknesses of a program, Follow-up surveys serve to identify which aspects of a program are related to satisfaction and perceived teaching competence.

Mostly, students/graduates' ratings are about the quality, effectiveness and sometimes the importance of the programs (e.g. Konyar, Nov.2001; Lonsway, 2001; Shields, 2001; CPCC Department of Planning & Research, 2001; Schissel, & Nelson, 2000; Krahn, & Sorensen, 1999; VCU Institutional research and Evaluation, 2001; MU Department of Education Opinion Poll, 1995; UH Office of vice president for planning & policy, 2001; Baylis, 1997; OCC Office of Institutional Research & Planning, 2002; MUR Academic Assessment, 1998; The Central Washington University, 1997; Tri-UTC The Institutional Effectiveness Assessments, 1999, 2000, 2001, & 2002; SMSU Office of Institutional Research, 2001; Moore, 2002; BGSU The Office of Institutional Research, 2002; SUU The Office of Institutional Research, Oct.2000; UMD Department of Education, 2002; UG Department of Science Education, Nov.2000; SUNJ The Office of Institutional Research & Academic Planning, 1997; Eslami, 2001; Provost, 1998; Grayson, 2000).

Several studies have pointed out that students rate higher the importance of teacher education programs, for example Rice (2003) indicated that teacher coursework in both the subject area taught and pedagogy contributes to positive education outcomes. Laczko-Kerr and Berliner (2002), after reviewing several studies related to the importance of teacher education programs, reported that traditionally certified teachers teaching in their area of certification outperform both certified teachers teaching out-of-field and alternatively certified teachers. Related to this, Margaret Mead once said that the most extraordinary thing about a really good teacher is that he or she transcends accepted educational methods (Maricopa Center for Learning and Instruction, 2005). A recent study (Allen, 2003) reviewed 92 studies looking for the most effective strategies for educating and training the nation's teachers. Their study attempted to answer eight questions on teacher preparation. The report refers to the thinness of research available to support various points of view. They pointed out that the issue of teacher preparation calls for more and better research.

With regard to students/graduates' ratings of the importance of teacher education programs, researches (NCTAF, 1996 and 2003; Bean & Vesper, 1994; Peutherer, 2001; Jernigan & Langer, 1997; Nelson et al, 1994; Garza, 2000; Greenwald et al, 1996; Abernathy, Forsyth, & Mitchell, 2001; Grosso de Leon, 2001; Reynolds, 1992; Jegede, Taplin & Chan, 2000; Borko & Putnam, 1995; Glaser, 1987; Darling-Hammond, 1997) have identified positive feedback and relatively low variation between the programs. This raises the question whether these evaluation studies really describe the quality of the programs, or if they also refer to general patterns students use in answering this evaluation questionnaire. For example, Murray and Porter (1996) addressed the importance of educational programs, e.g. subject content knowledge, and pedagogical knowledge for educators. Or Schulman (1987), in his study of a knowledge base for educators, identified seven broad categories of knowledge that constitute the major components of the knowledge base for a classroom teacher, and therefore, are necessary for successful, reflective practice. They include content knowledge; general pedagogical knowledge; curriculum knowledge; pedagogical content knowledge; knowledge of learners and their characteristics; knowledge of educational contexts; and knowledge of educational ends, purposes, and values, and their philosophical, social, political and historical grounds.

Quality and effectiveness assessment systems in higher education, like teacher education institutes, usually serve two major purposes. On the one hand they aim to improve the quality of teaching and learning. On the other hand they provide accountability to the outside world regarding the quality of the teaching activities and the use of the resources provided to this end (Hulpiau, 2001). For many evaluation activities, graduates are the most knowledgeable sources concerning actual course and program operations. Using graduates in the evaluation process and implementing the outcomes in the curriculum are some of the ways that departments can attempt to be more in tune with students' needs, wants, and concerns.

The perception of graduates' evaluations and satisfaction of their academic studies, and their goals and expectations for the future, provide valuable information to faculty and administrators for maintaining and enhancing the quality of students' education at an institution. As pointed out, follow-up studies are becoming more of an essential part of the evaluation of teacher education programs (Brian et al, 2004; Lerer et al, 2002; Kalb, 1999; Dalldorf, 2003; Miller and Wolosyk, 2002; Zelazek et

al, 1998; Plucker et al, 2004; Delaney, 1995; Flowers, 2002; Smoot, 2003; Taylor, 2004; Donovan, 20001; Rohn, 2005; Peutherer, 2001; Carabajal, 1999; Schissel, Zong, & Nelson, 2000; Bickerton & others, 2001; De Wolf, 1980; Jernigan & Langer, 1997; Walleri, 1981; Nelson et al, 1994; Polland, 2002; Garza, 2000; Valker & Branch, 1999; Schmitz, 1981; Shields, 2002; Wild, 2001).

there are several studies about the effectiveness of teacher education programs in perpetrating graduates to function as an educator in his/her job (Darling-Hammond, 1997; Jakku-Sihvonen, 2002; Saari, 2003; Brian et al, 2004; Bickert0n et al, 2001, 2004; Lerer et al, 2002; Zelazek et al, 1998; Flowers, 2002; Smoot, 2003; Donovan, 20001; Taylor, 2004; UMD Department of Education, 2002 NCTAF, 1996, 2003) have done studies. Some researcher (e.g. Grosso de Leon, 2001; Reynolds, 1992; Jegede, Taplin & Chan, 2000; Borko & Putnam, 1995; Glaser, 1987) have proposed different kinds of skills, knowledge, dispositions, and values in which effective teachers must be proficient through the use of students/graduates' feedback. They include: knowledge of learning environments and instructional strategies; classroom management; knowledge of learners and learning; subject matter knowledge; pedagogical content-knowledge; knowledge of instructional strategies and representations; knowledge of curriculum and curricular materials; and knowledge and skills on how to implement technology in the curriculum. For example, in another study, Zelazek et al (1998) asked the teacher education graduates at the Missouri State University to reply to "how would you rate your preparation to teach in culturally diverse settings?" Of 345 graduates, 146 of them rated effectiveness of teacher education programs in their preparation to teach as excellent and good. In the spring of 2001 the Department of Education (2001) at Gallaudet University distributed the department of education teacher preparation programs graduate survey. A part of this survey asked the respondents to rate the programmatic resources provided during the teacher preparation program: faculty quality; practical experiences; and content of the instruction. The results of this study showed that in all of the categories, over half (53% to 83%) of all respondents believed that programmatic resources were effective. Flowers (2002) authorized a follow-up study of all College of Education programs completers. One of the objectives of the surveys was to determine, "how program completers rated their own preparation?" The questionnaires focused on how well the program completers were prepared in: knowledge of subject matter; knowledge of instructional strategies, including technology; considering the school/family/community context

and the prior experiences of students in making educational decisions; and the appropriate use of assessment in measuring student learning outcomes. This survey also studied some variables e.g. professional and ethical work; information management and evaluation; curriculum, instruction, and learning environments; professional development; and technology and information systems. The results showed that College of Education programs in preparation of graduates were strongly effective and the graduates were satisfied.

Taylor (2004) has done a study to determine perspectives of teacher education graduates about their cooperating teachers during preservice placements. Discovering how graduates of a teacher education program perceived their cooperating teachers with regard to the attributes of leadership, diversity, collaborating, reflecting (and thinking critically), and remaining a learner for life . The major finding of this study was the high, positive responses that preservice teachers gave to the evaluation of their cooperating teachers. The entire group of preservice teachers and all subgroups of these indicated that they perceived their cooperating teachers positively.

One of most complete studies of the effectiveness of teacher education programs is a survey of British Columbia teacher education graduates by Bickerton et al (2004). The School of Teacher Education believes that teachers need to be widely educated and to be knowledgeable in the content areas of the curriculum. Courses that prepare teachers in curriculum content areas are typically found within a degree program in an academic faculty. The School of Teacher Education also believes that teachers need professional preparation that provides them with knowledge of the theoretical grounding and foundational aspects of education, the methodological and pedagogical basis of education, and the practice of teaching. This survey has tried to cover almost all knowledge, skills, and abilities related to teachers. The findings showed that British Colombia teacher education programs were effective in preparing graduates for working in the real world.

The researchers have done many studies of students/graduates' ratings of the quality of teacher education programs (Jakku-Sihvonen, 2002; Saari, 2003; Brian et al, 2004; Miller & Wolosyk, 2002; Flowers, 2002; Smoot, 2003; Rohn, 2005; Silverman, 2001; Bickert0n et al, 2001; SUU Office of Institutional Research, 2000; Craig, 2002 & 2003). For example, in order to study quality of education in a program, Lerer et al (2002) surveyed Adelphi students who graduated during the 1999-2000 academic year. Some student variables that have evaluated in this study

were: use of new technology; research skills; ability to work in teams; ethics and integrity; knowledge of a particular discipline; and decision-making abilities. This study also considered some moderator variables like Adelphi degree, sex, marital and job status. The results showed quite positive evaluations of these aspects of the program.

Plucker et al (2004) at Indiana University Bloomington School of Education, tried to answer three questions: What is the teaching status of the IUB teacher education programs? How well do those graduates who are currently teaching feel their IUB program prepared them for that work? According to those graduates who are currently teaching, what were the strengths and weaknesses of their IUB teacher education program? The graduates reported feeling well-prepared by their IUB teacher education program. Graduates report being most satisfied with: a) learning the content necessary to teach effectively in their subject area and b) the positive overall learning environment of their IUB undergraduate program. Practical experience in the classroom was cited as a critical aspect of teacher preparation. In this direction Smoot (2003) investigated the status and attitudes of graduates from the field-based programs of the John H. Lounsbury School of Education of Georgia College and State University who were teaching in partner and professional development schools. Ratings of various aspects of teaching ability were similar to those from student exit surveys. The kind and amount of new teacher orientation they had received varied greatly from school to school.

A follow-up study of the year 2000 graduating class of the Southern Utah University was conducted by the SUU Office of Institutional Research (2000). The main purpose of this study was to identify the strengths and weaknesses of programs. The areas of high quality were: class size, availability of faculty for office appointments, quality of program of study, library services, quality of academic advising, and variety of courses offered. The area of lowest quality was the practical work experiences offered in areas related to the major. Finally, UMD Department of Education (2002) at the University of Minnesota, Duluth, asked the graduates to provide some specific evaluations of their experience in UMD's teacher education program. Graduates evaluated their experience in UMD's teacher education program at the level of 3.7 (near to very good) out of 5.

Despite calls for higher education institutions to "mandate a campus-wide review of the quality of their institutions' teacher education programs" (American Council on Education, 1999), and acknowledged benefits of program evaluation

(Murray, 2000), evaluation of teacher preparation is often limited in scope and done primarily to satisfy accreditation requirements (Thomas & Loadman, 2001). Further, even if institutions collect and analyze such data, they often fail to use the data to make program improvements. Thomas and Loadman (2001) call on teacher education programs to collect quantitative and qualitative data on their graduates' teaching knowledge and skills and to develop scenarios that describe characteristics of programs that are effective and positively affect teaching and teacher education. This study explores the extent to which the selected programs answer Thomas and Loadman's call and adds to the limited knowledge base about how teacher education institutions collect, analyze, and use data to monitor and improve the effectiveness of their programs.

In sum, a review on past studies show that follow-up studies are beneficial to colleges and universities to find out what they are doing right and what they are doing wrong, since feedback opens up new channels of communications between the students, graduates, faculty, and the administrators (Raivola, 1992; Niemi & Tirri, 1996; Hort, 2002; Church, 2001; Yap et al, 2000; Ryan, 1975; Felder, Hollis, & Houston, 1981; NCATE, 1977). In this connection, follow-up is a key to improving teacher education programs and for providing the needed feedback for program development, as Farr (1997, p. 107) says that the improvement of teacher education programs depends upon feedback from graduates regarding their experiences in real-world teaching environments". The findings of this follow-up appear to support the idea that feedback is crucial to learning. Therefore, appropriate feedback can be one of the likely reasons why the quality of teacher education programs was "as good and as excellent" as it was.

2.3 The Comparison of Preservice and Inservice Experiences

What are preservice and inservice (work) experiences? And is there any correlation between student's ratings [with preservice experiences] and teachers' ratings [with work experiences] of the programs?

Documentation of preservice experiences is further divided into the three components: (a) entrance experiences, (b) mid-program experiences, and (c) culminating experiences. Data to be collected during the entrance experiences come from three general sources. The first source, one which is especially important during the first year of college, is the student's perceptions of initial

contact with teaching. A second source is a set of ratings or narrative comments. This source is especially attractive if the freshman year includes field experiences, because not only is the information free, but supervisors can provide intimate first-hand information about future reactions to actual school settings. Finally, a psychological history is taken on the student.

There are two components of documentation of inservice experiences. They deal with the manner and nature of documentation. Data for the first component are gathered entirely via written questionnaires sent to the previous year's graduates. Much of the information pertains to demographic and contextual variables that serve to describe the educational settings in which beginning teachers find themselves (e.g., educational placement offices, library-media center availability and usefulness, inservice opportunities, etc.). While these items usually are not considered as important as other facets that are more closely related to the professional preparation program, they are necessary services which are meant to aid program graduates. Thus, the degree of their success should be evaluated (De Voss, & Hawk, 1983).

Graduates' responses to questions of inservice experiences provide teacher educators with a clearer picture of what happens to a substantial number of their students after they leave teacher training. Because a significant proportion of graduates continue to choose professions other than teaching, programs should have the data about this group from which to make programmatic decisions. Even better, if these students could be identified early in their professional preparation, modifications to programs could be made in order to better equip these future nonteachers to deal with various professional alternatives. In the authors' opinions, although the use of questionnaires in follow-up studies is often derogated (Gupser, 1981), the survey design is an essential part of every follow-up program and cannot be replaced by any data-gathering procedure which is as inexpensive and practical. The only caveat is that a questionnaire must not be used as the sole means of data collection. Embedded in a design such as the one presented here, it is an invaluable component. (Ibid, 1983)

Another important component of this part involves interviewing and observing inservice teachers. Information obtained from these two sources provides a final validation of program adequacy, since behaviors or concerns evidenced by teachers can be compared to their profiles. Interviews and observation can be interrelated. Structured interviews can provide researchers

with a basic concept of a specific inservice teacher's teaching intentions, that is, what he or she feels is important and thus stresses while teaching. Observation systems can then be designed that compare the inservice teacher's teaching intentions to what actually occurs in the classroom, and to those behaviors observed during teaching training. The other crucial comparisons are between the intentions of an inservice teacher and the teacher behaviors desired by his or her mentors. The outcome of this process is one of greater awareness of the alignment between program and practice in the field. The final phase of this alternative model, longitudinal studies, is concerned with collecting data on inservice teachers over a period of several years after they enter the teaching profession. As previous follow-up findings are revealed they should be plugged into this phase in an effort to aid teacher educators in making informed decisions based on sound, longitudinal conclusions (De Voss, & Hawk, 1983).

Several studies have attempted to assess the relationship between student ratings and alumni ratings across courses. Researchers have shown that there is a positive correlation between students' and graduates' ratings (Centra, 1974, 1979; Feldman, 1989; Howard et al, 1985; McKeachie, 1979; Overall & Marsh, 1980). For example, Drucker and Remmers (1951) compared alumni and students' average ratings of programs and found positive correlations between .40 and .68 on 10 characteristics. These average ratings were similar for 6 of 10 items; ratings were significantly lower ($p<.01$) on one item. Centra (1973) updated and expanded research in this area. The rank correlation for the student-alumni responses was .75 ($p<.05$). Marsh (1977) obtained similarly positive findings in a related study focusing on graduating seniors. Marsh and Overall (1980) showed that students' ratings of instructional effectiveness are similar with graduates' ratings.

This runs counter to the argument by critics of student ratings that long after graduation, students with the benefit of additional years of wisdom, will hold a different view of an instructor (particularly one who is demanding) than at the time they were enrolled in that instructor's course, a view which is still commonly held (Wachtel, 1994). However, it is noted that Braskamp and Ory (1994) feel that it maybe useful to collect alumni ratings anyway.

And finally, do graduates' perceptions change with work experiences? Some researchers e.g. Feldman (1983) and Marsh and Hocevar (1991) have indicated that

the mean scores of student evaluation of teaching effectiveness [programs] do not change with experience.

In sum, quality assessment systems in higher education usually serve two major purposes. On the one hand they aim at improving the quality of teaching and learning. On the other hand they provide accountability to the outside world regarding the quality of the teaching activities and the use of the resources provided to this end (Hulpiau, 2001).

For many evaluation activities, students and graduates are the most knowledgeable sources concerning actual course and program operations. Students and graduates had more contact time with faculty and support personnel than other groups and are able to make valid judgments about program facilities, equipment, and other support systems. On the other hand, students do not necessarily have adequate knowledge about the conditions and demands of the professional activity as a basis for program evaluation. However, using both students and graduates in the evaluation process and implementing the outcomes in the curriculum are one of the ways that departments can attempt to be more in tune with students' needs, wants, and concerns. The anticipated outcome of such a follow up study is to identify opportunities for program, by examining its strengths and weaknesses, to determine the overall quality of the program and providing recommendations for improvement (Eslami, 2001).

Finally, in recent years, it seems that instructional institutes have succeed to fulfilling their roles properly through the exploitation of the research results, especially follow-up studies.

2.4 Reflective and Routine Actions for Teachers

Theoretically we can assume that it is not only the amount of teaching experience but also a more general orientation to teacher work which influence of teachers' evaluations about their pre-service training.

The activities of teaching are quite varied. The teacher activities involved in preparation, planning, and evaluation can also be related to expertise as it is discussed by Bereiter and Scardamalia (1993). There are two kinds of activities - reflective action and routine action – of a teaching job.

The distinction between reflective action and routine action is one that respects teachers as professionals whose technical expertise goes beyond the

application of pedagogical treatments. Understanding this distinction can help teachers to penetrate the superficial agreement that can come too quickly and easily when, in either preservice or inservice, teachers are asked about their use of reflective practice. One current writer, in fact, characterizes routine action and its reliance on thinking about methods in absence of context as "magical" because of the powers ascribed to their use (Bartolome, 1994). The well-intentioned frenzy for identifying more and better ways of doing things, he says, constitutes a "methods fetish", and Lilia Bartolome agrees with Donaldo Macedo (1994) that an anti-methods pedagogy is more likely to encourage critical (or reflective) action. Deway (1933, p. 9) made this same distinction and likened routine action to the stream of consciousness that accompanies everyday experience, in which the ends are taken for granted but the means for getting to those ends may be problematic (the goal or desired outcome of this routine action is unexamined and any procedural deviation can be tinkered with to improve the likelihood of the desired end). Reflective action, on the other hand, entails "active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it and the further conclusions to which it leads". In this sense, reflection is not a point of view but rather a process of deliberative examination of the interrelationship of ends, means, and contexts.

Deliberate practice is defined as the amount of time one spends in attempting to improve their performance**.** Simply performing the act is not deliberate practice; deliberate attempting to push one self further is. The theory of deliberate practice (Ericsson et al., 1993) extends Simon and Chase's work by suggesting that it was not simply training of any type, but engagement in "deliberate practice" that is necessary for the attainment of expertise. According to Ericsson et al. (1993), deliberate practice activities are forms of training that are not intrinsically motivating, require high levels of effort and attention, and do not lead to immediate social or financial rewards. Under deliberate practice conditions, experts develop specific skills that are required by their domain under conditions of high effort and concentration. The authors suggest that by continually modifying training activities so that optimal amounts of effort and concentration are required, future experts maximize physiological and cognitive adaptations.

Reflective teaching approaches to professional training and development have been associated with notions of growth through critical inquiry, analysis, and self-directed evaluation, and have sometimes been distinguished from

behavioral skills or craft apprenticeship approaches which, in contrast, emphasize the acquisition of pre-determined classroom practices (Zeichner, 1983; May & Zimpher, 1985). This captures a mechanism that may be manifest in activity that does not resemble what we commonly think of as training activity. In many professions, performers "practice" by engaging in repetitive activity designed to improve specific aspects of performance. These performers frequently practice under the direction of an experienced coach or trainer who helps them monitor progress and provides immediate feedback. At the foundation of the notion of deliberate practice, however, is the fact that deliberate practice refers to activity that provides optimal opportunity for learning and skill acquisition (Ericsson & Charness, 1994). It is possible that activities may look very different across domains yet serve this same purpose.

2.4.1 Implications of "Reflective Teaching" for Teacher Education

Not surprisingly, different conceptions of reflective teaching form the basis for varied and sometimes quite contrasting teacher education practices. For example, in the case of school experience, Schon's notion of reflection-in-action has been used to support the importance of coaching, emphasizing the need for early experience in schools and discussions between teacher and student teacher about teaching (Furlong & Hirst, 1987; Russell, 1988). Critical science notions of reflection, on the other hand, have been used to justify the avoidance of early experience in school: exposure to the craft knowledge of the teacher is viewed in terms of its conservative effects, initiating the student teacher into taken-for-granted routines. Indeed, it has been recommended that student teachers build up critical skills, and an understanding of the context in which teachers' work, well before approaching the teaching task (e.g., Goodman, 1985). Similarly, different conceptions of the nature of reflection and its function in professional learning have led to student teachers' thinking being directed to alternative areas. In some reflective teacher education courses, student teachers' reflection is deliberately focused on themselves, their own beliefs and personalities and how these inform their classroom practice (e.g., Handal & Lauvas, 1987), or on the relation of their own action to educational goals (Erdman, 1983). In others, it is focused away from themselves towards the context in which they operate and the values implicit within it (Beyer, 1984).

Reflective teacher education courses have occasionally been informed by quite complex models of reflection. Zeichner and Liston (1987), for instance, describe a pragmatic and eclectic approach to the design of such a course, drawing upon Dewey's notion of reflective action and Van Manen's notions of levels of reflection, together with some ideas from critical science. They aim to provide a form of teacher education which enables teachers to develop technical competence but also to be able to analyze their practice, become aware of the ethical and moral assumptions within it, and be able to direct their own professional growth as well as the development of the educational environment in which they work.

Russell (1988), having carried out a series of case studies of student and experienced teachers, suggests that the early stages of learning to teach are generally characterized by the mastery of classroom routines, and it may only be after achieving a basic mastery and a sense of comfort with their own practice that students are able to reflect upon their work, examining it in the light of their more abstract and theoretical knowledge about teaching. Reflection, in the general sense of an appraisal of one's own work, may require not only the possession of certain knowledge, critical skills, and a way of conceptualizing one's own learning as a reflective process, but also a basic practical competence together with some degree of self-confidence.

Clearly, teachers possess various areas of knowledge about pupils, the curriculum, teaching strategies, and educational aims which are drawn upon in the development of plans for teaching (Shulman, 1986; Wilson, Shulman, & Richert, 1987). However, the knowledge that more directly informs practice has been considered to be more relevant and suitable for meeting the demands of teachers in the practical and real situations of the work. This knowledge, which is generally referred to as practical knowledge includes such concepts as belief systems, implicit theories, schema, images, rules of practice, and scripts. Teachers in this study suggested that practical knowledge has a very critical role in managing their moral and practical problems in the classroom.

Learning to teach is a field of inquiry in research on teaching and teacher education. This important field has primarily focused on the process of teacher professional development from inside. In other words, it addresses how teachers develop their knowledge of how to teach. The main idea in this field of inquiry is to

insist on the fact that most of teacher professional learning happens in the work while they teaching.

Frequently in teacher education we seem to present student teachers with tasks which they in fact lack the appropriate skills and knowledge to complete, and which provide minimal learning opportunities, resulting in students' devaluing and losing interest in their professional preparation. For instance, in initial periods of classroom observation, student teachers often have difficulty cueing in to classroom processes (Copeland, 1981; Calderhead, 1984, 1988). They lack the concepts with which to perceive what is going on in classrooms. They lack knowledge about teachers' and children's intentions and behavior, knowledge about the curriculum and classroom working procedures, and need guid ance to learn to discriminate the noise and activity of classroom life. As a conclusion, from a deliberative or reflective perspective, the formal knowledge or other trainings of a teacher education program, even though they provide a basic knowledge to start the work of teaching, they are not sufficient in meeting the demands of situational appreciation of classroom life. Practical knowledge, which teachers develop as a result of their experiences and reflection on them, inform and guide the more practical or changeable pedagogical events in the context of teaching. Such knowledge is a direct outcome of teachers' reflection and professional deliberation.

It can be assumed that teachers who see the teacher profession in terms of routine practice do expect that pre-service education should focus on training of concrete practices in real school context. On the other hand, teachers who see that teacher expertise is more dynamic and requires continuous development through deliberate practice expect that the main task of pre-service education is to provide them with conceptual tools and reflection skill needed for continuous learning in various situations.

3 Criteria for Evaluation: What Do Teachers Need to Learn in the Teacher Education?

3.1 Introduction

When developing tools for evaluation of teacher education programs, it is crucial to know what are the adequate dimensions the evaluation instruments should cover. In other words: How we can describe a competent teacher? In the literature we can find numerous attempts to describe what competences teacher education programs should produce. Teacher competence is defined as the ability of a teacher to deal adequately with the demands of the teaching profession using an integrated set of knowledge, skills and attitudes as manifested in both the performance of the teacher and reflection on his or her performance, In other words, professional competences are the systems of knowledge, skills, abilities and motivational disposition which provide the effective realization of the professional teaching activities. Different authors (for example, Grosso de Leon, 2001; Reynolds, 1992; Jegede, Taplin & Chan, 2000; Borko & Putnam, 1995; Glaser, 1987; Murray & Porter, 1996; Schulman, 1987; Darling-Hammond, 1997; NCTAF, 1996, 2003; NCES, 2000d; Mitchell, 2001; Hermann, 2002; Costa, 1985; Keating, 1988; Rosenthal & Ogden, 1998; Räsänen & Sunnari, 2000; Brusling, 2005; Haynes, 1998; Hostetler, 1997; Lovat, 1981; Bjekic, 2007) have proposed different kinds of skills, knowledge, dispositions, and values in which effective teachers must be proficient. They include: communication competences; thinking critically; attention ethics; knowledge of curriculum and curricular materials; knowledge of instructional strategies and representations (roles); evaluation of learning or assessment; professional development; subject matters knowledge; knowledge of learning environments and Knowledge and skills on how to implement technology in the curriculum.

In this direction, the Finland Ministry of Education (2001, pp. 2-8)) has submitted a "Development Program Teacher Education" considering changing and expectable needs of/for teacher education. Increasing the quality of pedagogical studies in teacher education, especially in secondary level teacher education, is one of the priorities for reform. In this part of the program, one can find a proposal for a core curriculum of teacher education studies comprised of the following issues:

1. Educational institutions are faced with a situation where they must be capable of renewal, discussion and problem-solving [critical thinking]. The procedures used to this end are reflected as a model in the learner's day-to-day work. Future teaching will entail an ability to influence actively the work community and to make decisions. A sense of being part of a community is the key to preventing teacher burn-out.

2. Teaching is a human relations profession, in which encounters and interaction are at the very core of daily work. The teacher needs the ability to enter into dialogue with students, parents, local business and industry and organizations. This derives from teacher education, which must focus on developing interpersonal, interaction and "communication skills".
3. Prospective teachers must gain an awareness of the "ethical" responsibility intrinsic to the teaching profession not only in theory but also through experience. In other word teachers should pay attention to ethics.
4. For the development of lifelong learning it is essential that teachers share and internalize a common idea of teaching. Teachers specializing in different forms of education must have a sufficient common background of shared experiences in order to be able to cooperate across institutional borders, especially in the "curriculum and instruction". This is particularly important in the nodes of education, in curriculum design and growing mobility.
5. "The role of teacher" and good teaching isn't hidden for anybody. The Ministry of Education and universities will clarify the role of teacher education in the target outcome agreements. They will also assess the appropriateness of university core funding model for teacher education.
6. The teachers should be able to assess their work, teaching and learning activities; in other words they should learn "assessment skills".
7. One of the most important principles underpinning the teaching profession is "continuing professional development". Development as a teacher must be seen as a gradual process of studying, teaching and continuing professional education. The changes in the teaching profession necessitate up-to-date and constantly developing teaching skills. Teachers themselves must be willing to renew and to assume responsibility for developing their own work. In-service training is, in fact, a duty for all teachers in Finland. For the educational institution, it is important that staff development is carefully planned and linked to institutional development. This requires individual and institutional training plans and the possibility of requiring that teachers develop their own professional skills. In-service training is an important factor in preventing burn-out.
8. Apart from knowledge relating to learning and teaching, the teacher must also master educational content and have a "conception of how subjects", vocations or vocational skills are learned. Teaching and guidance at different levels differ in some respects. The teacher must understand these differences in order to be able to perform his or her duties successfully. Teaching

competence combines solid content knowledge with teaching and guidance skills.

9. Important partners in future "learning environments" will be experts, business enterprises and organizations, as well as students and teachers in other educational institutions. Learning environments will also keep opening up internationally. The learning community will be increasingly virtual, and teaching will be partly given via information networks. The opportunities inherent in IT must not, however, alone determine the course of education, which must have a solid basis in pedagogy and equal opportunity. Technology makes it possible to use several different learning methods and to differentiate content, which will allow learners' different needs and learning capacities to be taken into account. This requires varied learning support and guidance.
10. The educational "use of IT" must form part of all teachers' initial and further training. It must also include ethical and social points of view. The training arrangements in continuing professional education in particular must take into account that in regards to educational use of ICT, institutional development is a communal learning process. More explanations about the above issues are following.

The above description of the challenges of teacher education is used as the basis for the empirical analysis of this study. In the following chapters these criteria are elaborated further.

3.2 Criteria for Evaluation

3.2.1 Critical Thinking

Critical thinking is an important and vital topic in modern education. In general, "critical thinking" is a mental activity of evaluating arguments or propositions and making judgments that can guide the development of beliefs and taking action. Kraak (2000, p. 51) says that critical thinking is "an important, perhaps the most important of all present time educational tasks". Over the past decades, the focus of education has changed from curricular content to curricular outcomes, with a major emphasis on helping students learn to think critically and also results indicated a critical thinking program that emphasizes the teaching of thinking as a separate skill enhanced the students' ability to make judgments and support opinions (Edman, 1996; Fisher & Scriven, 1997; Klaczynski, Gordon & Fauth, 1997; Halpern, 1998; Tucker, 1996). By 1995, most colleges and

universities had included critical thinking (CT) skills as an important educational objective in their goal statements, and many accrediting agencies included measurable gains in critical thinking skills in their accreditation criteria (Facione & Facione, 1995; Siegel, 1988; Ennis, 1987; Garrison, 1991). Lipman, (1985) proposed that good thinking involves creative thinking as well as critical thinking. The ability to think critically is a never-ending process and, as with many skills areas, to become a proficient critical thinker, an educator must practice the skill of critical thinking. Therefore, teachers must model critical thinking for students and provide numerous opportunities for students to engage in thinking critically. To improve student performance on critical thinking tests, schools of education must improve teacher training. They must teach cognitive skills to preservice teachers before training them to teach these skills in the classroom (Ashton 1988). They must integrate critical thinking skills into all aspects of teacher preparation and train future teachers to be models of effective thinking strategies (Walsh & Paul, 1988). Research suggests that the effectiveness of such courses depends on parallel efforts across the curriculum (Resnick, 1987), including training all teachers in cognitive skills (Pauker, 1987). Smylie, Bay, and Tozer (1999, p. 57) declared, "Teachers must be able to think critically about the relationships among classroom practices, student learning, social outcomes, and the ways in which the school facilitates desired learning. To think well about these matters… teachers must be able to analyze complex situations, to inquire and observe, perceive relationships, and draw logical inferences".

According to Howe, Warren (1998, p. 1) the ability to think critically is essential if individuals are to live, work, and function effectively in our current and changing society. He believes that students must make choices, evaluations, and judgments every day regarding (1) information to obtain, use and believe (2) plans to make, and (3) actions to take. As adults they will be living in a complex world and in a democracy where both individual and collective actions will require effective selection, processing, and use of information. State and local curriculum guides contain goal and objective statements regarding the importance of critical thinking skills. In a research paper discussing critical thinking skills, Corder (1992, p. 245) states that critical thinking skills do not happen automatically. Neither can teachers teach students to think critically simply by wanting them to do so. Specific attention must be paid to the development of these skills and specific deliberate teaching strategies must be employed by the teacher. One can not coerce a learner to think critically or force another to analyze critically the values, beliefs, and assumptions on which their lives are built.

According to Walsh and Paul (1988, p. 49), to improve student performance on critical thinking tests, schools of education must improve teacher training. They must teach cognitive skills to preservice teachers before training them to teach these skills in the classroom. They must integrate critical thinking skills into all aspects of teacher preparation and train future teachers to be models of effective thinking strategies.

Educational researchers and program developers (Costa, 1985; Keating, 1988) have tended to include four elements in reports and writings on critical thinking. These include (1) content knowledge, (2) knowledge of thinking skills, (3) ability to monitor, use and control thinking skills (metacognition), and (4) an attitude to use thinking skills and knowledge. Winocut's listing of skills (Costa, 1985) includes three categories: (1) enabling skills, (2) processes, and (3) operations. Enabling skills include observing, comparing/contrasting, grouping/labeling, categorizing/classifying, ordering, patterning, and prioritizing. Processes include skills related to analyzing questions, facts/opinion, relevancy of information, and reliability of information. Processes also include skills necessary for inferring, understanding meanings, cause/effect, making predictions, analyzing assumptions, and identifying points of view. Operations include logical reasoning, creative thinking, and problem solving skills. Based on research results in the science fields related to reasoning (Glaser, 1984; Carey, 1986; Kuhn, 1985), developing an understanding of knowledge and the ability to retrieve useful knowledge are important for effective thinking. Analyses of items from tests using Bloom's Taxonomy have produced similar conclusions; students are generally not able to effectively use thinking skills without appropriate knowledge.

Teacher educators have shown burgeoning interest in teachers' beliefs about learning and teaching (Calderhead, 1996; Fenstermacher, 1994; Nespor, 1987; Pajares, 1992; Richardson, 1994, 1996; Smylie, 1988). These beliefs have been found to exert considerable influence on how teachers structure classroom activities and interact with learners (Anning, 1988; Calderhead, 1996; Nespor, 1987; Richardson, 1996). there are many research that have focused on beliefs about: cognitive skills, goal-directed-the kind of thinking involved in solving problems, and making decisions (Halpern, 2002, p.6; Torff, 2003; Brown & Campione, 1990; Browne & Keeley, 2001; Ennis, 1987; Henderson, 2001; Kuhn, 1999; O'Tuel & Bullard, 1993; Perkins, 1992; Perkins, Jay, & Tishman, 1993; Pogrow, 1990,1994; Raths, Wasserman, Jonas, & Rothstein, 1986; Resnick, 1987). Instruction that emphasizes CT ("high-CT activities") has been described as an approach to teaching that differs from direct instruction ("low-CT activities"). In a study on CT, Raudenbush et al (1993) examined the relationship

between academic track and emphasis on high-CT activities in a study in which 303 secondary teachers identified their instructional goals for high-track and low-track classes and completed specially designed scales that assessed teachers' emphasis on high-CT activities in these classes. Results of regression analyses indicated that instructional objectives and use of high-CT activities differed across academic tracks. Zohar et al (2001) obtained similar results in a study of 40 Israeli secondary teachers.

3.2.2 Communication Skills

The importance of communication skills for educators whether administrators or teachers, is widely accepted. A teacher uses knowledge of effective verbal, nonverbal, and media communication techniques to foster active inquiry, collaboration, and supportive interaction in the classroom. The first stage of a teacher education course normally begins with a period of classroom observation, during which student teachers are invited to focus on certain aspects of teaching technique, e.g. classroom organization, use of voice, methods of presentation of material. The consideration of questioning skills and techniques may also be included. Work on developing communication skills focused upon use of key words, becoming a good listener, and giving constructive, helpful feedback (Hughes, 1999). Case studies of high-wage companies also state that essential skills for future workers include problem solving, working in groups, and the ability to communicate effectively (Murane, & Levy, 1996). Craddock (1997), in a survey of the importance of communication skills found that 97 percent rated communication skills very important to their job and 80 percent said their ability to communicate effectively helped them advance. Rosenthal and Ogden (1998) found that of the 383 responded, 64.8 percent agreed with the statement: "Greater emphasis should be placed on communication skills", suggesting that the majority of students valued communication skills learning. However, response rates varied according to the year of training. For example, first, second and fourth year students had higher response rates (89.3, 78.6 and 88.8 percent, respectively) than third and fifth year students (65.4 and 54.2 percent, respectively). This suggests that the findings may not be generalizable to a wider population of third and fifth year students. The findings of Rees and Garrud (2001) showed that some medical students held positive attitudes towards communication skills learning. They also thought that communication skills were lifelong skills and helped them to work in teams. Finally, these findings suggested that communication skills learning was valued and that many students wanted

more. Yinger (1999, p. 91) pointed out that as organizational and systemic competence become more important in carrying out the work of teaching and learning, "communication, collaboration, and interdisciplinary and interprofessional conceptualizations and actions become increasingly necessary".

Finally, according to Cobb et al (2005, p. 69), teachers are generally expected to be able to do the following: Clearly and cogently present information; give clear explanations; help students put their ideas into words; help students improve their communication skills; help students understand the meaning of written language; provide apt analogies to assist learning; communicate well with parents both in speech (be "well spoken") and in writing, and, communicate effectively with administrators.

3.2.3 Ethics

In the 1960's and early 1970's ethics was still part of teacher education curricula in Finland, and it was clearly tied up with Christian tradition and Lutheran ethics. It is surprising why it was abolished at the time when changes became faster and there would have been need to reflect the direction, aims and consequences. Instead of transmitting values, discussions about ethical principles were emphasized both at schools and teacher education. Teachers' professional ethics began to interest; experiments to teach it were organized. In the end of the 1980's ethics again became important in teacher education discussion and gradually was included in the curricula. Instead of transmitting values, discussions about ethical principles were emphasized both at schools and teacher education. In spring 1999 researchers and teachers of professional ethics gathered in Helsinki to discuss the aims, approaches and methods of their teaching. Several questions were raised like who has the responsibility for the quality of teaching and learning results in professional ethics. Are the students alone responsible, or teacher education institutions, or employers or trade unions? The general impression seemed to be that although learning eventually depends on the students, all parties involved – and particularly teacher education departments – should take care of the area (Kumulainen, 2008, p. 173).

Teachers' ethics, teacher education and changing horizons is an article that is written by Räsänen and Sunnari (2000, p. 10) and it discusses the role of ethics and values in people's lives with a special focus on the role of teachers and education in value orientation and ethical discussion. It is pointed out that from many perspectives teachers' work can be considered an ethical profession with its own tasks in society and values to support and cherish. Teachers are also

supposed to participate in the young generation's ethical upbringing. Teacher education should prepare teachers for the ethical challenges of their profession, which is not easy in a versatile and changing reality.

In another paper, Ethics, education and teacher education, Räsänen (2000) argues that the teaching profession is essentially an ethical profession. According to her, professional ethics is not a question of rhetoric or repetition but personal involvement and determination, which includes cognitive and emotional aspects and striving for corresponding actions. In reviewing the history of moral education, Räsänen describes the developmental processes the Oulu Department of Teacher Education has been involved in whilst developing their ethical education. The diachronic account of the developmental processes provides valuable information for other institutions to reflect upon (Kumulainen, 2008, p. 12)

That is why moral education has traditionally been considered one of the areas of education and teachers' ethics, but the approaches to it have differed and changed. The approaches have been divided into e.g. (1) value-transmission, (2) value-clarification, (3) moral development theories, and (4) ideals of a community of ethical inquiry (Chazan, 1985; Hersh et al, 1980; Kay, 1975; Lipman et al, 1980; McPhail et al, 1975, Noddings, 1987, 1988; Power et al, 1989; Pring, 1987; Purpel & Ryan, 1976; Raths et al, 1978; Scharf, 1978; Straughan, 1988; Wilson et al, 1967; Wilson, 1973).

Teachers' ethics are the professional ethics of teachers. These are the moral standards and behavioral norms that teachers and education workers must observe in their educational activities and the moral concepts, sentiments, and qualities that go with them. Teachers' ethics form the core of the qualities of teachers and consist fundamentally of devotion to the task of educating the people, maintaining a firm and correct political orientation; being a model for others in abiding by the law; rigorous scholarship and the pursuit of innovation; genuine concern for students and safeguarding the legal interests of students. According to Brusling (2005, p. 3) to promote the teacher student's personal development and professional ethical dispositions is one of the important aims of the teacher education programs. In the introductory part of the national curricula for teacher education (Rammeplan for allmennlærerutdanningen,/ førskolelærerutdanningen, 2003, p. 6), common to the preparation of teachers and early childhood education teachers, professional ethics is identified as one of five main areas of competence for teachers (the others being subject competence, didactical competence, social competence, and competence for change and development). Thus, even a rough analysis of the most important

documents on which design of teacher education programs have to be based shows that professional ethics is a major policy concern (Brusling, 2005).

Teachers' ethics are the professional ethics of teachers. These are the moral standards and behavioral norms that teachers and education workers must observe in their educational activities and the moral concepts, sentiments, and qualities that go with them. Teachers' ethics form the core of the qualities of teachers and consist fundamentally of "devotion to the task of educating the people, maintaining a firm and correct political orientation; being a model for others in abiding by the law; rigorous scholarship and the pursuit of innovation; genuine concern for students and safeguarding the legal interests of students." This is the standard of professional ethics a teacher of quality must adhere to. This article describes the professional ethics of today's teachers in institutions of higher education mainly in terms of society's attitudes and the influences on them (including form of and criteria for teacher–student interaction, teachers' professional skills, and teachers' individual charisma (ZHENG& HUI2005, p. 91). Several sources (e.g. Idaho Professional Educators, 2003, 2004; British Columbia College of Teachers, 2004; Tom, 1984; strike & Soltis, 1985; Goxxllad et al 1990; Sockett 1993; Osre, 1994a; Campbell, 2000b; Freeman, 1999H; Sockett, 1990) conceptual links between ethical professionalism and moral education. Additionally, they, as well as other sources, provoke questions about the role of teacher education in preparing ethical professionals and the place of ethical codes or standards in the initial preparation and ongoing development of teachers. Also other related literature highlights the importance of professional ethics of educators (Haynes, 1998; Hostetler, 1997; Lovat, 1981). Therefore, good teacher–student relations are a major criterion in students' evaluation of teachers' professional ethics, and these need to be nurtured and facilitated by both teachers and students, who also need to develop mutual understanding. Therefore, good interaction is mainly reflected in the form it takes, and in the teachers' attitude toward students. The ethical process involves two steps, first one must know what is right and what is wrong, and second one must have the personal discipline, integrity and motivation to do what they know is right. Finally, learning ethical behavior begins early, but it must not stop when one graduates from school.

Brusling (2005, p. 11), in a part of his paper state that ethics comes out as an educational area associated with relatively modest expectations on behalf of the students in the studied teacher education programs, as well as with relatively low assessment of outcomes. The former may not come as much of a surprise considering student teachers widely known preoccupation with surviving as classroom performers. The latter finding confirms earlier research. In a review of

several studies of education in the professions, Bebeau (2002) concludes that almost none are able to show that positive moral development is occurring over the course of the studies. Lyons (1990) in the US and Husu (2001) in Finland find that students self -assessments are that they are ill-prepared for dealing with the moral dilemmas that they face in their work. Bergem (1993) in Norway states that teacher educators, despite declaring a concern for the moral dimensions of teaching, seldom explicitly addressed them. A study of training preferences of mentors in England and Wales (Wright & Bottery, 1997) indicated that technical matters of classroom performance were favored at the expense of discussing ethical dilemmas. Within the medical professions Andre (1992) even finds evidence of negative development in some studies.

3.2.4 Curriculum and Instruction

According to Curtis (1998, p. 46) all teachers use curriculum and instructional techniques to integrate theory with practice, academic and workforce education, professional education and subject matter, and learning theory and workforce preparation. Research indicates dozens of activities that all teachers can use to help students with their school-to-work transition. Examples include involving students in organized workplace experiences, linking with employers and the community, and including workplace representatives in school curriculum and instruction activities. If teachers want to be more successful at organizing and conducting school to work programs they must develop new talents that extend beyond their current capabilities. Examples of these talents include being willing to change with technological advances, understanding the many needs of employers and the community, and having knowledge of curriculum and instructional techniques and also a knowledge of school-based learning that goes beyond specific teaching areas.

Teachers in Finland take part in the planning of local curriculum. The aim is to involve teachers in decision making concerning their own work by having curricula designed primarily at the local level within nationally determined guidelines and broad educational goals established by the National Board of Education. It is seen as important that, during their teacher-training period, teachers receive preparation for work in the planning of local curricula. The regulations concerning local curriculum development and evaluation of quality in curriculum and learning emphasize the need for the teachers to collaborate with the stakeholders of the school. The concept of new professionalism in teachers' identities means a shift away from working in isolation towards new, interactive

forms of relationships with colleagues, students and the school's stakeholders. These collaborative curriculum development and evaluation processes entail a new school culture based on collegial collaboration (Kohonen, 2000).

It is important for teacher education to pay more attention to preparing students for collaboration in general and for a collective curriculum-making process in particular, explicit measures have to be taken. However it needs to investigate the widespread tendency among teachers to negatively perceive projects that require substantial change in behavior. The examples from the Finnish and other studies show that teacher education seems to have been narrowly classroom-oriented with the teacher seen as a single actor. Processes by which interaction between teachers, and a symmetric interaction between teacher and students, might be promoted have been given weights less. Student teachers' subject knowledge, its implication in classrooms, and theory-based general pedagogical knowledge have been given priority, with the emphasis on an input-output view of the transmission of subject knowledge (Edwards, 1995, p. 598). Teacher education needs to provide practical experience to help teachers act in a continuous renewal of schools by deepening their understanding of the interplay of teaching activities at different levels. In addition to analyzing curricular guidelines and school-based curricula, as well as practicing curriculum-making, student teachers could become actively involved in developing programs for teacher education. Thus, the form of teacher education should also serve as a model for student teachers' own future practice. As Smith (1994, p. 26) has pointed out, it is unreasonable to expect student teachers to create teaching contexts of their own which are very different from those that have dominated their own educational experiences.

It may appear that an increase in the responsibility of schools for involving student teachers in school-based curriculum work can be legitimized as the logical outcome of an emphasis on interaction between theory and practice. An increased emphasis on the school as a training base for curriculum work would provide opportunities to translate formal pedagogical knowledge into practical knowledge. This will avoid creating a framework of practice simply on the basis of an analysis of practice (Edwards, 1995, p. 597).

Curriculum and instruction are central to educational improvement, constituting the what, how and why of teaching and learning. The study of curriculum and instruction not only entails content, methodology and assessment but also entails an understanding of why curriculum and instruction are important in affecting change both within and outside of schools. Instruction is the creation and implementation of purposefully developed plans for the teaching of

curriculum content. It is what teachers often concisely refer to as "planning" and "teaching". Moore (2002, pp. 2-3) says that while a school's curriculum consists of the "total experience", instruction can be more narrowly defined as the strategies selected and implemented by the teacher to deliver the intended curriculum. Teachers need to know district expectations regarding planned curriculum and instruction in order to implement the written curriculum successfully. Teachers need to provide knowledge in a professionally meaningful manner, include different contexts and scenarios as well as work with authentic problems, and use assessment to drive and improve learning (Chambers, 1997; Van et al, 2000; Kaufman, 2003; Friedman Ben-David, 2000). Education specialists believe that the success of educational reform depends on the ability of teachers to continually renew curriculum and instruction, the core of educational practice.

3.2.5 Role of Teachers and Teaching

According to Morris et al (2007) the goal of teaching is to support student learning. It is hard to imagine teachers becoming more effective over time without being able to analyze teaching in terms of its effects on student learning. What did students learn, and how and why did instruction influence such learning? How could lessons based on this information be revised to be more effective when teaching them next time? They also state that two quite different kinds of knowledge, skills, and dispositions or competencies contribute to analytic expertise required to study and improve teaching. According to them, the first kind of competence is subject matter knowledge for teaching. This refers to the kind of subject matter knowledge needed to unpack the content learning goals for students, to understand students' thinking about the subject, to simplify the complex ideas of the subject in ways that sustain the integrity of the subject, to represent ideas in accessible ways for students, to pose key questions and problems, and so on. Shulman (1986) described this kind of competence as pedagogical content knowledge. Many researchers (e.g. Ball, 1999; Ball & Bass, 2000; Ma, 1999; Sherin, 2002) have extended these ideas in their own studies.

Research has shown that teachers are committed to helping and supporting students, and that they have an element of professional pride in the role they play. Teachers feel that they play an influential part in helping to shape students' attitudes and aspirations and that they support students at critical stages of their lives. They provide a range of formal and informal support in relation to future educational and employment pathways, and they also encourage students to see

the positive links between educational attainment and a future desirable lifestyle. Research projects have also found evidence that good teaching will advise students to follow an academic rather than a vocational education pathway. The research has also shown that there are a range of interrelated factors that are making it difficult for teachers to respond effectively to student's needs, and that organizational factors, cultural constraints and limitations of teachers' own knowledge and experience are key factors in effecting improvements in the role teachers can play. In this respect, the organizational culture within which teachers work has resulted in high levels of stress, overwork and demoralization. Teachers also feel that a range of conflicting values and cultures in the home, along with youth culture, increasing pressures and a loss of the motivation to learn amongst many students, are undermining any efforts that teachers might take.

Teachers also acknowledge that they often lack the resources and information which would allow them to provide the sort of support and advice that students need, and there is a strong sense that teachers do not recognize the opportunities that exist for students in the region (Dobbs et al, 2003; Foskett & Helmsley-Brown, 2001; Teay, 1998). Brubacher, Case, & Reagan (1994) suggested that the act of teaching can be more accurately and usefully conceptualized in terms of the role of the teacher as decision maker. Howey (1996, p. 150) defined effective teaching as a process in which teachers make reasonable judgments and decisions about the appropriate tools to use in any particular teaching situation. Thus, it is apparent that decision making for educators is a vital process whether they are serving as instructors, facilitators, managers, mentors, evaluators, or professionals. Such decision making is based upon knowledgeable justification and/or judgment from an awareness of different paradigms of teaching and learning and methods for choosing among those paradigms. Choices and change are the result of rational thinking and "practical reasoning" within the context of the decision making (Donmoyer, 1996; Schwab, 1969). There is a need to improve the educational environment in ways that allow teachers to develop effective support systems for students. In another study, Bell (1999) researched the influence of teacher educators' perspectives on the role of teachers in the students experience shows that it is the role of teachers to be a guide, a facilitator, a model, a decision maker, an agent for change, and an advocate for students. Teachers should carry out these roles while, showing respect for their students and creating a comfortable learning environment. Other studies have pointed out that one of the most critical elements affecting student

learning is the quality of the classroom teacher (Education Commission of the States, 2000).

As Byrnes (2003, p. 164) states: "Effective classroom teaching is associated with a number of skills or qualities possessed by successful teachers". Researchers have identified three dimensions of teaching that are related to effectiveness in the classroom (Shechtman & Godfried, 1993). They are: verbal, interpersonal, and leadership skills. Effective communication with students is a central facet of successful teaching. A teacher must possess the verbal skills to think clearly, organize his or her thoughts, and express himself or herself with clarity, enthusiasm, and friendliness (Lowman, 1984). Skill in interpersonal relationships is a crucial trait for successful teachers. Effective teachers must be able to consider the social-emotional needs of their students and the affective dimensions of learning (Steele, 1999). Successful teachers build support, rapport, and trust with their students. Shechtman (1989, p. 243) wrote: "Skills in human relationships are crucial not only for the affective well-being and growth of students, but also for their intellectual development and motivation to succeed". Also an effective teacher must have leadership qualities to motivate students through self-assuredness, dynamism, and enthusiasm (Westbrook, 1998). Highly successful individuals, both minority and nonminority former students alike, reflect back that their most highly respected and memorable teachers were those with strong leadership and interpersonal skills (Johnson & Prom-Jackson, 1986; Steele, 1999).

Some researchers (e.g. Goodlad, 1990; Haberman, 1987; Russell, Persing, Dunn, & Rankin, 1990) believe that most teacher education programs do not consider verbal, interpersonal, and leadership skills when selecting students. Instead, teacher education programs typically use academic criteria such as GPA and standardized test scores to select students, even though the research demonstrates that academic criteria are poor predictors of success in teaching (Guyton & Farokhi, 1987; Haberman, 1987; Shechtman & Godfried, 1993). Baskin et al (1996) suggested that teacher education programs persist in using academic criteria because of a series of reports during the 1980s that called for teachers achieving mastery of subject content (Carnegie Task Force on Teaching as a Profession, 1986; Holmes Group, 1986; National Commission for Excellence in Teacher Education, 1985; National Consortium for Educational Excellence, 1985). These reports advocated using standardized tests to assess the fit between a potential teacher and the objectives of the school district. Still others suggest that academic criteria are so extensively employed because there is a perception that there is a parallel between what might predict whether a student

will be successful at college generally and whether a student will be successful in a teacher education program more specifically.

Brain (1998) asked the following questions in his search for what makes a good teacher: What are the qualities that combine to create an excellent, memorable teacher? Why do some teachers inspire students to work three times harder than they normally would while others inspire students to skip class? Why do students learn more from some teachers than others? For those who aspire to become better teachers, these are important questions. In addition, he identified the issue of "emphasis on teaching" as focusing on four essential qualities that distinguish exceptional teachers (1) knowledge, (2) communication skills, (3) interest, and (4) respect for students (Ololube, 2005, pp. 97-98).

3.2.6 Assessment Skills

Assessment is the systematic collection, review, and use of information to increase students' learning and development. Educators use the results of tests and other assessments to monitor the progress of students, diagnose their needs, and make instructional plans. Assessment can also be used to provide information about the quality of programs, schools, and districts that are providing education and training. Several authors have argued that there are a number of essential assessment concepts, principles, techniques, and procedures that teachers need to know about (e.g. Calfee & Masuda,1997; Cizek, 1997; Ebel, 1962; Farr & Griffin, 1973; Fleming & Chambers, 1983; Gullickson, 1985, 1986; Mayo, 1967; McMillan, 2001; Sanders & Vogel, 1993; Schafer, 1991; Stiggins & Conklin, 1992), there continues to be relatively little emphasis on assessment in the preparation or professional development of teachers and administrators. In addition to the admonitions of many authors, there are established professional standards for assessment skills of teachers (STCEAS, 1990). The purpose can be formative assessment and assessment for learning, assessment for learning is based on a student involved approach to classroom assessment and has been well documented by Guskey (2003), Stiggins (2002, 2001), and others. Formative assessment refers to the feedback provided by teachers during the formation stage of learning to check on student learning outcomes (Black et al, 2004). Gronlund and Cameron (2004, p. 14) emphasize the importance of formative assessment, where the purpose is to "monitor learning progress and to provide corrective prescriptions to improve learning". Recent literature on teachers' classroom assessment practices pointed out that the principles and practices inherent in assessment reform need elaboration and development

beyond generally accepted practices (McMillan, 2003; Brookhart, 2003). Furthermore, literature on classroom assessment has delineated the content domain in which teachers need to develop assessment skills (e.g., Airasian, 1994; Carey, 1994; O'Sullivan & Chalnick, 1991; Schafer, 1991; Stiggins, 1992, 1997). Finally, Boston (2002), Rolheiser and Ross (2000) and others have emphasized the importance of training and professional development for teachers to help them better understand and implement effective practices that are the important elements of assessment.

The scope of a teacher's professional role and responsibilities for student assessment may be described in terms of the following activities which require competence in student assessment and sufficient time and resources to complete in a professional manner.

1. Activities occurring prior to instruction:

1.1 Understanding students' cultural backgrounds, interests, skills, and abilities as they apply across a range of learning domains and/or subject areas;
1.2 Understanding students' motivations and their interests in specific class content;
1.3 Clarifying and articulating the performance outcomes expected of pupils; and
1.4 Planning instruction for individuals or groups of students.

2. Activities occurring during instruction:

2.1 Monitoring pupil progress toward instructional goals;
2.2 Identifying gains and difficulties pupils are experiencing in learning and performing;
2.3 Adjusting instruction;
2.4 Giving contingent, specific, and credible praise and feedback;
2.5 Motivating students to learn; and
2.6 Judging the extent of pupil attainment of instructional outcomes.

3. Activities occurring after the appropriate instructional segment (e.g. lesson, class, semester, grade)

3.1 Describing the extent to which each pupil has attained both short- and long-term instructional goals;
3.2 Communicating strengths and weaknesses based on assessment results to students, and parents or guardians;
3.3 Recording and reporting assessment results for school-level analysis, evaluation, and decision-making;
3.4 Analyzing assessment information gathered before and during instruction to understand each students' progress to date and to inform future instructional planning;
3.5 Evaluating the effectiveness of instruction; and
3.6 Evaluating the effectiveness of the curriculum and materials in use (Ololube, 2005, P. 72).

3.2.7 Continuous Professional Development

According to the National Board of Education (2004, p. 32), the development program addresses the topic of continuing professional education. Development as a teacher must be seen as a gradual process of studies, teaching and continuing professional education. The changes in the teaching profession necessitate up-to-date and constantly developing teaching skills. Teachers themselves must be willing to renew their skills and to assume responsibility for developing their own work. For the educational institution, it is important that staff development is carefully planned and linked to institutional development. This requires individual and institutional training plans and the possibility of requiring that teachers develop their own professional skills. In-service training is considered an important factor in preventing burn-out. Continuing professional education should take into account the different training needs teachers have at different points of their careers. The guidance of newly graduated teachers will be intensified. Universities and polytechnics will take measures to bring continuing professional education closer to initial training. This will create a training continuum supporting lifelong learning and make it easier to determine which content is best provided during initial training and which during continuing education. The National Board of Education also believes that the responsibility for continuing professional education of teacher trainers rests with the teacher trainers themselves and their work communities. This requires staff development strategies which take account of both individual training needs and those of the work community. One important aim in these strategies is to prevent burn-out. It is also important for teacher trainers to actively take part in the production of new knowledge in R&D projects.

Continuous professional development is a catalyst for professional growth as it is increases curiosity, motivation, and educators' knowledge about their professions. It will supply best practices, new ways of thinking, and problem solving skills that empower them. Overall, it will improve the quality of schools and prepare and support educators to help all students achieve high standards of learning and development (Moore, 2000). Until now, many professional development activities have been implemented in different areas for different purposes. Some of these activities are innovative experiments for inservice teachers (Sandholtz, 2000) and collaborative partnerships among inservice teachers, designing course materials, and technology training (Sandholtz & Dadlez, 2000). These studies enabled researchers to come up with effective professional development programs. According to the model developed by Sparks

(2000, pp. 2-3) the quality of professional development programs for teachers depends on the content characteristics, process variables, and context characteristics. Content refers to what will be included in professional development activities (Guskey, 2000; Sparks & Hirsh, 1997; Sparks, 2000; Ganser, 2000; Reed, 2000; and Inquiry and National Education Standards, 2000). Process refers to how activities are planned, organized, carried, and followed up (Ganser, 2000; McCarthy & Riley, 2000; National Staff Development Council, NPEAT, 2000; Cobb, 2000). The context of professional development refers to the organization, system, and culture in which the professional development activities are implemented (Guskey, 2000; NCES, 1998; Ganser, 2000; NPEAT, 2000; Villa, Thousand, & Chapple, 1996). Overall, they improve the quality of schools and prepare and support educators to help all students achieve high standards of learning and development (Moore, 2000). Smylie, Bay, and Tozer (1999, p. 31) argue that teacher learning has always needed more emphasis in teacher preparation programs and that there has been lack of support for professional development and workplace learning throughout the careers of educators and also teachers need to have roles in promoting the broader purpose of schooling, particularly those associated with social change and school-level reform. Yinger (1999, p. 4) pointed to the importance of professional development in his discussion of the implications of the standards movement on teacher preparation: "New standards for teachers are aiming at a practitioner who is more knowledgeable about subject matter, more skilled in tailoring school content for diverse learners, more reflective, more collegial, and more directed toward continuous professional learning".

Villegas-Reimers (2003) has reviewed a few studies of teachers' Professional development: Borko and Putnam (1995, p. 55) offer evidence to support the fact that Professional development plays an important role in changing teachers' teaching methods, and that these changes have a positive impact on students' learning. Data collected during the "Cognitively Guided Instruction Project" (CGI) - a multi-year and multi-phase program of curriculum development, professional development and research - show "powerful evidence that experienced teachers' pedagogical content knowledge and pedagogical content beliefs can be affected by professional development programs and that such changes are associated with changes in their classroom instruction and student achievement". In another study, Supovitz and Turner (2000) report that data from the US National Science Foundation Teacher Enhancement program show that the degree of Professional development to which teachers are exposed is strongly linked to both inquiry-based teaching practice and investigative

classroom culture. Supovitz, Mayer and Kahle (2000, p. 331) in a separate study involving data collected in Ohio, USA, found that as a result of teachers' involvement in intensive professional development activities: "Teachers' attitudes, preparation, and practices all showed strong, positive, and significant growth from paraprofessional development to the following spring. Furthermore, these gains were sustained over several years following [the teachers'] involvement".

In an attempt to understand the factors that affect the relationship between educational reform and teachers' professional development, Futrell et al (1995) conducted research in nine school districts in the USA. Their report concludes with a number of recommendations to school district administrators, to colleges and universities, and to communities, school districts and schools. In order to allow professional development to play an effective part in educational reform, policies must be supportive of the changes that teachers are asked to make (Darling-Hammond & McLaughlin, 1995). These policies must address, for example, the need to create new structures and institutional arrangements that support the role of teachers as lifelong learners; they must also help to create new structures and opportunities, both outside of schools (for example, teachers' networks, inter-professional partnerships, etc.) and within schools; they must also support new systems of evaluation, accountability and promotion. A good example of the positive effects of these supportive policies is that of a reform of secondary teachers' professional development in Ireland. According to Garavan (1998), the country paid very detailed and special attention to the new policies that drove these initiatives at the local level with positive results; there was a need for a formalized policy at the national level, and at the time of his writing, these national policies were already under consideration (Villegas-Reimers, 2003, pp. 27-28).

According to Candy (1997, p. 12) life-long learning is important because of the very rapid and pervasive changes and advances in technology, in culture, in social relationships, in internationalization, in industrial relations, in the economy and so on. There have been such huge changes and advances in the past few years that anybody who is prepared as a professional cannot be considered to be prepared in any final sense, but must continue to go on learning throughout his or her professional life.

According to Guskey (1995, p. 127) there are some guidelines for success that must be followed when planning and implementing professional development opportunities for teacher. They are:

1. To recognize change as being both an individual and organization process.
2. To think big, but start small.

3. To work in terms of maintaining support.
4. To include procedures for feedback on results.
5. To provide continuous follow-up, and pressure.
6. To integrate programs.

Corcoran (1995, p. 72) has proposed the following guiding principles for experts and organizations that are designing and implementing professional development programs. These programs must:

1. stimulate and support site-based initiatives (schools', districts' and teachers' initiatives)
2. be grounded in knowledge about teaching
3. model constructivist teaching
4. offer intellectual, social and emotional engagement with ideas, materials
5. provide sufficient time and follow-up
6. be accessible and inclusive

Fullan (1987) believes there are four crucial factors for successful teacher development. They are: Redefinition of staff development as a process of learning; the role of leadership at the school level; the organizational culture at the school level; and, the role of external agencies, especially at the local and regional level (Villegas-Reimers, 2003, p. 18).

In summary, the professional development of teachers is a key factor in ensuring that reforms at any level are effective. Successful professional development opportunities for teachers have a significant positive effect on students' performance and learning. Thus, when the goal is to increase students' learning and to improve their performance, the professional development of teachers should be considered a key factor, and this at the same time must be featured as an element of a larger reform.

3.2.8 Subject Matter Knowledge

Courses in the teacher education program are drawn from throughout the curriculum, reflecting the Program's commitment to multidisciplinary and multicultural education. With this approach to knowledge, the curriculum strives to provide intellectual tools and insights that enable candidates to live in and teach about a world of diversity. Subject matter as an essential component of teacher knowledge is neither a new nor a controversial assertion. Subject matter knowledge is widely acknowledged as a central component of what teachers need to know. Philosophical arguments as well as common sense support the conviction that teachers' own subject matter knowledge influences their efforts to help students learn subject matter. Conant (1963, p. 93) wrote that if a teacher is largely ignorant or uniformed he can do much harm. Research on teaching and

on teacher knowledge is revealing ways in which teachers' understandings affect their students' opportunities to learn and also knowledge of the subject is very important to teaching, (e.g. Zumwalt, 1989; Passe, 1999; Leinhart & Greeno, 1986; Grossman, 1988; Lampert, 1986; Leinhardt & Smith, 1985; Shroyer, 1981; Wilson, 1988; Wineburg & Wilson, 1988). Shulman's (1986) three categories of content knowledge, subject matter content knowledge, pedagogical content knowledge, and curricular content knowledge are at the heart of much of the current inquiry. Many researchers (Ball, 1989; Carpenter, Fennema, Peterson, & Carey, 1989; Grossman, 1990; Hashweh, 1987; Lampert, 1986; Shulman, 1987; Wilson, 1988; Wilson & Wineberg, 1988; Stodolsky, 1988) suggest that teaching in new ways, in ways focused on understanding, is highly dependent on the teacher's own understanding and conception of the subject matter. Teachers cannot be expected to know every little fact in science and there are advantages for having a "big picture," rather than an array of unconnected details. A teacher whose knowledge becomes a slavish copy of the curriculum is unlikely to welcome change of any kind. Teachers who are "bubbling" with interest in innovations in science and technology are more likely to convey the "Nature of Science" and to instill curiosity and zest in their students.

The conclusions of the teachers' subject matter knowledge are especially provocative because they undermine the certainty often expressed about the strong link between college study of a subject matter and teacher quality. Seven studies relate to subject (Darling-Hammond, 2000b; Ferguson & Womack, 1993; Goldhaber & Brewer, 2000; Guyton & Farokhi, 1987; Hawk, Coble & Swanson, 1985; Monk, 1994; Rowan, Chiang & Miller, 1997). (1) Of the 7 studies, 4 concerned mathematics and science teachers, 1 concerned secondary teachers without specifying subject matters, 1 concerned elementary and middle school mathematics and reading teachers, and another studied program graduates who had taken subject matter knowledge tests. One study involved 36 teachers; the others had sample sizes ranging from 200 to 3,000 to 65,000 teachers. Measures of teacher subject matter knowledge included self-report about majoring in a relevant subject matter, counts of courses taken by individuals.

Consistent with common belief, several studies showed a positive connection between teachers' subject matter preparation and both higher student achievement and higher ratings on teacher performance evaluations, particularly in mathematics, science, and reading (Darling-Hammond 1999a and 1999b, Goldhaber & Brewer 2000, Guyton & Farokhi 1987, Monk 1994). Another study, Monk and King (1994), finds both positive and negative, generally insignificant effects of teachers' subject matter preparation on student achievement. Similarly,

Ferguson and Womack (1993) find that teacher's scores on national teacher examinations and grade point averages in the major accounts for only small proportions of the variance in teaching performance of prospective secondary teachers. In turn, Golhaber and Brewer (2000) find a positive relationship between teachers' degrees in mathematics and their students' test scores but do not find this relationship in science. Using the same data set, Rowan et al (1997) find a positive relationship between student achievement in mathematics and teachers' majors in mathematics, but the effect size is quite small. In the same way, Monk (1994) finds no effect of having a full mathematics major even if having coursework in mathematics matters. In the same study, while the author identifies a significant positive relationship between teachers' coursework in the physical sciences and student achievement, he does not identify the same effect for coursework in life sciences (Santiago, 2002).

It may be that these results are mixed because subject matter knowledge is a positive influence up to some level of basic competence in the subject but is less important thereafter. This interpretation is supported by the study by Monk (1994). Using data on 2, 829 students from the Longitudinal Study of American Youth, Monk finds that teacher's content preparation, as measured by coursework in the subject field, is positively related to student achievement in mathematics and science but that the relationship is curvilinear, with diminishing returns to student achievement of teachers' subject matter courses above a threshold level (Ibid, 2002).

In another study, however, researchers found that National Teachers Examination scores and grade point averages (GPAs) in the major accounted for only small proportions of the variance in teaching performance of prospective secondary teachers. In contrast, education coursework accounted for 48 percent and 39 percent of the variance when performance was rated by education supervisors and subject matter specialists, respectively. Several studies found that education coursework, including subject-specific methods courses, is useful, sometimes having a higher correlation with student achievement than subject matter study.

In a study that illustrates the complexity of studying prospective teachers' subject matter preparation, Monk (1994) found positive relationships between teachers' subject matter preparation and student achievement. However, there was evidence of a threshold effect; there was minimal additional effect of teachers' study of mathematics beyond five undergraduate mathematics courses on pupil mathematics performance. He also found positive effects of mathematics education courses, with courses in mathematics education contributing more to

student achievement gains than undergraduate mathematics courses. There was a similar relationship in science. After exploring a number of interaction effects, the researcher concluded that it is "risky" to make any generalizations about the significance of teacher subject matter knowledge. Although there is no definitive research that helps us understand this confusing finding, several possible explanations bear further investigation, including the possibility that a teacher needs pedagogical content knowledge as well as content knowledge.

In addition there are other studies of the effects of subject matter preparation (Adams, 1998; Ball, 1990a & 1990b; Borko et al, 1992; Graeber, Tirosh, & Glover, 1989; McDiarmid & Wilson, 1991; Simon, 1993; Stoddart, Connell, Stofflett, & Peck, 1993; Tirosh & Graeber, 1989; Wilson, 1994; Wilson & Wineburg, 1988). These studies suggest that the subject matter preparation that prospective teachers currently receive is inadequate for teaching toward high subject matter standards, by anyone's definition. It appears that prospective teachers may have mastered basic skills but lack the deeper conceptual understanding necessary when responding to student questions and extending lessons beyond the basics (Wilson, 2002).

3.2.9 Learning Environment

One of the most important things a teacher can provide their students with is a learning environment in which they feel comfortable. Teachers should create a learning environment that encourages positive social interaction, active engagement in learning, and self-motivation. Learning environment research has provided a useful focus in evaluations of educational innovations (Fisher, Aldridge, Fraser & Wood, 2001; Fraser & Maor, 2000; Maor & Fraser, 1996; Newby & Fisher, 1997; Teh & Fraser, 1995; Zandvliet, 2003; Jegede, Fraser & Fisher, 1995; Taylor & Maor, 2000; Walker, 2002; Moos, 1979). Past research has found links between classroom environments and student outcomes (Fraser, 1994 & 1998a; Fraser & Fisher, 1982; Goh, Young & Fraser, 1995). Technology in the school is one of the best resources that allow students to become actively engaged in the learning process (Aldridge, Fraser, Fisher, Trinidad & Wood, 2003; Trinidad, Macnish, Aldridge, Fraser & Wood, 2001). Such research has shown that students' outcomes are likely to be better when the actual learning environment more closely matches their preferred learning environment (Aldridge, Fraser, Fisher, Trinidad & Wood, 2003; Fraser, 1998b, 1999; Fraser & Fisher, 1983). Brown and Palinscar (1989) believe that the role of learning environments, of collaboration, of community, and of environments that encourage different

approaches in students. Finally, an important factor in creating a positive learning environment is classroom management. Teachers should manage their time and resources in the most efficient way possible. To create a positive learning environment, teachers should access any and every resource possibly provided by the school or community they teach in.

3.2.10 Knowledge of Educational Technology

In reviewing the literature, the term educational technology tends to be implicitly defined. Ely (1995, p. 4) wrote that educational technology is a term widely used in the field of education ... but it is often used with different meanings.... Educational technology properly refers to a particular approach to achieving the ends of education. This definition, like others found in the literature, can be seen as focusing on processes for teaching and learning as much as they are about pieces of hardware or software.

Educational technology, especially the use of computers and associated information technology, is rapidly solidifying a prominent role in education. The computer has the capacity to be employed for instance as a cognitive tool (Salomon, Perkins, & Globerson, 1991), a memory tool (Swan, 1996), a motivational tool (Means & Olson, 1995b), a communication tool (Doucette, 1994), or a project support tool (Marx, Blumenfeld, Krajcik, & Soloway, 1997). Understanding the range of possibilities, the appropriate applications, and the relevant pedagogical strategies requires an array of knowledge on the part of the teacher. This knowledge can be acquired from a variety of sources. For both student teachers and mentor teachers, the sharing of knowledgeable educational technology in the context of the student teaching placement may be a contributor to professional development (Easdown, 1994). Preservice teachers have reported that their student teaching experience is a very consequential portion of the teacher preparation process (Dowrick, 1997). Mentor teachers play a contributing role in the value to the student teacher of the student teaching experience (McIntyre, 1988). Their classroom experience, subject matter knowledge, and familiarity with particular teaching settings, cause them to be viewed as a respected source of knowledge for the student teacher.

According to Margerum-Leys (2004, pp. 423-424) sharing of knowledge is important for teacher preparation and development generally; it may be especially important in the acquisition of educational technology knowledge. Educational technology is an area in which mentor teachers are eager to access content knowledge held by student teachers. Mentor teachers view student

teachers by virtue of their relative youth as members of a generation that holds more knowledge of technology than they themselves do. They also perceive that student teachers' teacher education coursework will have contained more educational technology information than their own coursework (Lundeberg, Zeon, Brown, Ingebrand, & Bieging, 2001; Margerum-Leys & Marx, 2000). An additional motivation for studying the knowledge of teachers regarding technology is that the role of educational technology, especially computers in education, is changing rapidly. In the early days of computer use in education, computers were thought to be useful for the teaching of logic through programming (Papert, 1993). Subsequently, there was a conceptualization of computers as standalone information processing and document production tools. More recently, the computer has been thought of as a communication tool; computers are now used and viewed as portals to an ever-expanding array of information through electronic mail and the World Wide Web (Jonassen, 2000; Tiene & Ingram, 2001). Paralleling these changes in our perceptions of the utility of technology has been a steady movement toward more student-centered learning environments and activities. This has implications for the preparation and development of teachers. To use technology in ways that are congruent with our current understandings of teaching and learning as well as of technology itself, teachers need to be familiar with an expanding variety of pedagogical techniques (Forcier, 1999; Jonassen, 2000; Marx et al, 1997; Means & Olson, 1995a; Mergendoller, 1996).

The use of technology in an appropriate manner can actually enhance the learning process. Technology can play a vital role in helping students meet higher standards and perform at increased levels by promoting alternative, innovative approaches to teaching and learning (George, 2000). Review literature shows that teachers must be effective users of information and educational technology (Allen, 2001; Davidson et al, 2000; Dwyer, 1994; NECS, 2002; McNabb, Hawkes, & Rouk, 1999; Nevens et al, 2001; U.S. Department of Education Study, 2003; Brennan, 2000). Because, it is believed that instructional technology can improve the quality and quantity of teaching and student learning and Technologies are described as essential tools of the teaching trade (Sandholtz et al, 1997). In terms of research into these developments, issues concerning technological literacy (Gabriner & Mery, 1998), interface design (Wild and Stoney, 1998), software adaptability (Stahl et al, 1995), professional development (Schrum, 1995) and cost effectiveness of educational technology (Bacsich & Ash, 2000) are abundant and well represented. Many studies have investigated teacher's attitudes toward the use of technology and their anxiety about using technology. These studies are particularly important because a teachers' attitude about

computers and related technologies can positively or negatively influence their students' attitudes toward technology (Sheingold & Hadley, 1990). Finally, as reported by Green and Staley (2000), technologies such as computer conferencing systems can provide an effective learning tool if they attend to constructing a safe context and interpersonal rapport. That is a challenge, how to design educational systems where technology is in service to, values, and supports diverse learners and learning contexts (Wise, Leibbrand, & Williams, 1997; Vannatta & Beyerbach, 2000; Yildirim & Kiraz, 1999; Bryant, 2001; Hasselbring et al, 2000; NCATE, 1997; McCoy, 2001). According to Howey (1996) practitioner preparation programs should not underestimate the power of modern communications technology for learning to teach. The UNI InTime Project (2000) stated that technology must be integrated into the classroom and the practitioner preparation program so that it acts as a facilitator of quality education. Shields and Behrman (2000) proposed that the most effective use of technology in classrooms is as a tool for accessing information and interpreting, organizing, and representing personal knowledge. These are the types of activities that empower children to play active roles in the emerging digital world, not merely navigate in it. In the area of teacher preparation, Sosniak (1990) suggested better use of alternative instructional technologies, e.g., the Internet, for the development of subject matter and professional knowledge.

Finally, although there is consensus in the educational technology field that preservice teachers should use technology during practicum and student teaching experiences and that this does not happen often enough (CEO Forum on Education and Technology, 1999 & 2000; Moursand & Bielefeldt, 1999; Office of Technology Assessment, 1995). Researchers have identified the many difficulties inherent in providing such field-based practice opportunities. Various schools, colleges, and departments of education (SCDEs) have reported efforts to provide equipment to sites to ensure adequate technology access (Stetson & Bagwell, 1999), determine the technology attitudes of the cooperating teacher (Bosch & Cardinale, 1993), or organize technology equipment and services (Picciano, 1999). Other research emphasized the impact of quality technical and instructional support on whether technology is used by teachers for their own professional work or by students in their classrooms (Ronnkvist, Dexter, & Anderson, 2000, p. 2).

3.3 Summary of the Theoretical Introduction

Evaluation is a general process of systematic and critical analysis leading to judgments and/or recommendations for improvement regarding the quality of a (teacher) education institution or program. In answer to "how to evaluate teacher education programs?" usually for evaluation a program uses internal and external evaluation. According to Finnish Higher Education Evaluation Council (FINHEEC) students and graduates play an integral part in the evaluations (EURYDICE, 2006). It is characteristic in the evaluation of higher education that students/graduates, as consumers of the educational process, provide feedback to instructors and to professors about course content and classroom behavior at the conclusion of the course. A review of empirical studies indicates that students'/graduates' ratings can provide reliable and valid information on the quality of courses and instruction. Such information can be of use to academic departments in constructing normative data for the evaluation of teaching and may aid the individual instructor in improving his or her teaching effectiveness. In other words, students' preservice experiences and, after graduation, their work experiences can give new ideas to teacher education authorities for improving the programs.

At a general levels, teachers student have to be familiar with the most recent knowledge and research about the subject matters. They also have to know how subject matters can be transformed in relevant ways to benefit different learners and how it can help learners create foundations on which they can build their lifelong learning. This means that teachers need the latest research results and knowledge in pedagogy. They should have a thorough understanding of human growth and development, and they need knowledge of the methods and strategies that can be used to teach different learners. In addition, teachers have to be familiar with the curricula and learning environments of educational institutions. They also have to know about learning in non-formal educational settings, such as in open learning and labor market contexts. Teachers should have the latest knowledge of educational technology, and they need to be able to apply ICT in their work. Teacher education curricula and programs should give students opportunities to learn how to take responsibility for ethical choices (e.g. Aloni, 2002; Atjonen, 2004; Oser, 1994). This is a topic that is worth studying for its own sake for the purpose of developing a scientifically sound foundation for a course or module in applied intercultural ethics in teacher education. The task of teacher education in Finland involves the promotion and support of demanding intentional learning processes.

According to researchers of meta-cognition and self-regulated learning (e.g. Ruohotie, 1994; Winne 1996; Pintrich, 1999; Pintrich, & Ruohotie, 2000; Boekaerts, Pintrich & Zeidner 2002) students need to have pedagogical knowledge for example, knowledge of learning environments; instructional strategies; knowledge of curriculum and curricular; assessment skills; communication skills; subject matter knowledge.

3.4 Research Questions

The research questions of this study provide focus and direct attention to the major issues of concern in this research project and what the researcher specifically wanted to understand by doing this study. Therefore, they help to determine what data to collect and how and where to collect it. In order to provide possible answers to the problems of this study, the following research questions were addressed:

1. How do masters' degree of class teacher education graduates rate the importance and effectiveness of training they have received at the Faculty of Education?

1.1 What is the respondents' (graduates) perception of the importance and effectiveness of following issues:

(1) Critical Thinking Skills, (2) Communication Skills, (3) Attention to Ethics, (4) Curriculum and Instruction Knowledge, (5) Role of the Teacher and Teaching Knowledge, (6) Assessment Skills, (7) Attention to Continuous Professional Improvement, (8) Subject Matter Knowledge, (9) Knowledge of Learning Environment, and (10) Using Educational Technology

1.2 Are there significant differences between overall ratings of importance and effectiveness of training by year of graduation, sex, and age?

2. How do masters' degree of class teacher education graduates rate the quality of training they have received at the Faculty of Education?

2.1 Are there significant differences between overall ratings of quality of training by year of graduation, sex, and age?

3. Is there a significant relationship between respondents' (graduates) overall ratings of importance; effectiveness and their overall ratings of the quality of training and preparation they have received?

4. Examining the questions above about class teacher education students in the 4^{th} year.

5. Are there significant differences between graduates and students in the 4^{th} year about importance, effectiveness, and quality of teacher education programs?

6. What do teachers' [Graduates] believe about how increasing work experience has changed their opinions of their preservice training?

4 Research Methodology

4.1 Design of the Study

According to Cohen and Manion (1994) many educational research methods are descriptive. Descriptive research, according to Best (1970), studies the conditions or relationship that exist; practices that prevail; beliefs, point of views, or attitudes that are held; processes that are going on; efforts that are felt; or trends that are developing. At times, descriptive research is concerned with how what exists is related to some preceding event that has influenced or affected the present condition or event.

In this study the aim is not only to describe participants' opinions but also to measure the changes in evaluations of the teacher program when students graduate and when the work experience is increasing. The use of follow-up studies as a descriptive method is an efficient way to gather useful information for program evaluation (Ayers, 1988; Delaney, 1995; Holste & Matthews, 1992). According to Best (1986), the follow-up study investigates individuals who have left an institution after having completed a program, a treatment, or a course of study.

In the referred studies above, the term follow-up study is used in a very specific meaning, which is related to course evaluations afterwards. The follow-up in this study attempts to follow the changes in course evaluations between different phases of studying and a work career. The best research design for this purpose would have been longitudinal cohort study, in which the same subjects are measured several times during different phases of their career. This was, however, not possible in the framework of this study. Instead, a repeated cross-sectional research design was used. The benefit in this method is that the data from students and different alumni groups can be collected simultaneously. The limitation in using a repeated cross-sectional design is that there are no opportunities to control possible initial differences of the different cohorts. See figure 1.

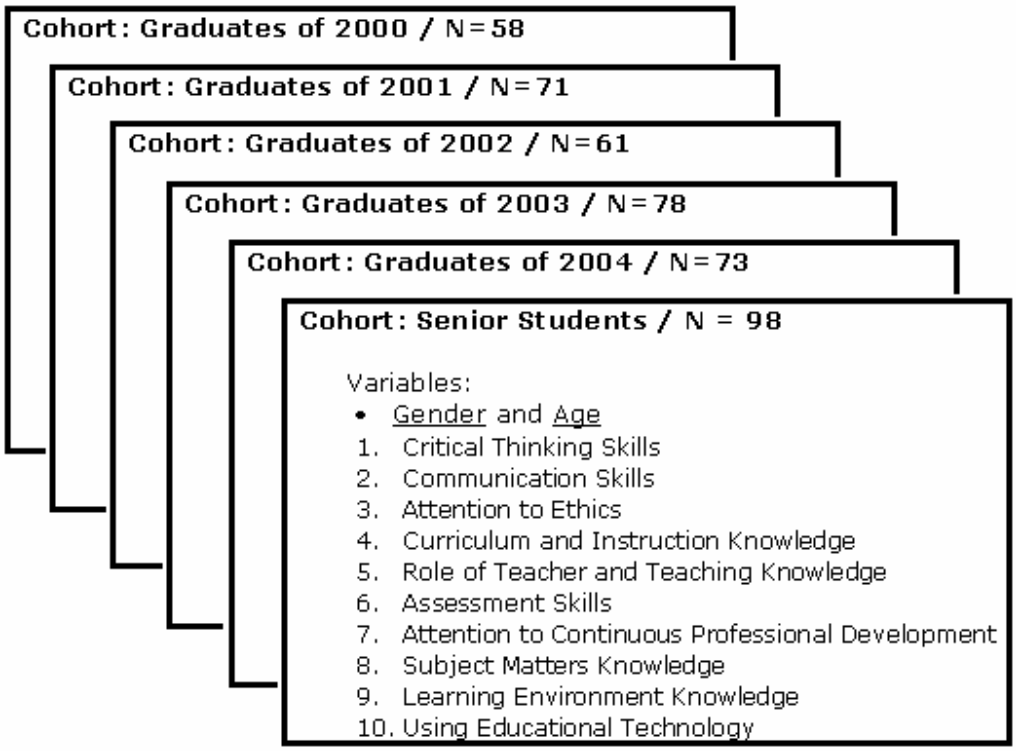


Figure 1: Repeated cohort data collection in study 1

In addition to the first data collection (Study 1) a second data collection was carried out for getting teachers own description about the influence of increasing work experience on their ratings of the pre-service teacher training they received (Study 2).

4.2 Design and Development of Instruments

This dissertation consists of two studies.

4.2.1 **Study 1**

A Lickert-scale questionnaire for gathering data for this research is devised by adopting ideas from: first, the review of Turku and Rauma Departments of Teacher Education aims and courses; second, Ministry of Education (2001) proposals for a core curriculum of teacher education and the National Board of Education in Finland (2004) recommendations for future studies; and, third several other questionnaires located during the review of related literature from other research studies,

especially, the National Survey of Teacher Education Program Graduates that is designed for use in teacher education follow-up studies (Loadman et al, 1999).

Items on the questionnaire covered the following areas:

1. Demographic and other background information (first section);
2. Graduates' self-ratings of knowledge and understanding of teacher education program content. This part consisted of: critical thinking skills, communication skills, work ethics, curriculum and instruction, role of the teacher and teaching, assessment, continuous improvement, knowledge of subject matters, learning environment, and educational technology (second section);
3. The quality of the preservice programs (third section)

The first section of questionnaire consisted of 8 items for graduates and 3 items for students, the second part had 79 items, and the third section had 15 items. Each item presents the respondents with five options (likert-type scale) and one open-ended question for writing any additional thought or information those respondents wanted to share with the researcher. The respondents' task was to select one of the options that most closely represented their self-perception. The respondents were required to focus on the role they fulfill in their work environment and answer all the questions in relation to that role. The items which related logically to instrument units in the preparatory programs constituted a substantial portion of the instrument.

Reliability is the extent to which a test is repeatable and yields consistent scores. Internal consistency reliability was estimated by Cronbach's alphas (Cronbach, 1951). For the total items an alpha of .96 was obtained and the separate reliability coefficient was obtained for the importance, effectiveness and the quality of programs scales, resulting in coefficients of .95; .93 and .80, respectively. In the temporal (stability) reliability exercise, the test-retest reliability technique was used. According to this method, the same instrument is applied to the same respondents at a later stage and the correlation between the two scores is then calculated" (Huysamen, 1989, p. 54; & Mulder, 1981, p. 211). In order to analyze stability, the questionnaire was given a second time to 25 graduates two weeks after the first session. For the total scale, support for temporal (stability) reliability was provided by test-retest correlations of .96 with a two-week interval.

According to Wynd, Schmidt & Schaefer (2003, P. 261), instrument content validity is often established through qualitative expert reviews, yet quantitative analysis of reviewer agreements is also advocated in the literature. In developing the instruments used in this research, and the researcher followed the formalities

and procedures adopted in framing a research questionnaire (Nworgu, 1991). To validate the instrument the questionnaire was given to several experts of teacher education who read it through and made necessary corrections. The second process that was used to validate the research instrument was that the questionnaire was pre-tested and the responses from the respondents were used to improve the items. In summary, the validity of this study rests on an overall evaluative judgment founded on empirical evidence and theoretical rationales of the adequacy, appropriateness of inferences and action based on the test scores. It is an inductive summary of both the adequacy of existing evidence for and appropriateness of potential consequences of test interpretation and use (Messick, 1994, Xiaorong, 2001).

4.2.2 **Study 2**

For gathering data about influences of teachers' work experiences on their perception about preservice experiences, researchers designed a web-based open ended questionnaire with the use of results from Study 1. The participants were first asked how many years of work experience they had as teachers. Then they were asked to write a short essay about how much their opinion about their pre-service teacher education program has changed in the course of increasing work experience as a teacher. The classification of the answers to the open-ended questionnaire was double checked by two researchers independently.

4.3 Target population

4.3.1 **Study 1**

The population for Study 1 was all senior students and 2000-2004 masters' degree of class teacher education graduates from the Departments of Teacher Education (in Turku and Rauma) Faculty of Education at the University of Turku. The numbers of potential participants were 161 senior students, 149 graduates from 2000, 166 graduates from 2001, 158 graduates from 2002, 206 graduates from 2003, and 180 graduates from 2004 for a total sample pool of 928. Table 1 presents details on the total number of masters' degree senior students and graduates from the Departments of Teacher Education at the Faculty of Education between the years of 2000 and 2004. This part of study did not utilize a sample.

Table 1
Total Number of Masters' Degree of Class Teacher Education Students and Graduates of the Faculty of Education / N=1020

Population	Gender				Total	
	Males		Females			
	N	%	N	%	N	%
2000	**48**	4.7	**101**	9.9	**149**	14.6
2001	**39**	3.8	**127**	12.4	**166**	16.3
2002	**46**	4.5	**112**	11.0	**158**	15.5
2003	**72**	7.0	**134**	13.1	**206**	20.2
2004	**63**	6.2	**117**	11.5	**180**	17.6
Senior Students	**42**	4.1	**119**	11.7	**161**	15.8
Total	**310**	30.4	**710**	69.6	**1020**	100.0

4.3.2 **Study 2**

The population for Study 2 was all class teachers who had graduated from the University of Turku and were now working in primary schools in Southwest Finland. Of 257 respondents 53 (20.6%) teachers had between 1-5 years work experience; 76 (29.6%) between 6-10, and 128 (49.8%), had over 10 years work experience.

4.4 Data Collection

4.4.1 Data Collection Procedure of Study 1

The five-scale questionnaire was sent to all senior students by e-mail thrice (first, after three days, and again after three days). Of 161 students, 98 (60.9%) of them answered the online questions. (Details in tables 1 and 2)

Table 2
Status of Students' Respondents by Gender and age / N=98

Gender				Age			
Male		Female		21-24		25-OVER	
N	**%**	**N**	**%**	**N**	**%**	**N**	**%**
20	20.4	**78**	79.6	**64**	65.3	**34**	34.7

Of the 859 individuals who received MA degrees from Departments of Teacher Education between the years of 2000 and 2004, the number of possible respondents was 514. The contact information of 345 graduates was not available. To obtain the post addresses of graduates, the researcher used a variety of methods. The main method was contacting the Student Service Office. To obtain of addresses which were postmarked undeliverable, the researcher used Numeronetti services (36).

About the graduates, the data collection procedure used in this survey followed the recommendations of De Vaus (2002). The first mailing was sent to all the possible respondents and included a personalized cover letter, the questionnaires and return envelopes. A follow-up postcard thanking the respondents and asking those who had not responded to send in the questionnaire was sent out a week after the first mailing. Along with the second follow-up, new questionnaires were sent to graduates who were postmarked undeliverable and the researcher found new addresses via Numeronetti services. 87, or 16.9 percent of the questionnaires were returned as undeliverable. The third and final mailing was sent out with a new cover letter to those who had not responded three weeks after the initial mailing. In order to increase of the percentage of return rate, the researcher designed a web-based questionnaire and informed the respondents that they can complete and submit the questionnaire online at www.mehdinezhad.com. Of the 514 possible respondents contacted, 349, or 67.9 percent responded to the survey and of 349 respondents 341, or 66.3 percent were usable and 8 or 1.6 percent were unusable, because the respondents hadn't completed the background information of questionnaire e.g. year of graduation; gender; and age. Of the 341 actual respondents 238, or 69.8 percent replied to survey online. Tables 3 to 6 present details on the total number of graduates, the number of actual respondents from the Departments of Teacher Education at the Faculty of Education between the years of 2000 and 2004.

Table 3 presents data about "Year of Graduation" of respondents. Of the 341, 58 participants or 17.0 percent had graduated in 2000; 71 participants or 20.8 percent in 2001; 61 participants or 17.9 percent in 2002; 78 participants or 22.9 percent in 2003; and 73 participants or 21.4 percent in 2004. In response to "sex", 108 (31.7%) participants were male and 233 (68.3%) were female.

Table 3
Status of Graduates' Respondents by Year of Graduation and Gender / N=341

Respondents	Gender				Total	
	Males		Females			
	N	%	N	%	N	%
2000	**17**	5.0	**41**	12	**58**	17.0
2001	**18**	5.3	**53**	15.5	**71**	20.8
2002	**18**	5.3	**43**	12.6	**61**	17.9
2003	**27**	8.0	**51**	14.9	**78**	22.9
2004	**28**	8.2	**45**	13.2	**73**	21.4
Total	**108**	31.7	**233**	68.3	**341**	100.0

Table 4 presents the data relative to the age categories of the 341 respondents. Of the age categories of the respondents, there were 258 or 75.6 percent of the respondents between the ages of 25 and 34.

Table 4
Graduates' Age Status / N=341

Age	N	%
25-34	**258**	75.6
35-0VER	**83**	24.4

In answer to this question "Do you currently have paid employment?" all 341 of graduates responded positively or yes.

Current employment status of 96.5 percent of the respondents was full-time and 3.5 percent of respondents work Part-time. This information is in table 5.

Table 5
Graduates' Employment Status / N=341

Employment Status	N	%
Full-time	**329**	96.5
Part-time	**12**	3.5

Table 6 presents information about worked related to field of studies respondents' status. 98.3 percent of participants responded they are working in their field of study.

Table 6
Working in Major Area / N=341

Area of work	N	%
Yes	**335**	98.3
No	**6**	1.8

Also, the graduates, in answer to how long after graduation did it take they to obtain their first job? They have obtained their first job between 0 to 3 months after graduation.

4.4.2 Data Collection Procedure of Study 2

For gathering data about teachers' opinions about preservice in relation to increasing work experiences, the researcher gave the address of web-based open ended questionnaire to the headmaster of 59 basic schools at the Southwest Finland

directly or by e-mail and asked them to give that to teachers who graduated from Turku University. 257 teachers answer to questions online. (Table 7)

Table 7
Teachers Status about Work Experiences / N=257

Years of Experiences	N	%
1 – 5	**53**	20.6
6 – 10	**76**	29.6
10 – Over	**128**	49.8

4.5 Data Analysis Methods

The data were analyzed using the Statistical Package for the Social Science -SPSS- (Brace et al, 2003). Statistical methods such as frequencies; percentages; standard deviations; Analysis of Variance; Pearson Product Moment Correlation (r); T-test; ANOVA, Bonferroni post-hoc test; and Polynomial Contrast tests meant to analyze linear trend were used to test the questions.

5 Results

5.1 Results of Study 1

Q.1: Graduates' Ratings of the Importance of Teacher Education Programs

Generally speaking graduates' evaluations about the importance of different aspect of the program were quite positive (Table 8).

Table 8
Graduates' Ratings of the Importance of Teacher Education Programs (N=341)

1= Very Unimportant	**2=** Unimportant	**3=** Average	**4=** Important	**5=** Very Important

Variables	**1**		**2**		**3**		**4**		**5**	
	N	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Critical Thinking Skills	3	**.9**	12	**3.5**	27	**7.9**	210	**61.6**	89	**26.1**
Communication Skills	4	**1.2**	15	**4.4**	29	**8.5**	245	**71.8**	48	**14.0**
Attention to Ethics	1	**.3**	5	**1.5**	17	**5.0**	178	**52.2**	140	**41.0**
Curriculum and Instruction Knowledge	4	**1.2**	13	**3.8**	21	**6.2**	270	**79.2**	33	**9.6**
Role of Teacher and Teaching knowledge	3	**.9**	15	**4.4**	23	**6.7**	229	**67.2**	71	**20.8**
Assessment Skills	2	**.6**	10	**2.9**	36	**10.6**	248	**72.7**	45	**13.2**
Continuous Professional Development	5	**1.5**	13	**3.8**	24	**7.0**	229	**67.2**	70	**20.5**
Subject Matters Knowledge	3	**.9**	11	**3.2**	28	**8.2**	223	**65.4**	76	**22.3**
Knowledge of Learning Environment	3	**.9**	8	**2.3**	17	**5.0**	166	**48.7**	147	**43.1**
Using Educational Technology	1	**.3**	5	**1.5**	23	**6.7**	205	**60.1**	107	**31.4**
Overall Rating	2	**.6**	9	**2.6**	24	**7.0**	225	**66.0**	81	**23.8**

The means and standard deviations of the variables are presented in table 9. The results show that teacher education programs were important in the opinion of graduates. The average overall ratings of the importance of teacher education programs were relatively high in all cohorts (3.9-4.3 of 5)

According to the participants' opinions, it was most important to pay attention to ethics, the learning environment, and educational technology.

Table 9
Graduates' Ratings of the Importance of Teacher Education Programs (N=341)

Variables		2000	2001	2002	2003	2004	Total
		N=58	N=71	N=61	N=78	N=73	N=341
Critical Thinking Skills	**Mean**	**4.293**	**4.126**	**3.901**	**3.876**	**4.287**	**4.0850**
	St. D.	.4592	.7546	.5387	.9940	.4558	.7447
Communication Skills	**Mean**	**3.913**	**3.788**	**4.131**	**3.846**	**4.013**	**3.9326**
	St. D.	.6292	.6952	.4646	.8071	.8078	.7101
Attention to Ethics	**Mean**	**3.982**	**4.493**	**4.344**	**4.500**	**4.219**	**4.3226**
	St. D.	.9641	.5035	.6294	.5032	.5833	.6654
Curriculum and Instruction Knowledge	**Mean**	**3.862**	**3.859**	**4.049**	**4.012**	**3.835**	**3.9238**
	St. D.	.7597	.3503	.3841	.7472	.7820	.6417
Role of Teacher and Teaching knowledge	**Mean**	**3.862**	**4.323**	**4.082**	**3.961**	**3.890**	**4.0264**
	St. D.	.8875	.4713	.2766	.9320	.7371	.7291
Assessment Skills	**Mean**	**3.913**	**4.154**	**4.065**	**3.653**	**4.000**	**3.9501**
	St. D.	.5056	.4358	.5121	.9647	.4082	.6374
Continuous Professional Development	**Mean**	**3.896**	**4.140**	**4.082**	**3.743**	**4.219**	**4.0147**
	St. D.	.3072	.8501	.5258	.9100	.4166	.7494
Subject Matters Knowledge	**Mean**	**3.724**	**4.056**	**4.065**	**4.346**	**3.972**	**4.0499**
	St. D.	.8943	.7725	.5121	.6412	.6003	.7157
Knowledge of Learning Environment	**Mean**	**4.586**	**4.577**	**4.442**	**4.025**	**4.013**	**4.3079**
	St. D.	.4968	.6472	.5008	.9565	.5650	.7489
Using Educational Technology	**Mean**	**4.275**	**4.253**	**4.278**	**3.897**	**4.068**	**4.2082**
	St. D.	.6433	.6028	.4521	.9479	.6085	.6513
Overall Rating	**Mean**	**3.879**	**4.323**	**4.245**	**4.192**	**4.137**	**4.0968**
	St. D.	.5324	.4713	.4342	.8383	.6732	.6769

Graduates of the years 2001 and 2002 reported a higher level of importance of the training they received in comparison with other groups (Table 10). The Analysis of Variance ($F_{(4,336)} = 6.369$, $P<.0005$) showed that there were significant differences in the ratings of the importance of teacher education programs by year of graduation. Employing the Bonferroni post-hoc test, significant differences were found between 2000 and 2001 graduates as well as 2000 and 2002 graduates. Contrast analysis showed that there was no linear trend in the importance evaluations of the 2000-2004 graduates.

Table 10
Graduates' Ratings of the Importance of Teacher Education Programs by Year of Graduation (N=341)

Year of graduation	N	Mean	St. D.
2000	58	**3.8793**	.5324
2001	71	**4.3239**	.4713
2002	61	**4.2459**	.4342
2003	78	**3.8974**	.9479
2004	73	**4.1370**	.6732
Total	341	**4.0968**	.6769
F = 6.369	df = 4, 336		Sig = .0005
Contrast, linear term, F= 0.122			Sig = .728

Both male and female graduates reported high levels of importance of the training they received: male (mean 4.2 of 5) and female (mean 4.1 of 5). The Analysis of Variance ($F_{(1, 339)} = 1.508$, $P>.070$); showed that there were no significant differences in the ratings of the importance of teacher education programs between genders. (Table 11)

Table 11
Graduates' Ratings of the Importance of Teacher Education Programs by Gender (N=341)

Gender	N	Mean	St. D.
Male	108	**4.1944**	.6184
Female	233	**4.0515**	.6991
Total	341	**4.0968**	.6769
F = 3.313	df = 1, 339		Sig = .070

Graduates classified into the age group 35 years and over reported significantly higher levels of importance of the training they received in comparison with 25-34 years old (Table 12).

Table 12
Graduates' Ratings of the Importance of Teacher Education Programs by Age (N=341)

Age	N	Mean	St. D.
25-34	258	**4.0310**	.68829
35- over	83	**4.3012**	.59949
Total	341	**4.0968**	.67694
F = 10.278	df = 1, 339	Sig = .001	

In general, the analysis suggested a positive attitude towards the importance of teacher education programs. There were some significant differences between the different cohorts but no linear trend related to an increasing amount of work experience. It seems that graduates who were older than students on average during their study time rated the overall importance of the program higher.

Q.2: Graduates' Ratings of the Effectiveness of Teacher Education Programs

As shown in table 13, the graduates rated the effectiveness of teacher education programs as very positive.

Table 13
Graduates' Ratings of the Effectiveness of Teacher Education Programs (N=341)

1= Very Ineffective	**2=** Ineffective	**3=** Average	**4=** Effective	**5=** Very Effective

Variables	**1**		**2**		**3**		**4**		**5**	
	N	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Critical Thinking Skills	4	**1.2**	8	**2.3**	29	**8.5**	244	**71.6**	56	**16.4**
Communication Skills	2	**.6**	5	**1.5**	29	**8.5**	220	**64.5**	85	**24.9**
Attention to Ethics	3	**.9**	9	**2.6**	41	**12.0**	198	**58.1**	90	**26.4**
Curriculum and Instruction Knowledge	4	**1.2**	7	**2.0**	36	**10.6**	266	**78.0**	28	**8.2**
Role of Teacher and Teaching	0	**0.0**	6	**1.8**	16	**4.7**	220	**64.5**	99	**29.0**
Assessment Skills	3	**.9**	15	**4.4**	29	**8.5**	192	**56.3**	102	**29.9**
Continuous Professional Development	6	**1.8**	10	**2.9**	24	**7.0**	160	**46.9**	141	**41.4**
Subject Matters Knowledge	6	**1.8**	17	**5.0**	92	**27.0**	208	**61.0**	18	**5.2**
Knowledge of Learning Environment	1	**.3**	5	**1.5**	74	**21.6**	227	**66.6**	34	**10.0**
Using Educational Technology	3	**.9**	7	**2.0**	30	**8.8**	223	**65.4**	78	**22.9**
Overall Rating	3	**.9**	14	**4.1**	39	**11.4**	213	**62.5**	72	**21.1**

The means and standard deviations of the effectiveness rating are presented in Table 14. Results showed that overall ratings of the effectiveness of the program were relatively positive in all cohorts (3.7-4.4 of 5). Highest effectiveness ratings were given to the role of teacher and teaching, communication skills, continuous professional development, and using educational technology.

Table 14
Graduates' Ratings of the Effectiveness of Teacher Education Programs (N=341)

Variables		2000	2001	2002	2003	2004	Total
		N=58	N=71	N=61	N=78	N=73	N=341
Critical Thinking Skills	**Mean**	**3.896**	**3.760**	**4.000**	**4.141**	**4.150**	**3.9971**
	St. D.	.3072	.9144	.4472	.6391	.3602	.6708
Communication Skills	**Mean**	**3.913**	**4.408**	**3.951**	**4.282**	**3.958**	**4.1173**
	St. D.	.8436	.4950	.8646	.4529	.4546	.6582
Attention to Ethics	**Mean**	**3.982**	**4.140**	**4.082**	**4.397**	**3.684**	**4.0645**
	St. D.	.8270	.5927	.2766	.7088	.9556	.7526
Curriculum and Instruction Knowledge	**Mean**	**3.655**	**4.169**	**3.803**	**3.756**	**4.068**	**3.9003**
	St. D.	.7621	.3774	.4008	.7418	.4810	.6054
Role of Teacher and Teaching knowledge	**Mean**	**4.189**	**4.070**	**3.918**	**4.423**	**4.369**	**4.2082**
	St. D.	.3955	.7620	.5258	.6141	.4861	.6044
Assessment Skills	**Mean**	**3.500**	**4.253**	**4.016**	**4.282**	**4.301**	**4.0997**
	St. D.	.9121	.6028	.4279	.8202	.6166	.7945
Continuous Professional Development	**Mean**	**3.965**	**4.746**	**4.360**	**4.128**	**3.945**	**4.2317**
	St. D.	.7000	.4381	.4842	.9624	.6644	.8414
Subject Matters Knowledge	**Mean**	**3.482**	**3.831**	**3.360**	**3.935**	**3.452**	**3.6305**
	St. D.	.9411	.5603	.7753	.6103	.6464	.7385
Knowledge of Learning Environment	**Mean**	**3.793**	**3.901**	**3.737**	**4.141**	**3.602**	**3.8446**
	St. D.	.4086	.7589	.4435	.5278	.6819	.6154
Using Educational Technology	**Mean**	**3.741**	**4.225**	**4.245**	**3.948**	**4.178**	**4.0733**
	St. D.	.9092	.6369	.4342	.4231	.6849	.6885
Overall Rating	**Mean**	**3.672**	**4.239**	**3.803**	**4.423**	**3.684**	**3.9883**
	St. D.	.8248	.4298	.7488	.6349	.7795	.7553

The cohorts of graduates rated differently the effectiveness of training they had received differently (Table 15). Analysis of Variance ($F_{(4,336)} = 17.738$, $P<.0005$) indicated that there were significant differences in the ratings of the effectiveness of teacher education programs by year of graduation. Employing the Bonferroni post-hoc test, significant differences were found between 2001 and 2003 graduates and graduates of three other cohorts. Contrast analysis showed that there was no linear trend in the effectiveness evaluations of the 2000-2004 graduates.

Table 15
Graduates' Ratings of the Effectiveness of Teacher Education Programs by Year of Graduation (N=341)

Year of graduation	N	Mean	St. D.
2000	58	**3.6724**	.8248
2001	71	**4.2394**	.4298
2002	61	**3.8033**	.7488
2003	78	**4.4231**	.6349
2004	73	**3.6849**	.7795
Total	341	**3.9883**	.7553
F = 17.738	df = 4, 336		Sig = .0005
Contrast, linear term, F = .606			Sig = .437

Female graduates reported significantly higher levels of the effectiveness of training they had received than male graduates (Table 16).

Table 16
Graduates' Ratings of the Effectiveness of Teacher Education Programs by Gender (N=341)

Gender	N	Mean	St. D.
Male	108	**3.7593**	.9459
Female	233	**4.0944**	.6226
Total	341	**3.9883**	.7553
F = 15.136	df = 1, 339		Sig = .0005

Both age ranges, 35 and over and 25-34 reported high levels of the effectiveness of training they had received. The Analysis of Variance ($F_{(1,339)} = .690$, $P<.407$) indicated that there were no significant differences in the ratings of the effectiveness of teacher education programs between age groups. (Table 17)

Table 17
Graduates' Ratings of the Effectiveness of Teacher Education Programs by Age

Age	N	Mean	St. D.
25-34	258	**3.9690**	.80792
35-OVER	83	**4.0482**	.56100
Total	341	**3.9883**	.75528
F = .690	df = 1, 339		Sig = .407

The analysis of data shows that, in general, participants presented positive opinions about the effectiveness of the program. There were significant differences between the cohorts in their evaluations about effectiveness but there was no linear trend related to an increasing amount of work experience. Even though genders did not differ in their importance ratings, females had more positive evaluation about the effectiveness males. On the other hand, students' age make a difference in the importance but not in the effectiveness ratings.

Q.3: Graduates' Ratings of the Quality of Teacher Education Programs

Table 18 shows the respondents' ratings of the quality of teacher education programs. Graduates have evaluated the quality of teacher education programs quite positively.

Table 18
Graduates' Ratings of the Quality of Teacher Education Programs (N=341)

1= Very poor	**2=** Poor	**3=** Fair	**4=** Good	**5=** Excellent

Variables	**1**		**2**		**3**		**4**		**5**	
	N	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Quality of teaching by faculty	6	**1.8**	18	**5.3**	114	**33.4**	157	**46.0**	46	**13.5**
Teacher's knowledge of subject(s)	6	**1.8**	6	**1.8**	46	**13.5**	209	**61.3**	74	**21.7**
Course objectives and requirements made clear	6	**1.8**	23	**6.7**	104	**30.5**	137	**40.2**	71	**20.8**
Content of course(s) in major area	6	**1.8**	30	**8.8**	90	**26.4**	153	**44.9**	62	**18.2**
Advice/counsel you received from the advisor in your major department	12	**3.5**	24	**7.0**	91	**26.7**	129	**37.8**	85	**24.9**
teacher preparation program(s)	12	**3.5**	17	**5.0**	89	**26.1**	137	**40.2**	86	**25.2**
Methods of instruction	12	**3.5**	22	**6.5**	96	**28.2**	143	**41.9**	68	**19.9**
Testing and grading	0	**0.0**	12	**3.5**	91	**26.7**	147	**43.1**	91	**26.7**
Required courses outside in major area(general education requirements)	0	**0.0**	23	**6.7**	51	**15.0**	187	**54.8**	80	**23.5**
Opportunities to increase your self-understanding	6	**1.8**	35	**10.3**	74	**21.7**	142	**41.6**	84	**24.6**
Opportunities to work with other students in groups or teams	6	**1.8**	5	**1.5**	81	**23.8**	131	**38.4**	118	**43.6**
Opportunities to engage in extra-curricular activities	6	**1.8**	18	**5.3**	68	**19.9**	177	**51.9**	72	**21.1**
Opportunities to participate in faculty members' research	5	**1.5**	17	**5.0**	66	**19.4**	119	**34.9**	134	**39.3**
Availability of courses at convenient times	6	**1.8**	12	**3.5**	74	**21.7**	163	**47.8**	86	**25.2**
Class size	6	**1.8**	17	**5.0**	78	**22.9**	159	**46.6**	81	**23.8**
Overall evaluation of the quality of teacher education programs	0	**.0**	5	**1.5**	66	**19.4**	186	**54.5**	84	**24.6**

The means and standard deviations of the quality evaluations are presented in Table 19. According to the means, quality evaluations of teacher education programs at the University of Turku were relatively high in all variables but there was same variation in respondents' answers. Particularly, opportunities to work with other students in groups or teams and opportunities to participate in research were emphasized by the participants.

Table 19

Graduates' Ratings of the Quality of Teacher Education Programs (N=341)

Variables		N=58	N=71	N=61	N=78	N=73	N=341
Quality of teaching by faculty	**Mean**	**3.500**	**3.563**	**3.524**	**3.653**	**3.917**	**3.7422**
	St. D.	.6818	.9383	.8084	.9234	.6181	.8443
Teacher's knowledge of subject(s)	**Mean**	**3.482**	**4.169**	**4.000**	**4.205**	**4.000**	**3.9941**
	St. D.	.9431	.3774	.6325	.5666	.7817	.7631
Course objectives and requirements made clear	**Mean**	**3.982**	**3.831**	**3.721**	**3.294**	**3.835**	**3.7155**
	St. D.	.6350	.6966	.7557	.9745	.9276	.9290
Content of course(s) in major area	**Mean**	**3.775**	**3.253**	**4.377**	**3.346**	**3.835**	**3.7891**
	St. D.	.9920	.9368	.4887	.9912	.6670	.9284
Advice/counsel you received from the advisor in your major department	**Mean**	**3.706**	**3.507**	**3.786**	**3.717**	**3.958**	**3.7361**
	St. D.	.9178	.9691	.9507	.9049	.9781	1.0236
teacher preparation program(s)	**Mean**	**4.120**	**3.816**	**3.606**	**3.884**	**3.534**	**3.7859**
	St. D.	.7028	.9225	.7806	.9114	.1066	.9932
Methods of instruction	**Mean**	**3.965**	**3.831**	**3.770**	**3.423**	**3.520**	**3.7833**
	St. D.	.7715	.5603	.9556	.9243	.9590	.9789
Testing and grading	**Mean**	**3.862**	**3.845**	**4.262**	**3.923**	**3.794**	**3.9296**
	St. D.	.9505	.8044	.8926	.4773	.7986	.8195
Required courses outside in major area(general education requirements)	**Mean**	**3.793**	**4.169**	**3.885**	**4.166**	**3.684**	**3.9501**
	St. D.	.9045	.3774	.7979	.9033	.7431	.8083
Opportunities to increase your self-understanding	**Mean**	**3.551**	**4.000**	**3.606**	**4.076**	**3.534**	**3.7713**
	St. D.	.9109	.7171	.9871	.8021	.9149	.9914
Opportunities to work with other students in groups or teams	**Mean**	**4.103**	**3.732**	**3.983**	**3.948**	**4.369**	**4.0264**
	St. D.	.8312	.9706	.7414	.8812	.6348	.8957
Opportunities to engage in extra-curricular activities	**Mean**	**3.586**	**4.084**	**4.262**	**4.089**	**3.646**	**3.8534**
	St. D.	.7955	.2801	.6299	.8088	.9399	.8722
Opportunities to participate in faculty members' research	**Mean**	**4.500**	**4.422**	**3.311**	**3.948**	**4.082**	**4.0557**
	St. D.	.6818	.6472	.9574	.8042	.9769	.9578
Availability of courses at convenient times	**Mean**	**3.793**	**3.577**	**4.295**	**3.923**	**4.000**	**3.9120**
	St. D.	.8738	.9296	.6149	.8181	.6872	.8734
Class size	**Mean**	**3.982**	**3.521**	**3.819**	**4.089**	**3.863**	**3.9563**
	St. D.	.9159	.7533	.8662	.9000	.7695	.8976
Overall evaluation of the quality of teacher education programs	**Mean**	**3.793**	**4.000**	**4.082**	**4.153**	**4.041**	**4.0235**
	St. D.	.7668	.5855	.5258	.8230	.7348	.7067

The Analysis of Variance ($F_{(4,336)} = .447$, $P>.774$) indicated that there were no significant differences and no linear trend in the ratings of the quality of teacher education programs between the cohorts (Table 20).

Table 20
Graduates' Ratings of the Quality of Teacher Education Programs by Year of Graduation (N=341)

Year of graduation	N	Mean	St. D.
2000	58	**4.0862**	.2831
2001	71	**4.0000**	.4140
2002	61	**4.0000**	.4472
2003	78	**4.0769**	.9905
2004	73	**3.9863**	.3906
Total	341	**4.0293**	.5834
F = .447	df = 4, 336		Sig = .774
Contrast, linear term, F= .293			Sig= .589

The Analysis of Variance ($F_{(1, 339)} = .930$, $P>.336$); showed that there were no significant differences in the ratings of the quality of teacher education programs between genders. (Table 21)

Table 21
Graduates' Ratings of the Quality of Teacher Education Programs by Gender (N=341)

Gender	N	Mean	St. D.
Male	108	**4.0741**	.6221
Female	233	**4.0086**	.5647
Total	341	**4.0293**	.5834
F = .930	df = 1, 339		Sig = .336

Similarly there were no significant ($F_{(1,339)} = .009$, $P<.925$) differences in the ratings of the quality of teacher education programs between the age groups. (Table 22)

Table 22
Graduates' Ratings of the Quality of Teacher Education Programs by Age (N=341)

Age	N	Mean	St. D.
25-34	258	4.0310	.59750
35-OVER	83	4.0241	.54046
Total	341	4.0293	.58336
F = .009	df = 1, 339	Sig = .925	

Participants' evaluations about the quality of the teacher education programs were generally quite positive and these ratings were not related to different cohorts, genders or age groups. However there was slightly more variance among participants in their quality ratings than in the two other scales (importance, efficiency).

Q.4: The Relationship between Graduates' Overall Ratings of Importance and Effectiveness and Their Overall Ratings of the Quality of Training

In attempting to analyze the relationships between ratings of teacher education programs' overall importance, effectiveness and quality the Pearson-Product Moment Correlations were calculated (Table 23). All the correlations were positive but relatively low.

Table 23
Graduates' overall ratings based on their perceptions of the importance; effectiveness and quality of the teacher education programs (N=341)

Variables		Overall ratings of importance	Overall ratings of effectiveness	Overall ratings of quality
Overall ratings of importance	**R**	-	.359	.328
	Sig.	-	.000	.000
Overall ratings of effectiveness	**R**	.359	-	.148
	Sig.	.000	-	.006
Overall ratings of Quality	**R**	.328	.148	-
	Sig.	.000	.006	-

The correlation between sub-variables related to importance and effectiveness ratings of teacher education programs are presented in tables 24 and 25**.**

The correlations of all variables related to the ratings of the importance of teacher education program (Table 24) were positive but relatively low. The highest correlations were between attention to ethics and knowledge of subject matters; critical thinking skills and assessment skills; role of teacher and teaching and continuous professional development; and communication skills and continuous professional development and the lowest correlations were between communication skills and attention to ethics; communication skills and assessment skills; and critical thinking skills and curriculum and instruction.

Table 24

Correlation between all variables related to importance of teacher education programs (Graduates) / N=341

Variables		1	2	3	4	5	6	7	8	9	10
1	**r**										
	Sig.										
2	**r**	.161									
	Sig.	.001									
3	**r**	.117	.071								
	Sig.	.016	.095								
4	**r**	.112	.202	.457							
	Sig.	.019	.000	.000							
5	**r**	.240	.293	.237	.155						
	Sig.	.000	.000	.000	.002						
6	**r**	.356	.94	.177	.271	.313					
	Sig.	.000	.041	.001	.000	.000					
7	**r**	.214	.333	.167	.104	.349	.377				
	Sig.	.000	.000	.001	.028	.000	.000				
8	**r**	.194	.146	.380	.245	.262	.167	.180			
	Sig.	.000	.004	.000	.000	.000	.001	.000			
9	**r**	.272	.117	.129	.159	.168	.106	.139	.191		
	Sig.	.000	.016	.008	.002	.001	.025	.005	.000		
10	**r**	.205	.109	.160	.118	.149	.090	.181	.135	.103	
	Sig.	.000	.022	.001	.015	.003	.049	.000	.005	.028	

Critical Thinking Skills	1
Communication Skills	2
Attention to Ethics	3
Curriculum and Instruction Knowledge	4
Role of Teacher and Teaching Knowledge	5
Assessment Skills	6
Attention to Continuous Professional Development	7
Subject Matters	8
Learning Environment Knowledge	9
Using Educational Technology	10

As shown in Table 25, the correlations for all variables related to the ratings of the effectiveness of teacher education programs were positive but relatively low.

The highest correlations were between communication skills and continuous professional development; curriculum and instruction and continuous professional development; and knowledge of subject matters and using educational technology and the lowest correlations were between critical thinking skills and knowledge of subject matters; attention to ethics and continuous professional development; role of teacher and teaching and knowledge of learning environment; and continuous professional development and knowledge of learning environment.

Table 25

Correlation between all variables related to effectiveness of teacher education programs (Graduates) / N=341

Variables		1	2	3	4	5	6	7	8	9	10
1	**r**										
	Sig.										
2	**r**	.139									
	Sig.	.005									
3	**r**	.193	.174								
	Sig.	.000	.001								
4	**r**	.167	.295	.192							
	Sig.	.001	.000	.000							
5	**r**	.168	.175	.074	.137						
	Sig.	.001	.001	.087	.006						
6	**r**	.105	.186	.186	.082	.073					
	Sig.	.066	.000	.000	.066	.089					
7	**r**	.105	.317	.005	.328	.037	.379				
	Sig.	.028	.000	.463	.000	.246	.000				
8	**r**	.092	.247	.091	.134	.067	.073	.238			
	Sig.	.045	.000	.047	.006	.107	.089	.000			
9	**r**	.141	.161	.130	.086	.043	.092	.080	.255		
	Sig.	.004	.001	.008	.39	.225	.045	.068	.000		
10	**r**	.131	.208	.144	.095	.055	.040	.214	.395	.083	
	Sig.	.007	.000	.004	.040	.155	.229	.000	.000	.064	

Critical Thinking Skills	1
Communication Skills	2
Attention to Ethics	3
Curriculum and Instruction Knowledge	4
Role of Teacher and Teaching Knowledge	5
Assessment Skills	6
Attention to Continuous Professional Development	7
Subject Matters	8
Learning Environment Knowledge	9
Using Educational Technology	10

The results of the correlation analyses show that the importance, effectiveness and quality ratings scales are clearly separate scales and refer to different experiences. However, there are low positive correlations between these dimensions. Similarly, the different variables of the scales describing the different aspects of study time experiences correlated positively but the low correlations indicate that each aspect was evaluated separately, and there were no strong positive or negative answering patterns. On the other hand, low correlations can be partly explained by the relatively low variance of the variables.

Q.5: Students' Ratings of the Importance of Teacher Education Programs

Students' evaluations of the importance of different aspects of the program were quite positive (Table 26).

Table 26
Students' Ratings of the Importance of Teacher Education Programs (N=98)

1= Very Unimportant	**2=** Unimportant	**3=** Average	**4=** Important	**5=** Very Important

Variables	**1**		**2**		**3**		**4**		**5**	
	N	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Critical Thinking Skills	2	**2.0**	2	**2.0**	9	**9.2**	63	**64.3**	22	**22.4**
Communication Skills	0	**0.0**	7	**7.1**	6	**6.1**	70	**71.4**	15	**15.3**
Attention to Ethics	0	**0.0**	2	**2.0**	5	**5.1**	52	**53.1**	39	**39.8**
Curriculum and Instruction Knowledge	4	**4.1**	1	**1.0**	5	**5.1**	77	**78.6**	11	**11.2**
Role of Teacher and Teaching knowledge	0	**0.0**	6	**6.1**	7	**7.1**	66	**67.3**	19	**19.4**
Assessment Skills	0	**0.0**	4	**4.1**	11	**11.2**	70	**71.4**	13	**13.3**
Continuous Professional Development	2	**2.0**	3	**3.1**	8	**8.2**	58	**59.2**	27	**27.6**
Subject Matters Knowledge	0	**0.0**	6	**6.1**	8	**8.2**	62	**63.3**	22	**22.4**
Knowledge of Learning Environment	2	**2.0**	2	**2.0**	8	**8.2**	51	**52.0**	35	**35.7**
Using Educational Technology	0	**0.0**	2	**2.0**	7	**7.1**	59	**60.2**	30	**30.6**
Overall Rating	0	**0.0**	3	**3.1**	7	**7.1**	64	**65.3**	24	**24.5**

The means and standard deviations of the importance ratings are presented in Table 27. The results show that all the aspects of teacher education programs were rated as important by students. Differences between different aspects were quite small, but the highest ratings were given to the attention to ethics (4.3 of 5) and educational technology (4.2 of 5) variables, and lowest to the curriculum and instruction (3.9 of 5) and assessment skills (3.9 of 5) variables.

Table 27
Students' Ratings of the Importance of Teacher Education Programs (N=98)

Variables	**Mean**	**Std. D**
Critical Thinking Skills	**4.0918**	.8006
Communication Skills	**4.0204**	.7595
Attention to Ethics	**4.3061**	.6644
Curriculum and Instruction Knowledge	**3.9184**	.7554
Role of Teacher and Teaching Knowledge	**4.1837**	.6788
Assessment Skills	**4.0000**	.6886
Attention to Continuous Professional Development	**4.1224**	.8405
Subject Matters	**4.0714**	.7766
Learning Environment Knowledge	**4.1735**	.8252
Using Educational Technology	**4.1939**	.6526
Overall Rating	**4.1939**	.6984

Both male and female students gave high levels to the importance ratings of the training they had received. And there was no significant (F (1, 96) = .082, P>.775) difference between the genders (Table 28).

Table 28
Students' Ratings of the Importance of Teacher Education Programs by Gender (N=98)

Gender	N	Mean	St. D.
Male	20	**4.1500**	.6708
Female	78	**4.1026**	.6564
Total	98	**4.1122**	.6562
F = .082	df = 1, 96		Sig = .775

Both age groups gave high levels to the importance ratings of the training they had received and there was no significant (F (1, 96) = .003, P>.953) difference between the age groups (Table 29).

Table 29
Students' Ratings of the Importance of Teacher Education Programs by Age (N=98)

Age	N	Mean	St. D.
21-24	64	**4.1094**	.7372
25-OVER	34	**4.1176**	.4777
Total	98	**4.1122**	.6562
F = .003	df = 1, 96	Sig = 953	

Generally speaking students' opinions about the importance of different aspects of teacher education program are quite positive and there are no differences in their opinions between female and male students and between younger and older students.

Q.6: Students' Ratings of the Effectiveness of Teacher Education Programs

As shown in table 30, the students rated the effectiveness of teacher education programs as positive.

Table 30
Students' Ratings of the Effectiveness of Teacher Education Programs (N=98)

1= Very Ineffective	**2=** Ineffective	**3=** Average	**4=** Effective	**5=** Very Effective

Variables	**1**		**2**		**3**		**4**		**5**	
	N	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Critical Thinking Skills	0	**0.0**	2	**3.5**	6	**10.5**	39	**68.4**	10	**17.5**
Communication Skills	0	**0.0**	1	**1.8**	7	**12.3**	36	**63.2**	12	**22.8**
Attention to Ethics	0	**0.0**	4	**7.0**	9	**15.8**	36	**63.2**	8	**14.0**
Curriculum and Instruction Knowledge	1	**1.8**	2	**3.5**	6	**10.5**	38	**66.7**	10	**17.5**
Role of Teacher and Teaching	0	**0.0**	1	**1.8**	3	**5.3**	36	**63.2**	17	**29.8**
Assessment Skills	0	**0.0**	1	**1.8**	6	**10.5**	30	**52.6**	20	**35.1**
Continuous Professional Development	1	**1.8**	2	**3.5**	6	**10.5**	35	**61.4**	13	**22.8**
Subject Matters Knowledge	0	**0.0**	5	**8.8**	17	**29.8**	30	**52.6**	5	**8.8**
Knowledge of Learning Environment	0	**0.0**	1	**1.8**	19	**33.3**	33	**57.9**	4	**7.0**
Using Educational Technology	0	**0.0**	5	**8.8**	5	**8.8**	25	**43.9**	22	**38.6**
Overall Rating	0	**0.0**	3	**5.3**	16	**28.1**	27	**47.4**	11	**19.3**

The means and standard deviations of the effectiveness ratings are presented in Table 31. Results showed that teacher education programs were rated as effective. The highest effectiveness ratings were given to the "role of teacher and teaching knowledge" (4.3 of 5), "using educational technology" (4.1 of 5) and "assessment Skills" (4.3 of 5) variables and lowest to the "knowledge of subject matters" (3.7 of 5) variable.

Table 31
Students' Ratings of the Effectiveness of Teacher Education Programs (N=98)

Variables	**Mean**	**Std. D**
Critical Thinking Skills	**4.1020**	.7106
Communication Skills	**4.1837**	.6788
Attention to Ethics	**3.8776**	.7768
Curriculum and Instruction Knowledge	**4.0000**	.7035
Role of Teacher and Teaching Knowledge	**4.2857**	.6092
Assessment Skills	**4.2755**	.6701
Attention to Continuous Professional Development	**4.0510**	.7649
Subject Matters	**3.7347**	.8440
Learning Environment Knowledge	**3.8673**	.6679
Using Educational Technology	**4.1429**	.8615
Overall Rating	**4.0204**	.7992

Female students rated the effectiveness of training higher than males (Table 32). The difference between genders was statistically significant (F (1, 96) = 5.221, P<.025).

Table 32
Students' Ratings of the Effectiveness of Teacher Education Programs by Gender (N=98)

Gender	N	Mean	St. D.
Male	20	**3.5500**	.9987
Female	78	**3.9872**	.6931
Total	98	**3.8980**	.7798
F = 5.221	df = 1, 96		Sig = .025

There was no significant difference between the age groups (F (1, 96) = 1.529, P>.219). (Table 33)

Table 33
Students' Ratings of the Effectiveness of Teacher Education Programs by Age (N=98)

Age	N	Mean	St. D.
21-24	64	**3.9688**	.7962
25-OVER	34	**3.7647**	.7410
Total	98	**3.8980**	.7798
F = 1.529	df = 1, 96	Sig = .219	

Students' rating of the effectiveness of teacher training program was quite positive. Female students had slightly more positive evaluations than males but students' age does not make any difference.

Q.7: Students' Ratings of the Quality of Teacher Education Programs

Table 34 shows the respondents' ratings of the quality of teacher education programs. Students rated the quality of the program moderately positive.

Table 34

Students' Ratings of the quality of Teacher Education Programs (N=98)

1= Very poor	**2=** Poor	**3=** Fair	**4=** Good	**5=** Excellent

Variables	**1**		**2**		**3**		**4**		**5**	
	N	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Quality of teaching by faculty	2	**2.0**	6	**6.1**	33	**33.7**	42	**42.9**	15	**15.3**
Teacher's knowledge of subject(s)	2	**2.0**	2	**2.0**	13	**13.3**	58	**59.2**	23	**23.5**
Course objectives and requirements made clear	0	**0.0**	6	**6.1**	30	**30.6**	42	**42.9**	20	**20.4**
Content of course(s) in major area	2	**2.0**	8	**8.2**	24	**24.5**	43	**43.9**	21	**21.4**
Advice/counsel you received from the advisor in your major department	2	**2.0**	4	**4.1**	24	**24.5**	41	**41.8**	27	**27.6**
teacher preparation program(s)	4	**4.1**	5	**5.1**	24	**24.5**	40	**40.8**	25	**25.5**
Methods of instruction	4	**4.1**	6	**6.1**	29	**29.6**	38	**38.8**	21	**21.4**
Testing and grading	0	**0.0**	4	**4.1**	26	**26.5**	43	**43.9**	25	**25.5**
Required courses outside in major area(general education requirements)	0	**0.0**	8	**8.2**	13	**13.3**	53	**54.1**	24	**24.5**
Opportunities to increase your self-understanding	2	**2.0**	12	**12.2**	20	**20.4**	44	**44.9**	20	**20.4**
Opportunities to work with other students in groups or teams	0	**0.0**	3	**3.1**	18	**18.4**	33	**33.7**	44	**44.9**
Opportunities to engage in extra-curricular activities	2	**2.0**	8	**8.1**	18	**18.4**	51	**52.0**	19	**19.4**
Opportunities to participate in faculty members' research	1	**1.0**	5	**5.1**	21	**21.4**	39	**39.8**	32	**32.7**
Availability of courses at convenient times	2	**2.0**	4	**4.1**	20	**20.4**	44	**44.9**	28	**28.6**
Class size	0	**0.0**	1	**1.0**	23	**23.5**	52	**53.1**	22	**22.4**
Overall evaluation of the quality of teacher education programs	0	**0.0**	2	**2.0**	6	**6.1**	71	**72.4**	19	**19.4**

Means and standard deviations of the quality of the program are presented in Table 35. Highest quality ratings were given to the variables "Opportunities to work with other students in groups of teams" and "teachers knowledge of subject(s)". Lowest quality rating was given to the variable "quality of teaching by faculty". However there was some variation in students' rating.

Table 35

Students' Ratings of the Quality of Teacher Education Programs (N=98)

Variables	Mean	St. D.
Quality of teaching by faculty	**3.7755**	.9364
Teacher's knowledge of subject(s)	**4.1224**	.7900
Course objectives and requirements made clear	**3.9592**	.8725
Content of course(s) in major area	**3.8878**	.9832
Advice/counsel you received from the advisor in your major department	**3.9898**	.9360
teacher preparation program(s)	**3.8878**	1.0343
Methods of instruction	**3.8061**	1.0220
Testing and grading	**4.0510**	.8295
Required courses outside in major area(general education requirements)	**4.0102**	.8433
Opportunities to increase your self-understanding	**3.8163**	1.0289
Opportunities to work with other students in groups or teams	**4.2653**	.8317
Opportunities to engage in extra-curricular activities	**3.9286**	.9443
Opportunities to participate in faculty members' research	**4.0612**	.9174
Availability of courses at convenient times	**4.0816**	.8696
Class size	**3.9592**	.9407
Overall evaluation of the quality of teacher education programs	**4.0918**	.5759

There were no significant (F (1, 96) = .005, P>.944) differences in the quality ratings between males and females (Table 36)

Table 36

Students' Ratings of the Quality of Teacher Education Programs by Gender (N=98)

Gender	N	Mean	St. D.
Male	20	**4.1000**	.5525
Female	78	**4.0897**	.5852
Total	98	**4.0918**	.5759
F =.005	df = 1, 96		Sig = .944

No significant difference (F (1, 96) = .335, P>.681) was found in the quality ratings between age groups either (Table 37).

Table 37

Students' Ratings of the Quality of Teacher Education Programs by Age

Age	N	Mean	St. D.
21-24	64	**4.1094**	.5667
25-OVER	34	**4.0588**	.6001
Total	98	**4.0918**	.5759
F = .335	df = 1, 96	Sig = .681	

Students' ratings about the quality of the teacher education program were moderately positive and there were no gender or age group differences in the ratings but in individual students' ratings there were somewhat variation.

Q.8: The Relationship between Students' Overall Ratings of Importance; Effectiveness and Their Overall Ratings of the Quality of Training

In order to evaluate the relationships between teacher education programs' overall importance and effectiveness, Pearson-Product Moment Correlations were calculated.

In Table 38, the correlations between the overall ratings of quality, effectiveness and importance of the programs are presented. There were positive but relatively low correlations between the subscales.

Table 38

Students' overall ratings based on their perceptions of the importance; effectiveness and quality of the teacher education programs (N=98)

Variables		Overall ratings of importance	Overall ratings of effectiveness	Overall ratings of quality
Overall ratings of importance	**r**	-	.325	.273
	Sig.	-	.001	.007
Overall ratings of effectiveness	**r**	.325	-	.337
	Sig.	.001	-	.000
Overall ratings of Quality	**r**	.273	.337	-
	Sig.	.007	.000	-

The correlation between the sub-variables of the importance and effectiveness scales of teacher education programs was computed separately (tables 39 and 40). As shown in Table 39, there were positive but mainly low correlations between the variables.

The highest correlations were between attention to ethics, curriculum and instruction knowledge and between the role of teacher and teaching knowledge.

Table 39

Correlation between all variables related to importance of teacher education programs (Students) / N=98

Variables		1	2	3	4	5	6	7	8	9	10
1	**r**										
	Sig.										
2	**r**	.060									
	Sig.	.558									
3	**r**	.042	.054								
	Sig.	.680	.597								
4	**r**	.013	.108	.502							
	Sig.	.895	.291	.000							
5	**r**	.131	.243	.130	.000						
	Sig.	.198	.016	.203	1.000						
6	**r**	.425	.007	.190	.246	.225					
	Sig.	.000	.946	.061	.015	.026					
7	**r**	.294	.185	.092	.010	.299	.424				
	Sig.	.003	.069	.365	.926	.003	.000				
8	**r**	.200	.041	.279	.241	.270	.019	.048			
	Sig.	.049	.689	.005	.017	.007	.853	.636			
9	**r**	.073	.055	.060	.258	.157	.038	.104	.095		
	Sig.	.475	.589	.556	.010	.124	.708	.308	.354		
10	**r**	.053	.001	.067	.030	.110	.045	.162	.114	.090	
	Sig.	.603	.995	.512	.767	.281	.657	.111	.263	.378	

Critical Thinking Skills	1
Communication Skills	2
Attention to Ethics	3
Curriculum and Instruction Knowledge	4
Role of Teacher and Teaching Knowledge	5
Assessment Skills	6
Attention to Continuous Professional Development	7
Subject Matters	8
Learning Environment Knowledge	9
Using Educational Technology	10

As shown in table 40, there was positive but quite low correlation between all variables of the effectiveness sub-scale.

Table 40

Correlation between all variables related to effectiveness of teacher education programs (Students) / N=98

Variables		1	2	3	4	5	6	7	8	9	10
1	**r**										
	Sig.										
2	**r**	.030									
	Sig.	.769									
3	**r**	.119	.079								
	Sig.	.243	.439								
4	**r**	.088	.222	.162							
	Sig.	.388	.028	.111							
5	**r**	.088	.133	.097	.025						
	Sig.	.387	.191	.343	.806						
6	**r**	.120	.269	.001	.175	.212					
	Sig.	.241	.007	.993	.085	.036					
7	**r**	.145	.297	.132	.230	.118	.194				
	Sig.	.154	.003	.195	.023	.246	.056				
8	**r**	.062	.126	.052	.019	.200	.068	.172			
	Sig.	.545	.217	.614	.851	.048	.506	.090			
9	**r**	.319	.213	.184	.094	.058	.060	.187	.079		
	Sig.	.001	.035	.069	.356	.567	.555	.066	.439		
10	**r**	.028	.140	.073	.136	.105	.105	.011	.265	.209	
	Sig.	.782	.169	.473	.182	.302	.305	.913	.008	.039	

Critical Thinking Skills	1
Communication Skills	2
Attention to Ethics	3
Curriculum and Instruction Knowledge	4
Role of Teacher and Teaching Knowledge	5
Assessment Skills	6
Attention to Continuous Professional Development	7
Subject Matters	8
Learning Environment Knowledge	9
Using Educational Technology	10

Q.9: Are There Significant Differences between Graduates and 4th Year students in Rating the Importance, Effectiveness, and Quality of Teacher Education Programs?

The main target of this study was to investigate if there are differences between graduates and students in the 4th year of their ratings of the importance, effectiveness, and quality of teacher education programs? T-test showed that there were no significant mean differences between graduates' and students ratings of the importance of different aspect of teacher training programs almost in all variables. (See tables 41 - 43)

Table 41
Graduates' and Students' Ratings of the Importance of Teacher Education Programs (N=439)

1= Very Unimportant	**2=** Unimportant	**3=** Average	**4=** Important	**5=** Very Important

Variables	**Groups**	**N**	**Mean**	**Std. D.**	**T-Test**	**Sig.**
Critical Thinking Skills	Graduates	341	**4.0850**	.7447	**.388**	.534
	Students	98	**4.0918**	.8006		
Communication Skills	Graduates	341	**3.9326**	.7101	**.387**	.534
	Students	98	**4.0204**	.7595		
Attention to Ethics	Graduates	341	**4.3226**	.6654	**.009**	.924
	Students	98	**4.3061**	.6644		
Curriculum and Instruction Knowledge	Graduates	341	**3.9238**	.6417	**.406**	.524
	Students	98	**3.9184**	.7554		
Role of Teacher and Teaching knowledge	Graduates	341	**4.0264**	.7291	**2.044**	.154
	Students	98	**4.1837**	.6788		
Assessment Skills	Graduates	341	**3.9501**	.6374	**.379**	.538
	Students	98	**4.0000**	.6886		
Continuous Professional Development	Graduates	341	**4.0147**	.7494	**5.512**	.019
	Students	98	**4.1224**	.8405		
Subject Matters Knowledge	Graduates	341	**4.0499**	.7157	**1.772**	.184
	Students	98	**4.0714**	.7766		
Knowledge of Learning Environment	Graduates	341	**4.3079**	.7489	**.013**	.909
	Students	98	**4.1735**	.8252		
Using Educational Technology	Graduates	341	**4.2082**	.6513	**.005**	.945
	Students	98	**4.1939**	.6526		
Overall Rating	Graduates	341	**4.0968**	.6769	**2.786**	.096
	Students	98	**4.1939**	.6984		

The means of graduates' and 4th year students' ratings of the effectiveness of teacher education program are presented in Table 42. The results of the t-tests show that in overall rating there was no significant difference. Students rated critical thinking skills and using educational technology items significantly higher, whereas

graduates had more positive evaluations about the effectiveness related to continuous professional development.

Table 42
Graduates' and Students' Ratings of the Effectiveness of Teacher Education Programs (N=439)

1= Very Ineffective	**2=** Ineffective	**3=** Average	**4=** Effective	**5=** Very Effective

Variables	**Groups**	**N**	**Mean**	**Std. D.**	**T-Test**	**Sig.**
Critical Thinking Skills	Graduates	341	**3.9971**	.6708	**4.789**	.029
	Students	98	**4.1020**	.7106		
Communication Skills	Graduates	341	**4.1173**	.6582	**1.945**	.164
	Students	98	**4.1837**	.6788		
Attention to Ethics	Graduates	341	**4.0645**	.7526	**.441**	.507
	Students	98	**3.8776**	.7768		
Curriculum and Instruction Knowledge	Graduates	341	**3.9003**	.6054	**.742**	.389
	Students	98	**4.0000**	.7035		
Role of Teacher and Teaching knowledge	Graduates	341	**4.2082**	.6044	**1.352**	.246
	Students	98	**4.2857**	.6092		
Assessment Skills	Graduates	341	**4.0997**	.7945	**.140**	.708
	Students	98	**4.2755**	.6701		
Continuous Professional Development	Graduates	341	**4.2317**	.8414	**5.561**	.019
	Students	98	**4.0510**	.7649		
Subject Matters Knowledge	Graduates	341	**3.6305**	.7385	**3.275**	.071
	Students	98	**3.7347**	.8440		
Knowledge of Learning Environment	Graduates	341	**3.8446**	.6154	**.839**	.360
	Students	98	**3.8673**	.6679		
Using Educational Technology	Graduates	341	**4.0733**	.6885	**12.678**	.000
	Students	98	**4.1429**	.8615		
Overall Rating	Graduates	341	**3.9883**	.7553	**2.914**	.089
	Students	98	**4.0204**	.7992		

The means of graduates' and 4th year students' ratings of the quality of teacher education program are presented in table 42. There was no significant difference in the overall rating of the quality. The individual item students rated slightly higher was the quality of the advice they received from the advisor in their major department.

Table 43
Graduates' and Students' Ratings of the Quality of Teacher Education Programs
(N=439)

1= Very poor	**2=** Poor	**3=** Fair	**4=** Good	**5=** Excellent

Variables	**Groups**	**N**	**Mean**	**Std. D.**	**T-Test**	**Sig.**
Quality of teaching by faculty	Graduates	341	**3.6422**	.8443	**.662**	.416
	Students	98	**3.7755**	.9364		
Teacher's knowledge of subject(s)	Graduates	341	**3.9941**	.7631	**1.153**	.283
	Students	98	**4.1224**	.7900		
Course objectives and requirements made clear	Graduates	341	**3.7155**	.9290	**3.314**	.069
	Students	98	**3.9592**	.8725		
Content of course(s) in major area	Graduates	341	**3.6891**	.9284	**.111**	.739
	Students	98	**3.8878**	.9832		
Advice you received from the advisor in your major department	Graduates	341	**3.7361**	1.0236	**5.336**	.021
	Students	98	**3.9898**	.9360		
teacher preparation program(s)	Graduates	341	**3.7859**	.9932	**.027**	.869
	Students	98	**3.8878**	1.0343		
Methods of instruction	Graduates	341	**3.6833**	.9789	**.067**	.795
	Students	98	**3.8061**	1.0220		
Testing and grading	Graduates	341	**3.9296**	.8195	**.041**	.840
	Students	98	**4.0510**	.8295		
Required courses outside in major area	Graduates	341	**3.9501**	.8083	**.001**	.978
	Students	98	**4.0102**	.8433		
Opportunities to increase your self-understanding	Graduates	341	**3.7713**	.9914	**.002**	.967
	Students	98	**3.8163**	1.0289		
Opportunities to work with other students in groups or teams	Graduates	341	**4.0264**	.8957	**.233**	.630
	Students	98	**4.2653**	.8317		
Opportunities to engage in extra-curricular activities	Graduates	341	**3.8534**	.8722	**.008**	.928
	Students	98	**3.9286**	.9443		
Opportunities to participate in faculty members' research	Graduates	341	**4.0557**	.9578	**.574**	.449
	Students	98	**4.0612**	.9174		
Availability of courses at convenient times	Graduates	341	**3.9120**	.8734	**.004**	.949
	Students	98	**4.0816**	.8696		
Class size	Graduates	341	**3.8563**	.8976	**.117**	.732
	Students	98	**3.9592**	.9407		
Overall evaluation of the quality of teacher education programs	Graduates	341	**4.0293**	.5834	**1.402**	.237
	Students	98	**4.0918**	.5759		

5.1.1 Summary of Study 1

After observing and reviewing the frequencies and percentages involved in the tabulation and computation process of the data analysis for the questions in this study and after comparing the ratings and independent variables' effects upon ratings, it was concluded that:

A majority of the respondents (graduates and students) rated the overall importance, effectiveness and quality of the teacher education programs as important, effective and good.

Generally speaking there were only a few significant differences between the cohorts and groups related to the background variables (gender, age).

The different cohorts were rating the quality of the programs very similarly but some differences between the cohorts were found in the importance and effectiveness ratings. Graduates of 2001 and 2002 rated the importance of the program significantly higher than 2000 graduates. The effectiveness of the programs was rated significantly higher by 2001 and 2003 graduates than other groups. In spite of these individual differences between cohorts there were no linear trends among the year cohorts in any measure.

In respondents' ratings of the effectiveness of teacher education programs there was significant difference between males and females; females rated it higher than males. There were no significant differences between males' and females' ratings of the importance and quality of programs.

In the ratings there was only one difference between age groups. Older graduates (35 years or older) rated the importance of the teacher training significantly higher that 25-35 years old graduates.

In graduates' ratings there were positive but relatively low correlations between all variables related to importance, effectiveness and quality of Teacher Education Programs.

Generally speaking students' ratings about importance, effectiveness and quality of teacher education program were very positive. There was only one significant difference related to the background variables. Females rated higher the effectiveness of the program.

The comparison of students' and graduates' perception about importance, effectiveness, and quality of teacher education programs showed that there were no significant differences between graduates and students in the overall ratings. However there were differences in some individual variables. Students rated higher

in importance of "Continuous Professional Development", effectiveness of "Critical Thinking Skills" and "Using Educational Technology" and quality of "Advice received from the advisor". Graduates rated higher in importance of "Knowledge of Learning Environment" and effectiveness of "Continuous Professional Development".

5.2 Results of Study 2

Q.10: What teachers' [Graduates] believe about how increasing work experience has changed their opinions of their preservice training?

The results presented above show that teachers' (graduates) and teacher students' answers are surprisingly similar when they evaluate their pre-service program with a structured rating instrument. Increasing teaching experience did not result in any systematic changes in these evaluations. However, the results based on the open-ended questions used in Study 2, show somewhat different results. Even though it was not always explicitly formulated, the answers of many teachers implicated that their opinions have changed substantially during their increased work experience. There were also many teachers who mentioned that their perception has not changed about the appropriateness and quality of training that they received at the Faculty of Education. A direct comparison with the results of Study 1 is not possible because the sampling method was different and the samples only partially overlapped.

A majority of teachers who mentioned that their opinions have changed did mention that in real teaching work they have noticed what is missing from pre-service training or what weaknesses there were in the content and organization of the study program. A teacher who had 11 years work experience put it as follows:

> My opinions have become more critical. During the teacher training students should get a better understanding about the school-age child's life and more skills to support children in their development.
> For the teaching of social skills I did not get adequate support in the teacher training.
> In my opinion the practical work among primary school children should be every teacher's strength.

However, there were also many teachers who mentioned that it is only after a couple of years work experience that they have learned to appreciate many aspects of their pre-service training which they didn't fully understand during their study time.

> Now after several years of work experience I appreciate more the teacher education I got.
> In the practical work I have realized the complexity of the relation between theoretical studies and the skills I learned in practical work. University can not focus on teaching the similar kind of practical "tricks" you learn in your daily work.

Teachers' answers to the open-ended question did not only tell if their opinions have changed but gave a rich variety of opinions and evaluations about teacher

education and work conditions which directly or indirectly consisted of proposals for developing the content of teacher education programs. The answers were classified on the basis of the features of teacher education programs participants would like to change or make stronger. Altogether 12 different categories of proposed changes were found (Table 44). The N of proposals is larger than the N of participants because one answer could consist of several categories.

Table 44
Respondents' suggestions to teacher education programs

Variables		N	%
More emphasis on:			
Practical-based courses and programs		**139**	**54.1**
Student characteristics (e.g. students' learning differences, special children, and different age groups) and the environmental context of learning		**92**	**35.8**
Communication with	Parent	**79**	**30.7**
	Multi Professional teams e.g. psychologists and social workers	**75**	**29.4**
Comprehensive education about school and classroom management		**46**	**17.9**
Knowledge of subject matters		**37**	**14.4**
Knowledge of new technology or ICT		**34**	**13.2**
Pupil evaluation methods and aptitude tests		**23**	**8.9**
Teacher's rights and duties or responsibility		**22**	**8.6**
Designing lesson plans to help students		**21**	**8.2**
New teaching methods		**20**	**7.8**
Enhancing motivation to learn		**19**	**7.4**

Practical-based courses and programs: More than half of the participants proposed that teacher education programs must pay more attentions to practical knowledge and skills needed in teachers work. According to this group the primary function of pre-service teacher education courses is to prepare students for school teaching. It seems that there is not an appropriate balance between theoretical and practical knowledge in programs.

For example teachers said:

> It is important that teacher education emphasizes more on practice than theory.
> I have found a gap between the skills that have been learned in theoretical studying and practical work.

Besides making students' familiar with materials, teaching methods and programs associated with the curriculum areas, all teacher education courses must place an emphasis on practical school experience and integrate at least the following aspects with classroom practice:

Communication skills: Participants emphasized good communication skills with colleagues, multi professional teams and parents. Successful teachers must be capable of communicating with students, parents, and other professional. Interpersonal skills are essential in today's schools where decision-making is shared and trust is built through collaborative working relationships among teachers, principals, multi professional, and parents.

As some teachers said:

> We didn't get guidance on how to meet the pupils' parents. After several years as teacher I have noticed that there are some weaknesses in teacher education programs e.g. cooperation between home and the school [teachers and parents]; multi professionals e.g. psychologists, counselors and social worker.
> In the education, teacher students should be trained to meet parents.
> The teacher education did not give any readiness for the meeting or operating with parents of the students with learning disabilities.

Student characteristics: Participants emphasized learning approaches to teaching and learning to provide effective and challenging student learning and adapt subject content to suit the individual learning needs of all students. Students with learning differences represent a wide range of problem areas - learning disabilities (reading, writing and mathematics), memory issues, processing information and problem solving, attention/concentration deficits, organization issues, language and communication problems, sensory handicaps (vision and hearing).

In this case some teachers believed that:

> Nowadays one meets so many different learning difficulties in the work and we have received rather little education for the meeting of them.
> I got little competences in the teacher education to cope with pupils and to understand learning difficulties.
> In teacher education, meeting of the different learners should be taken into more consideration.
> In my opinion, in teacher education programs there was little information about the learning difficulties and about the meeting of different pupils.

Classroom management: Participants emphasized learning approaches to successful classroom management. Teachers, especially novice ones, continue to report that classroom management is one of their greatest challenges in the classroom. Classroom management involves the full range of teacher teacher's efforts to oversee classroom activities such as learning, social interaction, and student behavior.

For example a teacher said:

> Teacher education should provide situations for student teachers so those can practice more educational management.

Enhancing motivation to learn: Participants emphasized developing an understanding of child development, learning and motivation at all levels, including points of transition such as those in the early years of schooling and adolescence. Motivation in the classroom is an essential component of teaching. In schools, teachers can have a significant impact on students' motivation to learn. Thus, it is not causeless that teachers would like to know more about methods of students' motivation, as one teacher said:

> We would want to learn more about methods of motivating students in teacher education. In other words, how can teachers develop students' motivation?

Knowledge of subject matters: Participants emphasized acquiring a strong knowledge of subject matters. This is an essential part of a teachers' knowledge that goes beyond specific topics within a curriculum, it is the subject matter that is to be taught. The subject matter of any area of study, in very broad terms, includes the topics, facts, definitions, procedures, concepts, organizing structures, representations, influences, reasons, truths and connections within the area of study and the connections outside the area of study to other areas. About the knowledge of subject matters one respondent stated:

> The content of teacher education courses in this case must be related to primary schools' books.

Pupil evaluation methods and aptitude tests: Participants emphasized gaining knowledge of assessment strategies, data analysis and reporting practices appropriate to the subject discipline and level of maturation of school students. It is important for teachers to have a clear vision of their roles and responsibilities to provide the best teaching strategies for their students. The instructor's role is a dynamic one that requires having individuals who are able to create a virtual climate that encourages meaningful individual and collaborative learning. Assessment is an important element in the teaching and learning process that challenges instructors to consider evaluation techniques that meet the learning needs of today's learners. The teacher's assessment strategies are significant because they provide a relational prompt for students and insights into the educational process. Evaluating the teaching and learning process involves a host of activities such as creating course objectives, gathering data from a variety of sources and often assigning grades for student work.

According some teachers, they need more knowledge about this variable, as one of them said:

> Teacher education programs should pay more attention to knowledge of students' assessment methods in separate subjects.

Knowledge of new technology or ICT: Participants emphasized being able to demonstrate a developing competence and confidence in the use of a range of learning technologies (ICT) in the classroom. The use of technology in an appropriate manner can enhance the learning process. Technology can play a vital role in helping students meet higher standards and perform at increased levels by promoting alternative, innovative approaches to teaching and learning. Teachers can use the new technology to improve their teaching, give it more variety and make it better suited for a more diverse group of students. Teachers should have the latest knowledge of educational technology and they need to be able to apply ICT in their work. Thus, teacher education curricula and programs should give students opportunities to learn how to use ICT. In this category one teacher suggested:

> Teacher education programs should update their courses about ICT knowledge for their students.

Teacher's rights and duties or responsibility: Participants emphasized learning to be familiar with teacher's rights and duties or responsibilities. Teachers have a right to: Contribute to the policy and practices of the school's curriculum; be free from verbal abuse, physical abuse and all forms of discrimination and harassment; courtesy and respect from students, parents and colleagues and all members of the school community; respect for their professional views/opinions/contributions; work in a safe, healthy and pleasant environment, have their property kept safe; experience minimal classroom disruption; expect students to be punctual; and receive regular communication regarding current school activities and alterations to usual procedures and also have duties to: Provide quality programs of instruction in accordance with System guidelines and school policy; model courteous, respectful and supportive behavior and treat all members of the school community with consideration; demonstrate a duty of care towards students; Provide learning experiences and expectations that assist students to become independent and lifelong learners; provide and maintain a safe, supportive, healthy and hygienic learning environment for students; develop and maintain regular communication with parents about student welfare and other educational matters; inform students and parents of the school behavior plan and class rules and the consequences of inappropriate behavior; develop collaboratively with students a

classroom behavior management plan including set of class rules and to display such in the classroom and circulate to parents/careers; and regularly discuss the classroom behavior management plan with students.

New teaching methods: Participants emphasized being able to acquire new teaching methods. It is very important that the students have time to do the exercises under the supervision of the teacher. The use of multimedia materials, together with a less intensive use of slides or the blackboard, has proven to be very positive; it favors understanding of concepts that are too complex to illustrate graphically. Innovative teaching methods need to be incorporated into lessons and assessments in order to enhance the learning process by surprising students every day.

Many teachers strongly emphasized continuous development in their work. For them it seemed to be natural that they face new challenges. According to their answers, routine skills cannot be enough for coping with these challenges, but more general level conceptual understanding and reflection is needed. Some of the teachers emphasized the role of in-service training whereas other expressed that the individual and/or collective reflection of these new challenges and deliberate attempts to develop new skills and practices are key processes in coping with these challenges. The following answers characterize this kind of work approach:

> Theoretical basis for work is important. Even though the work is partly very practical it is also very challenging and you have to understand the systemic whole. There are many changing demands teachers have to cope with. Thus the reflective and inquiry-based approach to the work has helped me to reshape my work.
> Learning environments, curriculum and many frame factors and constrains of the work are changing so much that comprehensive updating of knowledge and skills is needed in different phases of the career. It does not mean only voluntary in-service training but also conscious attempt to reflect and improve own professional practice.

There are other teachers who describe the demands on teachers' profession in very different terms and emphasize the skills needed to carry out the different routine tasks of everyday work. Their view of the teaching profession seems to be more stabile. This does not mean that they would only see teaching as a set of simple practices. Some of the tasks are demanding and complex, but these teachers seem to believe that there are "ready made" routines which can be used in dealing with the tasks.

> It would be important to focus on training teachers to use the basic teaching methods. It is very obvious that the new creative methods do not work.
> I was an idealist when I graduated, but in my first workplace the more experienced colleagues changed very soon my conceptions about the work. My daily work is very much focused on carrying out small routines. These small routines were not emphasized in my pre-service education.

Because of the limitations of the data, it is not possible to present statistically confirmed results about the frequencies of these two orientations and the relationship between the work orientations and opinions about teacher education programs. However, preliminary results show that both groups mentioned positive and also critical remarks about the teacher education program they had attended in the university. However, there were qualitative differences in their answers. Those teachers who conceptualized the teaching profession as a dynamically changing expertise appreciated the theoretical studies more, whereas teachers with a more stable professional view mainly argued that teacher training should focus more on teaching the concrete practices and routines needed in teacher profession.

6 Conclusion and Discussion

6.1 Main Findings and discussion

This study consists of two parts. The main aim of Study 1 was to investigate how students and graduates rate the importance, effectiveness, and quality of the preservice experiences that they have received in teacher education and if these ratings are dependant on theirs amount of experience as a teacher. In Study 2 the aim was to investigate what teachers' [graduates] believe about how increasing work experience has changed their opinions of their pre-service training. In addition, study 2 aimed at analyzing if teachers' evaluations about pre-service training are related to different orientations to work and professional development.

A repeated cross-sectional research method was used to obtain data for study 1. The data collection instrument was a Likert-scale questionnaire with 5 options. It consisted of background questions and 94 items dealing with different aspects of the subject's teacher training program. The participants in Study 1 were senior students (4^{th} study year, N=98) and 2000-2004 masters' degree graduates (N=439) from the Teacher Education Departments of the Faculty of Education at the University of Turku.

The data of Study 2 was based on a background question (amount of teaching experience) and an open-ended question in which the participants were asked to write a short essay about how much their opinions of the preservice teacher education program had changed during the course of their increasing work experience as a teacher. The participants in Study 2 were class teachers who graduated from the University of Turku and now worked in primary schools in South-West Finland. All together 257 teachers answered to the web-based questionnaire. In Study 2 there was more variation in the year of graduation than in Study 1.

The main findings from this study revealed the importance, effectiveness and quality of teacher education programs. The respondents showed a positive attitude toward teacher education programs. A majority of the respondents rated the overall importance of the teacher education programs as important or very important. In the opinion of the respondents, having and developing the knowledge, attitudes, and skills, such as, critical thinking skills, communication skills, work ethics, curriculum and instruction, knowledge about role of the teacher and teaching, assessment skills, attention to continuous improvement, knowledge of subject matters, knowledge of learning environments, and using instructional technology are important, and teacher education programs at the Turku Faculty of Education were effective in providing these abilities. They also rated the quality of training that they have received as good or excellent. The results also showed that there was a positive

relationship between respondents' overall importance and effectiveness ratings and their overall evaluating of the quality of the teacher education they had received. In total, the majority of the respondents were generally satisfied with the teacher education programs.

In the graduates' ratings there were significant differences in some individual variables between the cohorts (2000-2004 graduated). Graduates of the years 2001 and 2002 reported a higher level of importance of the training they received in comparison with other groups. In effectiveness ratings 2001 and 2003 graduates had more positive opinions than graduates of the three other cohorts. In quality ratings there were no differences between the five cohorts. However, there were no systematic overall differences or any linear trends related to the increasing work experience.

The results indicated a few significant relationships between background variables and evaluations of the programs. Graduates who were older than students on average during their study time rated the overall importance of the program slightly higher, and females had more positive evaluation of the effectiveness than males.

There were only some minor differences between the ratings of graduates and 4th year students on individual items. In overall ratings of importance, effectiveness and quality of teacher education programs, there were no significant differences between students and graduates. On effectiveness questions, students rated critical thinking skills and using educational technology items higher, whereas graduates had more positive evaluations about the effectiveness related to continuous professional development. Students rated the quality of the advice they received from the advisor in their major department higher than graduates.

The very positive evaluations presented by students in the structured questionnaire are fully in line with the similar studies elsewhere. (NCTAF, 1996, 2003; Bean & Vesper, 1994; Peutherer, 2001; Jernigan & Langer, 1997; Nelson et al, 1994; Garza, 2000; Greenwald et al, 1996; Abernathy, Forsyth, & Mitchell, 2001; Grosso de Leon, 2001; Reynolds, 1992; Jegede, Taplin & Chan, 2000; Borko & Putnam, 1995; Glaser, 1987; Darling-Hammond, 1997). For example, Murray and Porter (1996) addressed the importance of establishing and enhancing a strong relationship among the general education programs, subject content knowledge, and pedagogical knowledge in the preparation of educators. Or Schulman (1987), in his study of a knowledge base for educators, identified seven broad categories of knowledge that constitute the major components of the knowledge base for a

classroom teacher, and therefore, are necessary for successful, reflective practice. They include content knowledge; general pedagogical knowledge; curriculum knowledge; pedagogical content knowledge; knowledge of learners and their characteristics; knowledge of educational contexts; and knowledge of educational ends, purposes, and values, and their philosophical, social, political and historical grounds. Also, Retta and Dennis (2006, p. 46) indicated that the teacher must be able "to use multiple assessment modes and approaches aligned with learning goals to assess student learning before, during and after instruction".

The analysis data also showed the effectiveness of teacher education programs in preparing graduates to function as an educator in his/her job. In support of this result, the effectiveness of teacher education programs, researches have commonly reported positive feedback (Darling-Hammond, 1997; Jakku-Sihvonen, 2002; Saari 2003; Brian et al, 2004; Bickert0n et al, 2001, 2004; Lerer et al, 2002; Zelazek et al, 1998; Flowers, 2002; Smoot, 2003; Donovan, 20001; Taylor, 2004; UMD Department of Education, 2002 NCTAF, 1996, 2003). For example, (Grosso de Leon, 2001; Reynolds, 1992; Jegede, Taplin & Chan, 2000; Borko & Putnam, 1995; Glaser, 1987) have proposed different kinds of skills, knowledge, dispositions, and values in which effective teachers must be proficient. They include: knowledge of learning environments and instructional strategies; classroom management; knowledge of learners and learning; subject matter knowledge; pedagogical content-knowledge; knowledge of instructional strategies and representations; knowledge of curriculum and curricular materials; and knowledge and skills on how to implement technology in the curriculum.

The result of analysis of graduates' ratings of the quality of teacher education programs was good or excellent. This result is also similar with typical findings in similar studies (Jakku-Sihvonen, 2002; Saari 2003; Brian et al, 2004; Miller and Wolosyk, 2002; Flowers, 2002; Smoot, 2003; Rohn, 2005; Silverman, 2001; Bickert0n et al, 2001; SUU Office of Institutional Research, 2000). It is, however, difficult to conclude what these similar results mean because the teacher education programs in question, as well as the details of the evaluation instruments, differ from one study to another. It can be that these seemingly similar results from these kinds of studies tell more about the typical answering patterns when questionnaires with structured Likert-scales are used in program evaluation studies.

The most interesting finding of Study 1 was that there were no systematic differences between different cohorts (representing different amount of work experience) and between the ratings of students and graduates. This somewhat counter-intuitive finding is, however, in line with some previous findings from the USA. Studies assessing the relationship between student ratings and alumni ratings across courses have shown that there is a positive correlation between students and graduates ratings (Centra, 1974, 1979; Drucker & Remmers, 1951; Feldman, 1989; Howard et al, 1985; McKeachie, 1979; Overall & Marsh, 1980).

All together the results of Study 1 showed that participants had quite positive opinions of the teacher education programs. Even though there were some differences between cohorts, genders and age groups the results did not indicate any systematic trends. According to the results of study 1 an increase in work experience is not related to the evaluations of teacher education programs.

Interestingly, Study 2 gave quite different results. According to the qualitative data of Study 2 some graduates expressed that their perceptions have not changed about the importance, effectiveness, and quality of training that they received during their study time. They pointed out that teacher education programs have provided them the basic theoretical/formal knowledge and some training of practical routines. However, a majority of the teachers seems to have somewhat critical opinions about the teacher education. These teachers were not satisfied with teacher education programs because they argued that the programs failed to meet their practical demands in different everyday situations of the classroom e.g. in coping with students' learning difficulties, multi-professional communication with parents and other professional groups (psychologists and social workers), and classroom management problems. Participants also emphasized more practice oriented knowledge of subject matter, evaluation methods and teachers' rights and responsibilities. Therefore, they (54.1% of participants) suggested that teacher education departments should provide more practice-based courses and programs as well as closer collaboration between regular schools and teacher education departments in order to fill gap between theory and practice.

The results of Study 2 also indicate that there were qualitative differences in the answers of teachers representing different orientations to work and professional development. Teachers who conceptualized the teaching profession as a dynamically changing expertise and described professional development in terms of deliberate practice had more appreciation for the theoretical studies, whereas teachers with a more stable professional view (routine expertise) mainly

argued that teacher training should focus more on teaching the concrete practices and routines needed in the teacher profession.

The researchers have done many studies about different aspects of practical and theoretical knowledge that the results of those support these research findings. About:

The researcher such (Ellsworth, 2002; Becker et al, 1979; Bak, D. & Hansen, Dyrgaard, 1999; Pause, 1977; Nir-Janiv, 1974; Yi-Ling, 2006; Souza et al, 2006; Katz, 1997; Kummer, 2003; Pearson, 1989; Kilgore et al., 1990) have done studies about teachers' cooperation with colleagues, and external relationships e.g. parents. The findings of these studies showed that teachers, especially novices have problems in this domain.

Methods of encounter with students' learning difficulties is one the most important problem for teachers and the findings of studies (Jakku-Sihvonen & Niemi, 2005; Driel et al, 1998; Cochran, DeRuiter, & King, 1993; Doyle, 1986; Fennema, 1990; Li, 1999; Ellsworth, 2002; Lubawy, 2003) certify deficiency of many teachers in this area.

In a classroom, there are tow kinds activities (teaching and managing) and managing is prerequisite of teaching. Some respondents have stated that they are unable in class management. This result is similar with typical findings in similar studies (Reynolds and Muijs, 1999; Ellsworth, 2002; NCTM, 2000; Wong & Wong, 1998; Manning & Bucher, 2003; Smith, 2000; Sokal, Smith, & Mowat, 2003; Burden, 2000; Good & Brophy, 2000; Iverson, 2003; Weinstein, 1996; Brown et al, 1989; Leinhardt, 1988; Morine-Dershimer, 1989).

Acquiring a strong knowledge of subject matters is an essential part of a teachers' knowledge and it should be present by academic programs. Some teachers believe that there is a few related between teacher education courses and primary schools books. This is like the findings of some researchers (Floden & Meniketti, 2005; Meijer et al, 1999; Ellsworth, 2002; Ball, Lubienski, & Mewborn, 2001; Cooney & Wilson, 1995; Even, 1993; Grossman, Wilson, & Shulman, 1989; Ma, 1999; Shulman, 1986; Thompson, 1992; Wilson, Shulman, & Richert, 1987; Driel et al, 1998; Cochran, DeRuiter, & King, 1993; Grossman, 1990; Shulman,1986, 1987; Bereiter & Scardamalia, 1993; Wheeler & Feghali, 1983; Diem, 1982; Gore, 1987; Weinstein, 1989).

The use of technology in an appropriate manner can enhance the learning process. Technology can play a vital role in helping students meet higher standards and perform at increased levels by promoting alternative, innovative approaches to

teaching and learning. Teachers should have the latest knowledge of educational technology and they need to be able to apply ICT in their work. Thus, teacher education curricula and programs should give students opportunities to learn how to use ICT. In this subject the results showed that older teachers have problems more than novices. This result supported by previous findings like (Margerum-Leys, 2004; Driel et al, 1998; Lundeberg, Zeon, Brown, Ingebrand, & Bieging, 2001; Margerum-Leys & Marx, 2000; Allen, 2001; Davidson et al, 2000; Dwyer, 1994; NECS, 2002; McNabb, Hawkes, & Rouk, 1999; Nevens et al, 2001; U.S. Department of Education Study, 2003; Brennan, 2000).

Assessment is an important element in the teaching and learning process that challenges instructors to consider evaluation techniques that meet the learning needs of today's learners. Teacher education programs should emphasize to this element. See to findings by (Airasian, 1994; Carey, 1994; O'Sullivan & Chalnick, 1991; Schafer, 1991; Stiggins, 1992, 1997; Boston, 2002; Rolheiser & Ross, 2000);

Teacher should be familiar with their rights and duties or responsibilities and teacher training programs should provide facilities of this familiar. The results of (Whitehead, 2002; Mathew, 2005; Alexander & Alexander, 1998; Lehr, 2003) support this research finding.

The important finding of Study 2 dealing with the different orientations to professional development and the role of practical skill and theoretical knowledge is widely studied in different research traditions. Perhaps the most effective preparation programs will be those that balance attention to developing pedagogical classroom skills and analytic skills [deliberate]. Hiebert et al (2007), emphasize the analytic skills, not only because they have received less attention but also because they believe the core of teaching - interacting with students about the content - is not learned well through automatizing routines or even through acquiring expert strategies during a teacher preparation program. Rather, it is learned through continual and systematic analysis of teaching. A consequence of focusing on analytic skills is that the center of teaching expertise shifts from on-the-fly performance in the classroom to preparation and reflection outside the classroom. Hiebert et al, proposed a framework consists of four skills: (a) specifying the learning goals for the instructional episode (What are students supposed to learn?); (b) conducting empirical observations of teaching and learning (What did students learn?); (c) constructing hypotheses about the effects of teaching on students' learning (How did teaching help [or not] students learn?); and (d) using analysis to propose improvements in teaching (How could teaching more effectively help students

learn?). These four skills are drawn from the daily routines of ordinary classroom teachers as they plan, implement, and reflect on classroom lessons (see also; Osterman & Kottkamp, 2004; Cruickshank & Applegate, 1980; Van Es & Sherin, 2002).

Hiebert et al (2007, pp. 56-58) reasons for selecting these skills were: first, the skills are drawn from the (implicit) practice of classroom teachers. This gives the skills a kind of face validity and, in addition, suggests the skills might be sustainable, in some form, as part of teachers' daily and weekly practice. A second reason for selecting these skills is their similarity to the components of disciplined inquiry. This similarity indicates that teachers who apply these skills will be engaged in a disciplined inquiry into teaching - the precise goal of the framework. It offers teachers the opportunity to accumulate knowledge for improving their own teaching (and that of others) over time. These kinds of research-oriented teaching skills, that enable teachers to participate in the process of gathering knowledge to inform their practice, can engender a healthy and productive professional identity (Franke, Carpenter, Fennema, Ansell, & Behrend, 1998; Malara & Zan, 2002). A third reason for selecting the four skills is that they create a framework that allows space for the influence of subject matter knowledge. Subject matter knowledge clearly influences how and how well teachers teach (Borko et al., 1992; Borko, Livingston, McCaleb, & Mauro, 1988; Carlsen, 1993, 1997; Hill et al, 2005; Leinhardt & Greeno, 1986; Stein et al, 1990; Stodolsky, 1988); however, the mechanisms through which such knowledge enters teachers' thinking and practice are not well understood. The framework they propose identifies sites where subject matter knowledge could influence teachers' work, especially as they prepare to implement and then reflect on classroom lessons.

A fourth reason for selecting these skills is that preliminary data suggest that they work; that is, applying skills like those we describe leads to improvements in teaching over time. Goldenberg, Saunders, and Gallimore (2004) and Saunders and Goldenberg (in press) reported considerable success with school wide efforts to improve students' learning that emphasize teachers' analysis of practice. In the weekly teacher meetings that occurred in these schools, teachers set learning goals for students, brought student work to examine, and used the findings of their analysis to revise classroom teaching. A fifth reason for choosing this framework lies in its potential for helping teachers move toward more equitable instruction. With its focus on student thinking and on collecting concrete evidence of students' achievement of the learning goals, the framework encourages teachers to make

instructional decisions based on each student's learning rather than on their (sometimes biased) perceptions and expectations. Collecting revealing evidence of students' thinking is facilitated by knowing one's students, knowing what ideas they bring to the classroom, and appreciating why individual students might differ in their thinking. Using students' thinking to revise instruction places teachers in a better position to help each student achieve the learning goals. A final reason why this framework has promise is that the four skills can be applied to improve learning with respect to all types of learning goals. During their teaching careers, prospective teachers are likely to be asked to help their students achieve a variety of learning goals.

6.2 Recommendations for Implementations of the Findings

The results indicate that students' and graduates' ratings about the teacher education programs are surprisingly similar. This emphasizes the importance and usefulness of course evaluations submitted by students. It seems that students do not only evaluate teaching on the basis of their current preferences, but they are able to relate the evaluations to the future challenges of the teaching profession.

On the other hand the results show that there are important differences in results when different evaluation instruments are used. Structured likert-scales seem to lead to generally positive ratings whereas open-ended questions result in more diverse and more critical evaluations. It is important that teacher education programs are not only evaluated by using structured questionnaires, but it is important to collect more qualitative evaluations by using open-ended questions as well.

The results also show that the insufficient integration of theoretical knowledge and practical skills is still an important issue in teacher education programs. The mere increase of practical courses and practicing periods is not a relevant solution to this problem. According to the results there are differences in teachers' orientations to work and professional development. Teacher education programs should support students in developing more dynamic ideas of teacher expertise which is based on continuous deliberate practice. Practical skills are needed already during the pre-service teacher education but these skills should not be learned independently from a more general conceptual understanding which creates opportunities for critical reflection and continuous development.

6.3 Assumptions and Limitations

Due to the nature of the investigation and questionnaire, the following assumptions are basic for this study:

1. The subjects of this study have answered the questions as accurately and honestly as possible.
2. Subjects have interpreted each question in the same way.
3. Response rate was not very high but satisfactory.

One of limitation was that the researcher was not able to carry out a real follow-up or longitudinal study but instead used a repeated cross sectional study with separate cohorts. Because of that it was not possible to control the initial differences of the different groups.

This study was limited to the masters' degree class teacher education students in their 4th year and 2000-2004's graduates and all teachers who have graduated Turku Faculty of Education and now work in the few basic schools in South-West Finland.

However, the researcher was eager to extend the scope of this study, but was constrained by financial restrictions. In the course of carrying out this research, efforts were made to make my opinions clear and rely on multiple methods (e.g. observation) of information gathering, but questionnaires were the major source of my data gathering. The researcher also was eager to know employers' or principals' opinions of the graduates' functions.

6.4 Some Further Research Ideas

The findings indicated that the majority of the students and graduates were satisfied with their training and preparation they received during their study time at the Departments of Teacher Education (in Turku and Rauma) at the Faculty of Education, University of Turku. This satisfaction might be due to any one or a combination of several variables. Therefore, the following recommendations were made for further studies:

1. Future studies should make use of observation instruments in the classrooms of graduates.
2. Future studies should be conducted every year in order to determine the importance, effectiveness and quality of the teacher education programs.
3. In the future, studies should make use of the employers'/managers' perceptions of the graduates' preparation for instructional activities.

References

Airasian, P. W. (1994). Classroom assessment, New York: McGraw-Hill.

Aldridge, J., & et al. (2003). Monitoring the success of an outcomes-based, technology-rich learning environment, Paper presented at the annual meeting of the American Educational Research Association, April, Chicago, IL.

Aleamoni, L. M. (1981). Student ratings of instruction, in: J. MILLMAN (Ed.) Handbook of Teacher Evaluation, pp. 110-145 (Beverly Hills, Sage).

Aleamoni, L. M. & Hexner, P. Z. (1980). A review of the research on student evaluation and a report on the effect of different sets of instructions on student course and instructor evaluation, Instructional Science, 9, pp. 67-84.

Alexander, K., and Alexander, M. (1998). Teacher rights and freedoms. American Public School Law (4th ed., pp. 632-645). Belmont, CA: Wadsworth. Educational Organization and Leadership 350: Legal and Professional Issues for Teachers. Dr. Arthur Lehr. Fall 2003. Class Notes

Allen, R. (2001). Technology and learning: How schools map routes to technology's Promised Land. ASCD Curriculum Update, 1-3, 6-8.

Allen, M. (2003). Eight questions on teacher preparation: What does the research say? A summary of the findings, Denver, CO: Education Commission of the States.

American Philosophical Association, (1990).Critical thinking: A statement of expert consensus for educational of assessment and instruction, The Delphi Report: research finding and recommendations prepared for the committee on pre-college philosophy. (ERIC Document Reproduction Service No, ED 315-423).

Amthor, G. (1991). Interactive Multimedia in Education: Concepts and Technology, Trends, and Model Applications, Mega media and Knowledge Systems. T.H.E. Journal, Special Issue: IBM Multimedia, pp. 2-11, September.

Amundson, K. (1991). Teaching values and ethics: Problems and solutions. American Association of School Administrators

Anastasi, A. (1988). Psychological Testing, New York, NY: Macmillan.

Anderson, Laurance, E. (1997).Public Speaking Opportunities for Elementary School Students. Paper presented at the Annual Conference of the Association for Supervision and Curriculum Development, Baltimore, MD. [ED409590).

Angell, V. (1997). Teachers as Researchers, As revised from The New Mexico Journal of Reading, XVIII, 1.
http://www.suu.edu/faculty/angell/comprehension/teacher.researchers.htm

Angelo, T. (1993). A "teacher's dozen". AAHE Bulletin, April 3-13. Retrieved October 20, 2004. http://www.csuchico.edu/~lseder/ceeoc/teachers_dozen.pdf

Apple, M. (1982). Curriculum Form and the Logic of Technical Control: building the possessive individual, in M. Apple (Ed.) Cultural and Economic Reproductions in Education: essays on class, ideology and the state. London: Routledge & Kegan Paul.

Archbald, D. A., and Newmann, F. M. (1988). Beyond Standardized Testing: Assessing Authentic Achievement in Secondary School. Madison: National Center on Effective Secondary Schools, University of Wisconsin, and Washington, DC: National Association of Secondary School Principals. (ERIC Document Reproduction Service No, ED 301 587)

Armstrong, Sandra. Rentz, Tina. (2002). Improving Listening Skills and Motivation, Master of Arts Action Research Project, Saint Xavier University and Skylight Professional Development Field- Based Master's Program, Chicago, IL. (ED468085).

Ashton, P. (1988). Teaching higher-order thinking and content: An essential ingredient in teacher preparation. Gainesville, FL: University of Florida.

Ashton, P. (1988). Teaching higher-order thinking and content: An essential ingredient in teacher preparation. Gainesville, FL: University of Florida. P. 2.

Astin, A. W. (1993). What matters in college: Four critical years revisited. San Francisco: Jossey -Bass.

Ayres, J. B. (1989). Follow-up Studies: Providing the Thrust for Program Improvement, Paper presented at the Annual Meeting of the American Educational research Association, San Francisco: CA.

Ayres, J.M. (1989). Comparative Feeding Ecology of the Uakari and Bearded Saki, Cacajao and Chiropotes. Journal of Human Evolution,Vol. 18(7), 697-716

Bacsich, P and Ash, C (2000). Costing the lifecycle of networked learning: documenting the costs from conception to evaluation, Association of Learning Technology Journal, 8, 1, 92–102

Bak, D. & Hansen, A. Dyrgaard. (1999). Partnership and Cooperation at Ribe Statsseminarium – An Insight, TNTEE Journal, Volume 1, Nr 1 http://tntee.umu.se/publications/journals/v1n1/06Denmark.pdf

Baker, E. L., Freeman, M., & Clayton, S. (1991). Cognitively sensitive assessment of subject matter: Understanding the marriage of psychological theory and educational policy in achievement testing, In M. C. Wittrock & E. L. Baker (Eds.), Testing and cognition (pp. 131-153), New York: Prentice-Hall.

Ball, D. L. (1989). Teaching mathematics for understanding: What do teachers need to know about the subject matter? In Competing visions of teacher knowledge: Proceedings from an NCRTE seminar for education policymakers: February 24-26, 1989: Vol. 1: Academic subjects. (Conference Series 89-1, pp. 79-100), East Lansing: Michigan State University, National Center for Research on Teacher Education.

Ballou, D. (1996). "Do Public Schools Hire the Best Applicants?" The Quarterly Journal of Economics February: 97–133.

Barr, Lori. Dittmar, Maureen. Roberts, Emily. Sheraden, Marie. (2002). Enhancing Student Achievement through the Improvement of Listening Skills, Master of Arts Action Research Project, Saint Xavier University and Skylight Professional Development Field-Based Master's Program, Chicago, IL. (ED465999).

Barr, Robert B. and John, T. (1995). From Teaching to Learning: A New Paradigm for Undergraduate Education, Change, Nov-Dec, pp. 13-25.

Bartolome, L. (1994). Beyond the methods fetish: Toward a humanizing pedagogy. Harvard Educational Review, 64/2, 173-194.

Baylis, B. (1997). 1996 Report on the CCCU Alumni: 1994 Graduates of CCCU Institutions. http://www.cccu.org/doclib/20020326_summary.doc

Bean, J. P. & Bradely, R. K. (1986).Untangling the satisfaction-performance relationship for college students, Journal of Higher Education, 57(4), 393-412.

Bean, J. P. & Vesper, N. (1994). Gender differences in college student satisfaction, Paper presented at the annual meeting of the Association for the Study of Higher Education, Tucson, AZ.

Beach, W. (1991). Ethical education in our public schools: crisis and opportunity, The Clearing House. 61(4), 313-315.

Becker, B. & et al. (1979). Behavior Theory in the Nursery School: Problem Solving and Teacher Training, International Review of Education, Vol. 25, No. 4 (1979), pp. 501-515

Beck, DE. (2000). Performance based assessment: using preestablished criteria and continuous feedback to enhance a student's ability to perform practice tasks. J Pharm Pract.13: 347-64.

Becker, Gary H. (1992). Copyright: A Guide to Information and Resources. Lake Mary, FL: Gary Becker.

Beech, J. P., Kazanas, H. C., Sapko, J. Jr., Sisson, K. A. & List, R. (1978). Necessary Work values, habits, and attitudes: A final report. (Report No. 1368), Jefferson City, MO: Missouri State Department of Education.

Beith, M. (1965). Education as a Discipline: A Study of the Role Models in Thinking. Allyn and Bacon, Boston, Massachusetts, p. 317.

Bell, Valerie, D. (1999). The influence of teacher educators' perspectives on the role of teachers in the students' experience, ED 433 338

Bennett, R. E., and Sebrechts, M. M. (1996). "The Accuracy of Expert-System Diagnoses of Mathematical Problem Solutions", Applied Measurement in Education, 9(2), 133-150

Bereiter, C. and Scardamalia, M. (1993). Surpassing ourselves Open Court, Chicago, IL.

Best, John W. (1989). Research in education. Englewood Cliffs, N.J.: Prentice-Hall.

Bernauer, J. A., (1995). Integrating technology into the curriculum: First year evaluation, Paper presented at the annual meeting of the American Educational Research Association (AERA), San Francisco, CA, (ED 385–224).

Berryman, S. (1991). Summary of the cognitive science research and its implications for education--designing effective learning environments, Solutions. Washington, D.C.: National Council on Vocational Education.

Bestor, A. E (1955). The Restoration of Learning: A Program for Redeeming the Unfulfilled Promise of American Education. Knopf, New York.

Betts, Julian and D. Morell (1999) "The Determinants of Undergraduate Grade Point Average: The Relative Importance of Family Background, High School Resources, and Peer Group Effects", Journal of Human Resources; 34(2), Spring: 268-93

Beyer, B. K. (1985). "Critical Thinking: What Is It?" Social Education, 49/4, PP. 270-276.

Beyer, L. E. (1984). Field experience, ideology and the development of critical reflectivity. Journal of Teacher Education , 35(3), 36-41.

Bickerton, L. & et al. (May 2001). The Report of 2000 Survey of Recent Graduates of British Columbia Teacher Education Programs, http://www.bcct.ca/documents/survey00.pdf

Bickert0n, L & et al. (2004). 2003 BCCT survey of recent graduates of British Colombia Teacher education Programs. http://www.bcct.ca/documents/rpt_survey_may04.pdf

Bicknell-Holmes, T. & Hoffman, P. S. (2000). Elicit, engage, experience, explore: Discovery learning in library instruction, Reference Services Review. 28(4), 313-322.

Birdwhistell, R. L. (1970). Kinesics and Context: Essays on Body Motion Communication. Philadelphia, University of Pennsylvania Press.

BGSU Office of Institutional Research (July, 2002). Report of the Results of the BGSU graduating Senior Questionnaire, Bowling Green State University, http://www.bgsu.edu/offices/ir/studies/studies.htm

Black, P., Harrison, C., Lee, C., Marshall, B. & Wiliam, D. (2004). Working inside the black box: Assessment for learning in the classroom, Phi Delta Kappan. 86 (1), 13-22.

Blakely, R. J. (1979). To serve the public interest: Educational broadcasting in the United States. Syracuse, NY: Syracuse University Press.

Blok, H., Oostdam, R., Otter, M. E., & Overmaat, M. (2002). Computer-assisted instruction in support of beginning reading instruction: A review. Review of Educational Research, 72, 101-130.

Boardman, K. (1994, October 9). Labor task force working to improve work force in Athens, Athens Banner-Herald, p. 6D

Board, D. (2007). Information & Communication Technology. http://www.developingteachers.com/articles_tchtraining/ict3_darron.htm

Bober, M. J. (2003). Using technology to spark reform in pre-service education, Retrieved August 31, 2004. http://www.citejournal.org/vol3/iss2/currentpractice/article1.cfm

Bonwell, C. C. (1998). Active Learning: Energizing the Classroom. Green Mountain Falls, CO: Active Learning Workshops.

Borg, Wolter R. & Gall, Meredith D. (1989) Educational Research, New York. Long man, Inc. Sec. ED

Boston, C. (2002). The concept of formative assessment, Practical Assessment, Research & Evaluation, Retrieved March 23, 2005 from http://PAREonline.net/getvn.asp?v=8&n=9

Bower, B. L. (1998). Instructional computer use in the community college: A discussion of the research and its implications. Journal of Applied Research in the Community College, 6(1), 59-66.

Brace, N; and et al. (2003). SPSS for psychologists: a guide to data analysis using SPSS for Windows (Versions 9, 10 and 11).Second Edition. London: Macmillan.

Braskamp, L. A., & Ory, J. C. (1994). Assessing faculty work: Enhancing Individual and Institutional Performance. San Francisco: Jossey-Bass Publishers.

Braun, C. (1986). Facilitating Connecting Links between Reading and Writing, ERIC Clearinghouse: United states Department of Education

Breland, H. M., Camp, R., Jones, R. J., Morris, M. M., & Rock, D. A. (1987). Assessing writing skill (Research Monograph NO 11), New York: College Entrance Examination Board

Brennan, R. L. (1983). Elements of Generalizability theory, Iowa City, IA: American College Testing Program.

Brian, Nichols J. & et al. (2004). Program Review Department of Teacher Education Texas Baptist University, http://www.etbu.edu/nr/etbu/reviews/pr_2004_teacher%20education.pdf

British Columbia College of Teachers. (2004). Standards for the education, Second edition, PP. 1-23

British Columbia Teacher education. (2001). 2000 BCCT survey of recent graduates of British Colombia Teacher education Programs. http://www.bcct.ca/documents/survey00.pdf

Brkker. D. (1993). Character and moral reasoning: An Aristotelian perspective, In K. Strike and L. Ternasky (Eds.). Ethics for professional in education: Perspectives for preparation and practice, (PP. 13-26). New York: Teachers College Press.

Brookhart, S. M. (2003). Developing measurement theory for classroom assessment purposes and uses, Educational Measurement: Issues and Practice, 22 (4), 5-12.

Browne, C. (2006). 2005 HEDS Alumni Survey Class of 2000, Institutional Research Office. http://www.macalester.edu/ir/surveys/alum05rpt.pdf

Brown, J. S., Collins, A., & Duguid, P. (1989). Situated cognition and the culture of learning. Educational Researcher, 18, 32-42.

Brown. J., Collins, A, & Duguid, P. (1989). Situated cognition and the culture of learning, Educational Researcher, 18(1), 32-42,

Brown, S. and et al. (1996) Assessment is a multi-faceted process that has several aims.

Brown, S., Race, P and Smith, B. (1996) 500 Tips on Assessment, London, Kogan Page

Brown, A. L., & Palinscar, A.-M. (1989) Guided cooperative learning and individual knowledge acquisition. In L. B. Resnick (Ed.), Knowing, learning, and instruction: essays in honor of Robert Glaser (pp. 393-454). Hillsdale, N.J.: Erlbaum Associates.

Brubacher, J. W., Case, C. W., & Reagan, T. G. (1994). Becoming a reflective educator: How to build a culture of inquiry in the schools, Thousand Oaks, CA: Corwin Press, Sage Publications.

Brusling, C. (2005). Professional ethics in teacher education: students' expectations and experiences. Centre for the Study of Professions. Oslo University College

Bryant, G. D. (2001). Student-related management concerns, In B. J. Brown (Ed.) Management of the business classroom (pp. 141-153) National Business Education Yearbook, No. 39. Reston, VA: National Business Education Association.

Buchberger, I. & et al. (2003). Program Solving Capacity of a Teacher Education System as Condition of Success: An Analysis of the Finnish Case. http://www.oecd.org/dataoecd/43/15/5328720.pdf#search=%22%22TEACHER%20EDUCATION%20DEVELOPMENT%20PROGRAMME%22%22

Bullock, A., Stallybrass, O. & Trombley, S. (Eds) (1988). The Fontana Dictionary of Modern Thought, London: Fontana Press.

Bush, G. W. (2001). No child left behind. Bush's K-12 Educational Plan. Washington, D. C.: Department of Education. PP. 12-23.

Byrnes, Deborah A. (2003). Evaluating the use of group interviews to select students into teacher-education programs. Journal of Teacher Education, 01-Mar 2003, PP. 163-171

Calderhead, J. (1984). Teachers' classroom decision-making. London: Cassell.

Calderhead, J. (1987). The quality of reflection in student teachers' professional learning. European Journal of Teacher Education, 10, 269-278.

Calfee, R. C., & Masuda, W. V. (1997). Classroom assessment as inquiry: In G. D. Phye (Ed.) Handbook of classroom assessment: Learning, adjustment, and achievement. NY: Academic Press.

Campbell, E. (1996a). The moral core professionalism as a teachable ideal and a matter of Character: Curriculum Inquiry, 26(1), 71-80.

Campbell, E. (1996b). Ethical implications or collegial loyalty as one view of teacher professionalism, Teachers and Teaching: Theory and Practice, 2(2), 191-208

Campbell, E. (1997a). Ethical School Leadership: Problems of an elusive role. Journal of School Leadership, 7(3), 287-300.

Campbell, E. (1997b). Connecting the ethics of teaching and moral education, Journal of Teacher Education, 48(4), 255-263.

Campbell, E. (2000b). Professional ethics in Teaching: Towards to development of a code of practice. Cambridge Journal of Education, 32(2), 203-221.

Cannell, J.J. (1987). Nationally normed elementary achievement testing of America's public schools: How all 50 states are above the national average? Daniels, WV: Friends for Education.

Cannell, J. J. (1988). Nationally normed elementary achievement testing in America's public schools: How all 50 states are above the National average? Educational Measurement: Issues and Practice, 1(2), 5-9.

Cantrell. (Unknown). Using a Variety of Teaching Methods and Strategies, OSU Extension, School of Natural Resources, http://faculty.ncwc.edu/mbrooks/202%20Online%20Section/Week4/Variety%20of%20Teaching%20Methods.htm

Carabajal, K. (1999). TVI Alumni Study Summer 1999: Institutional Planning and Research, http://planet.tvi.cc/ipr/surveys/PDFs/Alumni%20Survey1999.pdf

Carbonell, L. (2004). Instructional Development Timeline, Retrieved August 31, 2004. http://www.my-ecoach.com/idtimeline/indexlist.html

Carey, L. M. (1994). Measuring and evaluating school learning. Boston: Allyn and Bacon.

Carey, S. (1986). "Cognitive Science and Science Education." American Psychologist, 41, p 1123-1130.

Carnine, D. (2000). Why education experts resist effective practices (and what it would take to make education more like medicine). Thomas, B. Fordham Foundation report of April 2000

Carpenter, T., Fennema, E., Peterson, P., and Carey, D. (1989). Teachers' pedagogical content knowledge of students' problem solving in elementary arithmetic, Journal for Research in Mathematics Education, 19, 385-401.

Cattangi, A., & Farris, E. (2001). Internet access in U.S. public schools and classrooms: 1994-2000 (NCES Statistics in Brief). Washington, DC: National Center for Education Statistics. Retrieved November 6, 2003, http://nces.ed.gov.pubs2001/2001071.pdf

CDC Ad hoc Committee on Holistic Review of the Mathematics Curriculum (2000). Report on Holistic Review of the Mathematics Curriculum. Hong Kong: Printing Department, P.34 Para. 5.30.

Centra, J. A. (1993). Reflective faculty evaluation (San Francisco, Jossey-Bass).

Cobb, Casey D. and et all (2005). Verbal ability and teacher effectiveness. Journal of Teacher Education, 01-SEP-05. http://goliath.ecnext.com/coms2/gi_0199-4692395/Verbal-ability-and-teacher-effectiveness.html

Centra, J. A. (1979) Determining Faculty Effectiveness (San Francisco, Jossey-Bass).

Centra, J. A. (1977). Student ratings of instruction and their relationship to student learning, American Educational Research Journal, 14, pp. 17-24.

Centra, J. A. (1974). The relationship between student and alumni ratings of teachers, Educational and Psychological Measurement, 34, pp. 321-326.

Chaffee, J. (1988). Thinking critically. Boston, MA, Houghton Mifflin. Cheak, M., J. (1999). The development and field testing of an instrument designed to measure.

Chalmers RK, Grotpeter JJ, Hollenbeck RG, et al. (1992).Ability-based outcome goals for the professional curriculum: a report of the focus group on liberalization of the professional curriculum. Am J Pharm Educ.56:304-9

Chambers DW, Glassman P. (1997). A primer on competency-based evaluation, J Dent Educ. 61:651-66.

Cherrington, D. J. (1980). The work ethic: Working values and values that work. New York: AMACOM.

Chi, M. T. H., Glaser, R., & Farr, M. (1988), The nature of expertise. Hillsdale, NJ: Erlbaum.

Chickering, A. W, & Ehrmann, S.C. (1996). Implementing the seven principles: Technology as lever, AAHE Bulletin, 49(2), 3-6.

Cizek, G. J. (1997). Learning, achievement, and assessment: Constructs at a crossroads. In G. D. Phye (Ed.) Handbook of classroom assessment: Learning, adjustment, and achievement. NY: Academic Press.

Chodorow, N. (1974).Family structure and feminine Personality, In M. Z. Rosaldo & L. Lamphere (Eds.). Woman, culture and society, Stanford CA: Stanford Press.

Christopher, P. (2004). What is Instructional Technology? - A personal reflection. Retrieved January 8, 2004, http://www.gsu.edu/~mstswh/courses/it7000/papers/whatis.htm

Church, F. (2001). Student and consumers: In the importance of student feedback in the quality assurance process. University of Derby, http://www.ukcle.ac.uk/lili/2001/church.html

Clark, C.M. and Peterson, P.L. (1986). Teachers' thought processes. In: M.C. Wittrock, Editor, Handbook of research on teaching (3rd ed.), Macmillan, New York pp. 255–296.

Clark, R. E. (1996). Media and learning, In T. Plomp & D. Ely (Eds.) International encyclopedia of educational technology (pp. 59-64), New York: Elsevier Science.

Clark, Thomas (1999). "Sharing the importance of attentive skills", Journal of Management Education, 23(2)

Clark, R. E. (1992). Media use in education, In M. C. Alkin (Ed.), Encyclopedia of Educational Research (pp 805-814) New York: Macmillan.

Clotfelter, Charles T. and et al. (2004).Teacher Sorting, Teacher shopping, and the Assessment of Teacher Effectiveness. http://trinity.aas.duke.edu/~jvigdor/tsaer5.pdf

Cobb, J. (2000). The impact of a professional development school on pr-eservice teacher preparation, in-service teachers' professionalism, and children's achievement: Perceptions of in-service teachers. Action in Teacher Education, 22, 64-76.

Cochran, K. F. (1993). Pedagogical Content Knowing: An Integrative Model for Teacher Preparation. Journal of Teacher Education, 44(4), 263-272.

Cochran, K. F., King, R. A., & DeRuiter, J. A. (1991). Pedagogical Content Knowledge: A Tentative Model for Teacher Preparation . East Lansing, MI: National Center for Research on Teacher Learning. (ERIC Document Reproduction Service No. ED340683)

Cockburn, A. (2002). Agile Software Development, Reading, MA: Addison Wesley Longman, Inc.

Code of fair testing practices in education (1988). Washington, DC: Joint Committee on Testing Practices (American Psychological Association). Available http://ericae.net/code.htm

Code of professional responsibilities in educational measurement (1995). Washington, DC: National Council on Measurement in Education. http://www.unl.edu/buros/article2.html

Cohen, J. (1977). Statistical Power Analysis for the Behavioral Sciences, (rev. ed.) Orlando, Fla.: Academic Press.

Cohen, P. A. (1981). Student ratings of instruction and student achievement: A meta-analysis of multi section validity studies, Review of Educational Research, 51, pp. 281-309.

Cohen, P. A. (1980). Using student ratings feedback for improving college instruction: A meta-analysis of findings, Research in Higher Education, 13, pp. 321-341.

Collins, A., Brown, J. S., & Newman, S. (1989). Cognitive Apprenticeship: Teaching the Crafts of Reading, Writing, and Mathematics. In Resnick, L. B. (ed.), Knowing, Learning, and Instruction: Essays in honor of Robert Glaser. Hillsdale, NJ: Lawrence Erlbaum Associates, Inc, pp. 453-494.

Colnerud, G. (1997). Ethical conflicts in teaching, Teaching and Teacher Education, 13(6), 627-635

Colson, C. W. & Eckerd, J. M. (1991). Why America doesn't work. Dallas: Word.

Collins, A., Hawkins, J., & Frederiksen, J. (1990, April). Technology-based performance assessments, Paper presented at the annual meeting of the American Educational Research Association, Boston.

Combs, H. Jurgen (1997). Goals and objectives, http://www.su.edu/faculty/jcombs/object/

Conant, J. (1963). The education of American teachers, New York: McGraw-Hill.

CPCC Department of Planning & Research, (Sept.2001). Follow-Up Survey of 1999-2000 CPCC Graduates, http://inside.cpcc.edu/ie/Word/grad9900.doc

Copeland, W. D. (1981). Clinical experiences in the education of teachers. Journal of Education for Teaching. 7, 3-17.

Corcoran, T. (1995). Helping teachers teach well: Transforming professional development (CPRE Policy Brief). New Brunswick, NJ: Consortium for Policy Research in Education. Retrieved November 11, 2003.

Corder, J.B. (1992). The association among critical thinking, clinical decision-making and selected demographic characteristic of generic baccalaureate nursing students, The University of Alabama

Cortes, C.E. (1981). The societal curriculum: Implications for multiethnic educations. In Banks, J.A (ed.) Educations in the 80's: Multiethnic education. National Education Association

Costa, A. (1985). Developing Minds: A Resource Book for Teaching Thinking. Association for Curriculum and Supervision, Arlington, VA, ED 262 968

Costa, A. (ed). Developing Minds: A Resource Book for Teaching Thinking. Association for Curriculum and Supervision, Arlington, VA, 1985. ED 262 968.

Craddock, James N. (1997). What Scientific and Technical Communication Is? http://civil.engr.siu.edu/intro/lectures/techcom/index.htm

Cradler, J. (April 2003). Technology's impact on teaching and learning, Learning and Leading with Technology, 30, 54-57

Craig, C. (2002 & 2003). A Study of SMSU Teacher Education Graduates 2001-2002. College of Education. Southwest Missouri State University

Crehan, K. D. (1997). "An Investigation of the Validity of Locally Developed Performance Measures in a School Assessment Program", Paper presented at the annual meeting of the National Council on Measurement in Education, Chicago, IL. (ERIC Document Reproduction Service No, ED 410 275)

Cronbach, L. J., Gleser, G. C., Nanda, H., & Rajaratnam, N. (1972). The dependability of behavioral measurements, New York: Wiley.

Cronbach, L. J. (1951). Coefficient alpha and internal structure of testes, Psychometrical, 16(2), PP. 297 – 334

Cruickshank, D. and Metcalf, K. (1993). Improving pre-service teacher assessment through on-campus laboratory experiences, Theory into Practice, 32 (2), 86-92

Cruickshank, D., & Applegate, J. (1980). Reflective teaching as a strategy for teacher growth. Educational Leadership, 38, 553-554.

Cuban, Larry, Kirkpatrick, Heather, and Craig Peck. (Winter 2001). "High Access and Low Use of Technologies in High School Classrooms: Explaining an Apparent Paradox." American Education Research Journal

Cuban, L. (1986). Teachers and machines: The classroom use of technology since 1920. New York: Teachers College Press.

Curtis R. Finch. (1998). Vocational Teacher Education in an Era of Change: The United States Experience. Australian Journal of Teacher Education. Vol. 23. PP. 42-46 http://ajte.education.ecu.edu.au/ISSUES/PDF/232/Finch.pdf

Custer, R. L. & Claiborne, D. M. (1992). Critical skill clusters for vocational education. Journal of Vocational Education Research, 17(4), 15-40

Dale, E. (1969). Audiovisual methods in teaching, Hinsdale, IL: Dryden Press.

Dalldorf, Jennifer A. (2003). Results of a Satisfaction Survey of Graduates of the Master of Science in Speech Language Pathology. Nova Southeastern University. http://www.nova.edu/rpga/reports/forms/2003/03-03f.pdf

Darling-Hammond, L. (2000). How Teacher Education Matters. Journal of Teacher Education, 51, 166.

Darling-Hammond, L. and A. Wise (1985). Beyond standardization: state standards and school improvement. Elementary School Journal, 85, 315-36

Darling-Hammond, L. (1997). The Right to Learn: A Blueprint for Creating Schools that Work. San Francisco: Jossey-Bass, 1977, p. 294-7.

Davison, L. J., Burr, D., Eberlein, J., Fuchs, D. J., Saucedo, L., Steffen, B. H. (May 2000). Building a technology foundation for future teachers", TechTrends, 44 (4)

Dede, C. (1997). Rethinking how to invest in technology, Educational Leadership, 55(3), 1, 2–16

Delaney, A.M. (1995). Promoting responsive teacher education through effective follow-up studies, (ERIC Document Reproduction Service No. 388 659)

Retta E. Poe. And Dennis, K. George. (2006). Evaluating Program Effectiveness Using Student Assessment Data: Basic Steps for Beginners. SACS COC Annual Meeting, Orlando, FL. P. 46.

Department of Education. (2000). E-learning: Putting a world-class education at the fingertips of all children. The national educational plan, Washington, D. C.: Department of Education (ERIC. ED 410 226)

Department of Education Teacher. (2001). Department of Education Teacher Preparation Program Alumni Survey 2001, http://gspp.gallaudet.edu/NCATE/deptedalumnisurv.PDF

De Vaus, D. A. (2002).Surveys in Social Research (5th Ed).London: Rutledge

DeVoss, G. & Hawk, D. (1983). Follow-Up Models in Teacher Education. Educational Evaluation and Policy Analysis, Vol. 5, No. 2, pp. 163-171

Dewey, J. (1997). Democracy and education, New York: Simon and Schuster. (Original work published 1916).

Dewey, J. (1933). How we think. Boston: D. C. Heath.

Dewey, J. (1902). The Social and Society, Chicago: University of Chicago Press.

De - Wolf, V. A. (1980). Early career experiences of doctorates as a function of degree field and gender. ERIC, No. ED 197755

Dexter, S. (2003). Why improving preservice teacher educational technology preparation must go beyond the college's walls. Journal of Teacher Education,01-Sep 2003.

Diamond, R. (August 1997). Curriculum reform needed if students are to master core skills. The Chronicle of Higher Education, B7

Diem, R. A. (1982). Measurements of social studies content knowledge in pre-service elementary education majors. Journal of Social Studies Research, 6 (1), 8-12.

Diez, M. E. (Ed.). (1998). Changing the practice of teacher education: Standards and assessment as a lever for change. Washington DC: American Association of Colleges for Teacher Education.

DIIA. (2005). Best Practices for using Instructional Technology

Dobbs, L., Driver, H., Foreman, H. & Heyman, A. (2003) Young People's Attitudes to Education in the North East of England, Newcastle upon Tyne, Centre for Public Policy, North Umbria University.
http://www.utexas.edu/academic/diia/assessment/iar/resources/best_practices/index.php

Doddington, Christine. (2001). Entitled to Speak: Talk in the Classroom, Studies in Philosophy and Education, 20(3), pp 267.74. (EJ631408)

Dodge, Ellen P. and Mallard, A.R. (1992). Social skills training using a collaborative service delivery model, Language, Speech, and Hearing Services in Schools, 23, Pp. 130-135.

Doll, Ronald. C. (1996). Curriculum Improvement: Decision Making and Process (9th edition). Boston: Allyn and Bacon.

Doll, W. E. (1993). A Postmodern Perspective on Curriculum, New York: Teachers College Press.

Donmoyer, R. (1996). The concept of knowledge base, In F. B. Murray (Ed.), Teacher educator's handbook: Building a knowledge base for the preparation of teachers (pp. 92-119). San Francisco: Jossey-Bass.

Donovan, G. (20001). A summary of a Follow-Up Study of the 2000 UMM Graduates, University of Minnesota, Morris.
http://www.mrs.umn.edu/services/career/surveys/UMM_Followup_Study_00.pdf

Doyle, W. (1986). "Classroom organisation and management" in M. Wittrock (Ed), Handbook of research on teaching (3rd ed.), Macmillan, New York.

Draugalis JR, Slack MK, Sauer KA, Haber SL, Vaillancourt RR. (2002). Creation and implementation of a learning outcomes document for a Doctor of Pharmacy curriculum, Am J Pharm Educ. 66:253-60

Dressel, P. L. & Mayhew, L. B. (1954). General Education: Exploration in education. Was Hinton, DC: American Council on Education

Drucker, P. F. (1974). Management Tasks, Responsibilities, Practices. New York: Harper & Row.

Drummond, D. (2002). "Accelerating Reinforcement Learning by Composing Solutions of Automatically Identified Subtasks", Volume 16, pages 59-104

Dumaresq, C. & et al. (2003). The Class of 1996 Five Years after Graduation: Comparing BC University Outcomes for Direct Entry and Transfer Students.
http://www.bccat.bc.ca/pubs/univoutcomes.pdf

Duncan, S.L.S. (1996). Cognitive apprenticeship in classroom instruction: Implications for industrial and technical teacher education. Journal of Industrial Teacher Education, 33 (3), 66-86.

Duran, Robert L. (1983). "Communication Adaptability: A Measure of Social Communication Competence". Communication Quarterly 31.4 Pp. 320-26.

Dwyer, D. (1994). Apple Classrooms of Tomorrow: What we've learned. Educational Leadership**,** Vol.51.

Ebel, R. L. (1962). Measurement and the teacher, Educational Leadership, 20, 20-24

Edman, L. (1996). Teaching teachers to teach thinking, The National Honors Report, 16, PP. 8-12

Education Commission of the States. (2000). In pursuit of quality teaching, Denver, CO: Author.

Education & Cultural Services Department, (2002). Planning Assessment Recording and Reporting in the Primary Curriculum

http://www.wirralmbc.gov.uk/management/assessment/Planning_Assessment_recording_primary/PARR.doc

Ehrenberg, R.G., and D.J. Brewer. (1995). "Did Teachers' Verbal Ability and Race Matter in the 1960s? Coleman Revisited." Economics of Education Review, 14(1): 1–21.

Ehrenberg, R.G., and D. Brewer. (1994). "Do School and Teacher Characteristics Matter? Evidence from High School and Beyond." Economics of Education Review, 13(1): 1–17.

Eisner, E.W. (1994). The educational imagination: On design and evaluation of school programs. (3rd. Ed) New York: Macmillan.

Elder, L. and Paul, R. (1994)."Critical Thinking: Why we must transform our teaching." Journal of Developmental Education, 18:1, 34-35.

El-Hindi, A. E. & Leu, D. J., Jr. (1998). Beyond classroom boundaries: Constructivist teaching with the Internet. Reading Teacher. 51(8), 694-700.

Ellsworth, J. (1999). Teacher as Organizer, http://jan.ucc.nau.edu/~jde7/ese502a/class/proactive/prevent/organizer.html

Ellsworth, J. (1999F). Teacher as Educational Facilitator, http://jan.ucc.nau.edu/~jde7/ese502a/class/proactive/prevent/facilitator.html

Ellsworth, J. (1999E). Teacher as Educational Evaluator, http://jan.ucc.nau.edu/~jde7/ese502a/class/proactive/prevent/evaluator.html

Ellsworth, J. (2001). Teacher as Educational Model, http://jan.ucc.nau.edu/~jde7/ese425/eco/optional/model.html

Ellsworth, Judith Z. (2002). Using Student Portfolios to Increase Reflective Practice among Elementary Teachers. Journal of Teacher Education, 53, 342.

Ellsworth, R.R. (2002). Leading with purpose: The new corporate realities, Stanford University Press, Stanford

Ennis, R. H. (1989). Critical thinking and subject specificity: Clarification and need research. Educational research. 18(3), 4-10.

Ennis, Robert. (1987). "A Taxonomy of Critical Thinking Dispositions and Abilities." In Joan Baron and Robert Sternberg (Eds.) Teaching Thinking Skills: Theory and Practice. W. H. Freeman, New York.

Ennis, R. (1987). A taxonomy of critical thinking dispositions and abilities. In Baron, J., and Sternberg. R. (Eds). Teaching thinking skills: Theory and practice. New York: W. H. Freeman.

Ennis, R. H. (1985). Goals for a critical thinking curriculum, In A.L. Costa (Ed.), Developing minds: A resource book for teaching thinking, New York: Association for supervision and curriculum development.

Ely, D.P. (2000). The field of educational technology: Update 2000. A dozen frequently asked questions. ERIC Digest Clearinghouse on Information and Technology document # EDO-IR-2000-01. PP. 1-4. http://ericit.org/digests/EDO-IR-2000-01.shtml

Ely, D. P. (Ed.) (1963). The changing role of the audiovisual process in education: A definition and a glossary of related terms. AV Communication Review. 11(1) 5-26.

Erdman, J. I. (1983). Assessing the purposes of early field experience programs. Journal of Teacher Education, 34(4), 27-31.

Ericsson, K.A. and Charness, N. (1994). Expert performance: Its structure and acquisition. American Psychologist, 49, pp. 725–747

Ericsson, K.A., Krampe, R.T. and Tesch-Römer, C. (1993). The role of deliberate practice in the acquisition of expert performance. Psychological Review, 100, 363-406

Eslami, Akbar. (2001). Analysis of a Graduate Follow up Study For Accreditation and Program Improvement. Elizabeth City State University. http://www.asee.org/conferences/international/proceedings/Eslami.pdf

Facione, P. A. (1990). Critical Thinking: A statement of expert consensus for purposes of educational assessment and instruction. Research findings and recommendations prepared for the committee on pre-college philosophy of the American philosophical association. Network, DE: American Philosophical Association.

Facione, P.A. & Facione, N. (1995). The disposition toward critical thinking, The journal of General Education, 44, PP. 25-50.

Falls, Horace L. (1999). Teachers' Self – Perceptions of Their Role as Generalist: A Study of the International Skills necessary for Effective Leadership and Counseling, Virginia Polytechnic Institute and State University http://scholar.lib.vt.edu/theses/available/etd-100899 144358/unrestricted/rockydone.pdf

Fardanesh, H. (2004). Instructional Technology and Its Exigency. Retrieved online June 1, 2004. http://www.usq.edu.au/electpub/e-jist/docs/old/vol3no3/article1/

Fardanesh, H. (2001). Instructional Technology. In A. M. Kardan (Ed.), Educational Sciences: their Nature and Domain, p 283-306. SAMT Publishing Company, Tehran, Iran.

Farr, R., & Griffin, M. (1973). Measurement gaps in teacher education. Journal of Research and Development in Education, 7(1), 19-28.

Farr, J. (1997). Becoming a balanced teacher: Idealist goals, realist expectations. English Journal, 86, (6), 106-109.

Fatt, J. P. T. (1998). "Nonverbal Communication and Business Success." Management Research News 21(4): 1-10.

Felder, B. D. Hollos, & Huston (1981). Reflection an evaluation of a teacher education program: The University Huston experience (ERIC, No. ED200519).

Felder, R.M., and R. Brent. (1994). Cooperative learning in technical courses: Procedures, pitfalls, and payoffs. ERIC Document Reproduction Service, ED 377038.

Felder, R.M., and R. Brent. (2001). Effective strategies for cooperative learning. Journal of Cooperation and Collaboration in College Teaching. 10(2): 63–69.

Feldman, K. A. (1989c). "Instructional Effectiveness of College Teachers as Judged by Teachers Themselves, Current and Former Students, Colleagues, Administrators and External (Neutral) Observers." Research in Higher Education, 30, 137–194.

Feldman, K. A. (1988). Effective college teaching from the students' and faculty's view: matched or mismatched priorities, Research in Higher Education, 28, pp. 291-344.

Feldman, K. A. (1976a). Grades and college students' evaluations of their courses and teachers, Research in Higher Education, 4, pp. 69-111.

Fennema, E. (1990). Teachers' beliefs and gender differences in mathematics. Fennema & Leder (eds), Mathematics and Gender, Columbia University, New York, pp. 169-187.

Ferguson, P. (1989). A Reflective Approach to the Methods Practicum. Journal of Teacher Education, 40, 36

Ferguson, R.F., and H. Ladd. (1996). "How and Why Money Matters: An Analysis of Alabama Schools." In H.F. Ladd, ed., Holding Schools Accountable: Performance-Based Reform in Education. Washington, DC: Brookings Institution Press.

Ferguson, R. (1991). "Paying for Public Education: New Evidence on How and Why Money Matters." Harvard Journal of Legislation, 28 (summer): 465–98

Feuer, M. (2002). The logic and the basic principles of scientific based research. Presentation given at a seminar on the use of scientifically based research in education, Washington, DC.

Finch, C.R. and Crunkilton, J. R. (1999). Curriculum Development in career and technical and Technical Education (pp. 3-22). Boston: Allyn and Bacon.

Finley, K. (2005). New Brunswick Community College Three-Year Graduate Follow-Up Survey 2005 Survey of 2001-02 Graduates. http://www.gnb.ca/0343/GFUE05.pdf

Finn, J.D. (1960). Technology and the instructional process. Audiovisual Communications Review, 8 (1), 9-10.

Fisher, A. & Scriven, M. (1997). Critical thinking: Its definition and assessment. Point Reyes, CA: Edge press.

Fisher, D., Aldridge, J., Fraser, B. & Wood, D. (2001). Development, validation and use of a questionnaire to assess students' perceptions of outcomes-focused, technology-rich learning environments. Paper presented at the annual conference of the Australian Association for Research in Education, December, Perth, Western Australia. http://www.aare.edu.au/01pap/fis01028.htm

Fleming, M., & Chambers, B. (1983). Teacher-made tests: Windows on the classroom. In W. E. Hathaway (Ed.), Testing in the schools, San Francisco: Jossey-Bass.

Floden, R. and Meniketti, M. (2005). Research on the effects of coursework in the arts and sciences and in the foundations of education in Studying Teacher Education: The Report of the AERA Panel on Research and Teacher Education. Washington DC: American Educational Research Association.

FNBE. (2005). Quantitative Educational indicators. International comparisons of some features of Finnish education and training.

Flowers, Ronald D. (2002). 2001-2002 Follow-up Study of the College of Education Program Completers. Eastern Michigan University.

Forbes, C. (1992). The Polgar sisters: Training or genius? Henry Holt, New York.

Furlong, V. J., & Hirst, P. H. (1987). School-based training in the P.G.C.E. Final Report, University of Cambridge Department of Education.

Foshay, A. W. (1969). Curriculum. In: Ebel R I (ed.) 1969 Encyclopedia of Educational Research: A Project of the American Educational Research Association, 4th end. Macmillan, New York.

Foskett, N. & Helmsley-Brown, J. (2001) Choosing Futures: Young Peoples Decision Making in Education, Training and Careers Markets, London: Routledge Falmer.

Franklin, K. K. (Nov.1994). Multivariate correlation analysis of a student satisfaction survey. Unpublished paper: East Tennessee State University.

Fraser, Barry J., Fisher, Darrell L. (1982). Predicting students' outcomes from the perceptions of classroom psychosocial environments. American Educational Research Journal, 19, 498-518.

Fraser, B. J. & Maor, D. (2000). A learning environment instrument for evaluating students' and teachers' perceptions of constructivist multimedia learning environments. Paper presented at the annual meeting of the National Association for Research in Science Teaching, April, New Orleans, LA.

Fraser, B. J. (1994). Research on classroom and school climate. In D. Gabel (Ed), Handbook of research on science teaching and learning (pp. 493-541). New York: Macmillan.

Fraser, B. J. (1998a). Science learning environments: Assessment, effects and determinants. In B. Fraser & K. Tobin (Eds), International handbook of science education (pp. 527-564). Dordrecht, The Netherlands: Kluwer.

Fraser, B. J. (1998b). Classroom environment instruments: Development, validity and applications. Learning Environment Research: An International Journal, 1, 7-33.

Fraser, B. J. (1999). Using learning environment assessments to improve classroom and school climates. In H. J. Freiberg (Ed.), School climate: Measuring, improving and sustaining healthy learning environments (pp. 65-83). London: Falmer Press.

Fraser, B. J. & Fisher, D. (1983). Student achievement as a function of person-environment fit: A regression surface analysis. British Journal of Educational Psychology, 53, 89-99.

Frederiksen, N. (1984). The real test bias: Influences of testing on teaching and learning. American Psychologist, 32, 193-202.

Freeman. N. (1998). Morals and Character: The foundations of ethics and professionalism. The Educational Forum, 63(1), 30-36.

Friedman Ben-David M. (2000).The role of assessment in expanding professional horizons. Med Teach. 22:472-7.

Fromkin, V. and J. Rodman (1983). An Introduction to Language. New York, NY. CBS College Publishing.

FSU Office of Institutional Research (1999). Summary of Findings 1997-98 Survey of Recent Graduates, Florida State University. www.fsu.edu/~rsect/irpage/-kb

Fullan, M. G. W. S., S. (1991). The new meaning of educational change. New York: Teachers College Press.
Fullan, M. (2000). The three stories of education reform. Phi Delta Kappan, 81(8), 581–584.
Gabbott, M. and G. Hogg (2000). "An Empirical Investigation of the Impact of Non-Verbal Communication on Service Evaluation." European Journal of Marketing 34(3-4): 384-398.
Gabriner, R and Mery, P (1998) Technology Survey: Faculty Computer Expertise and Use of Instructional Technology, research report, City College of San Francisco Office of Research, Planning and Grants.
Gagné, R.M., Briggs, L.J., Wager, W. W. (1992). Principles of Instructional Design, Harcourt Brace Jovanovich College Publishers, Fort Worth. Fourth Edition pp. 11.
Gagne, R. M. (1988). Some reflections on thinking skills. Instructional Science. 17, 387-390.
Galbraith, J.K. (1967). The new industrial state. Boston: Houghton Mifflin
Gall, M. D., Borg, W. R., Gall, J. P. (2003). Educational research: An introduction. (7th Edition) White Plains, New York: Longman. Recommended: Skim read Part IV "Quantitative Research Design" (Chapters 10-13) (pp. 287 - 431).
Ganser, T. (2000). An ambitious vision of professional development for teachers. NASSP Bulletin, 84, 6-12.
Gardner, H. (2007). The Role of Deliberate Practice in the Acquisition of Expert Performance, http://www.zanet.co.uk/tradertom/extraordinaryminds.htm
Garrison, D.R. (1991). Critical thinking and adult education: A conceptual model for developing critical thinking on adult learner. International Journal of lifelong Education, 10(4), 287-303.
Garza, O. Guerra (2000). A ten-year follow-up study of the completers' perceptions of the TAMU Community College and Technical Institute Leadership Development Program: Minority Leadership Development Project. http://wwwlib.umi.com/dissertations/fullcit/9980148
Catawba College. (2005). TEACHER AS REFLECTIVE PRACTITIONER: Conceptual Framework http://www.catawba.edu/academic/teachereducation/conceptual_framework.pdf
Gebart, Henriette D. & Lucas, John A. (1980). Follow-Up Study of Dietetic Technician Graduates, 1975-1979. Volume 10, Number 14. ERIC: ED207659.
George, P. (2000). Breaking ranks. Principal Leadership, 1(4), 56-61.
Gilligan, C. (1982). In a different voice. Cambridge, MA: Harvard University Press.
Gillespie, C. S.; Ford, K. L.; Gillespie, R. D.; and Leavell, A. G. (March 1996). "Portfolio Assessment: Some Questions, Some Answers, Some Recommendations." Journal of Adolescent & Adult Literacy 36, no. 9: 480-491. (ERIC No. EJ 525 767).
Giroux, H. A. (1991). Beyond the ethics of flag waving: Schooling and citizenship for a critical democracy, The Clearing House. 64. 305-308.
Giroux, H., & Penna A (1983). Social education in the classroom: The dynamics of the hidden curriculum. In H. Giroux & D. Purpel (Eds.), The Hidden curriculum and moral education. Berkeley, CA: McCutchal. pp. 100-121.
Glatthorn, Allan A. (1987). Curriculum Renewal. Alexandria, VA: Association for Supervision and Curriculum Development.
Glaser, R. E. (1988). "Education and Thinking: The Role of Knowledge," American Psychologist, 39, 93-104.
Glass, Gene. V. (2002). School Reform Proposals: The Research Evidence. http://epsl.asu.edu/epru/documents/EPRU%202002-101/Summary-08.Glass.pdf
Glenn, A. D. (1997). Technology and the continuing education of classroom teachers, Peabody Journal of Education, 72(1), 122-128.
Glock, Nancy Clover. (1987). College level and critical thinking: Public policy and educational reform. Loa Angeles. P. 10.
Goh, S., Young, D. & Fraser, B. J. (1995). Psychosocial climate and student outcomes in elementary mathematics classrooms: A multilevel analysis. The Journal of Experimental Education, 43, 90-93.
Goldhaber, D. (2003). Teacher Quality and Students Achievement. ERIC Clearinghouse on Urban Education Urban Diversity Series No. 115. P. 5
Good, C. V. (1959). Dictionary of Education, 2nd edn. McGraw-Hili, New York.

Goodman, J. (1985). Making early field experience meaningful: An alternative approach. Paper presented at the Annual Meeting of the American Educational Research Association, Chicago, 1985

Gore, Jennifer M. (1987). Reflecting on Reflective Teaching. Journal of Teacher Education, 38, 33

Goxxllad, and et al. (1990). The moral dimensions of teaching San Francisco. Jossey Bass. Graduates are not prepared to work in business. (June 1997). Association Trends, p. 4.

Green, D. A., &Staley, A. (2000). Using Infonnation technology in traditionall "soft" subjects. Paper presented at the International Conference on Learning with Technology, "Does Technology Make a Difference?," Philadelphia, Temple University.

Greenfield, P. M. (1984). Mind and media: The effects of television, video games, and computers. Cambridge, MA: Harvard University Press.

Grayson, J. Paul, (2000). The Satisfaction Atkinson Graduates with their Education. http://www.atkinson.yorku.ca/~pgrayson/report1.pdf

Greenwald, A. G. (1997). Validity concerns and usefulness of student ratings of instruction, American Psychologist, 52, 1182-1186

Grimmett, P. P., & MacKinnon, A. M. (1992). Craft, knowledge and the education of teachers. In G. Grant (Ed.), Review of research in education, 18 (pp.385-465). Washington, D.C.: American Educational Research Association.

Grognet, Allene. Van Duzer, Carol. (2002). Listening Skills in the Workplace (Part of ELT: Technical Assistance for English Language Training Projects, 2002.2003). Denver, CO: Spring Institute for International Studies. (ED468604).

Gronlund, E. & Cameron, I. J. (2004). Assessment of Student Achievement. Toronto: Pearson.

Grossman, P. L. (1988). Sources of pedagogical content knowledge in English. Unpublished doctoral dissertation, Stanford University.

Grossman, P. (1990). The making of a teacher. New York: Teachers College Press

Grossman, P. L. (1990). A study in contrast: Sources of pedagogical content knowledge for secondary English. Journal of Teacher Education, 40(5), 24-31.

Grundy, S. (1987). Curriculum: product or praxis. Lewes: Falmer.

GSI Teaching & Resource Center. (2005). Teaching Guide for Graduates Students Instructors. http://gsi.berkeley.edu/resources/it/rules.html

Guba, E.G., and Lincoln, Y. S. (1981) Effective evaluation: Improving the usefulness of evaluation results through responsive and naturalistic approaches. San Francisco, CA: Jossey-Bass.

Gullickson, A. R. (1985). Student evaluation techniques and their relationship to grade and curriculum. Journal of Educational Research, 79(2), 96-100.

Gullickson, A. R. (1996). Teacher education and teacher-perceived needs in educational measurement and evaluation. Journal of Educational Measurement, 23(4), 347-354.

Guskey, T. R.. (February, 2003). How classroom assessments improve learning. Retrieved from http://www.ascd.org/publicationsed_lead/200302/guskey.html

Guskey, T.R. (2000). Evaluating professional development. Published: Thousand Oaks, Calif.: Corwin Press.

Guskey, T.R. (1995). Professional development in education: In search of the optimal mix. In T.R. Guskey & M. Huberman (Eds.), Professional development in education: New paradigms and practices, pp. 114-131. New York, NY: Teachers College Press.

Haas Dyson, A. (1990). Talking up a writing community: The role of talk in learning to write. L. Knapp and Gerald R. Miller Newbury Park, CA: Sage Pp. 171-201.

Haertel, E. (1990). Performance measurement. In M. C. Alkin (Ed.), Encyclopedia of Educational Research, Sixth edition.

Haggerty, L. (1996). The 1994 Washington State University Graduating Class: What Are They Doing Now? http://www.wsu.edu/sares/PDFs/grad_9501.pdf

Halpern, D.F. (1998). Teaching critical thinking for transfer across domains. American Psychologist, 53, PP. 449-455.

Halpern, D. F. (1996). Thought and Knowledge: An Introduction to Critical Thinking.

Handal, G., & Lauvas, P. (1987). Promoting reflective teaching: Supervision in action. Milton Keynes: Society for Research in Higher Education & Open University Press

Hansen, S.-E. (1998). Preparing student teachers for curriculum-making. Journal of curriculum studies, 1998, vol. 30, no. 2, PP. 174-175

Hanushek, E.A. (1992). "The Trade-Off between Child Quantity and Quality." Journal of Political Economy, 100(1): 84–117

Harasim, L. M. (1993). Global Networks: An Introduction. In Linda, L. M. (Ed.) Global Networks: Computers and International Communication. Cambridge, MA: The MIT Press, pp. 3-13.

Harden RM. (2001). Curriculum mapping: a tool for transparent and authentic teaching and learning. Med Teach. 23:123-37.

Hartnell-Young, E. A. (2003). Towards Knowledge Building: Reflecting on Teachers' Roles and Professional Learning in Communities of Practice, Department of Education Policy and Management the University of Melbourne. http://eprints.unimelb.edu.au/archive/00000921/01/01front.pdf

Hashweh, M. (1987). Effects of subject matter knowledge in the teaching of biology and physics. Teaching and Teacher Education, 3, 109-120.

Hasselbring, T. S., Smith, L., Glaser, C. W., Barron, L., Risko, V. J., Snyder, C. et al, (2000). Literature review: Technology to support teacher development, Washington, DC: Office of Educational Research and Improvement.

Hativa, N. (1996). University instructors' ratings profiles: Stability over time, and disciplinary differences. Research in Higher Education, 37, (3), 341-365

Haynes, F. (1998). The ethical school. London: Routledge.

Hedges, L. E. (1991). Helping students develop thinking skills through the problem-solving approach to teaching. The Ohio State University, Dr. Lowell Hedges.

Hermann. A. (2002). Teaching critical thinking online. Journal of Instructional Psychology. http://www.findarticles.com/p/articles/mi_m0FCG/is_2_29/ai_88761499/pg_1

Herman, J. L., Aschbacher, P. R., and Winters, L. (1992). A Practical Guide to Alternative Assessment. Alexandria, VA: Association for Supervision and Curriculum Development.

Hersey, B. and Blanchard, K. (1988). Management of Organizational Behavior: Utilizing Human Resources. New Jersey: Prentice Hall, p.30.

Hersh, R. H., & Paolitto, D. P. (1979). The teacher as moral educator. In T.C. Hennessey (Ed.). Value/Moral education: Schools and teachers. New York: Paulist Press. pp. 9-49.

Hiebert, et al. (2007). Preparing teachers to learn from teaching. Journal of Teacher Education, 2007; 58; 47-61

Hieronymus, A. N. & Hoover, H. D. (1987). Iowa Tests of Basic Skills: Writing supplement teacher's guide. Chicago: Riverside Publishing Company.

Hill, R. B. (1992/1993). The work ethic as determined by occupation, education, age, gender, work experience, and empowerment. (Doctor of Philosophy dissertation, The University of Tennessee, Knoxville, 1992). Dissertation Abstracts International, 53, 2343.

Hill, C., and Larson, E. (1992, December). Testing and Assessment in Secondary Education: A Critical Review of Emerging Practices. Berkeley, CA: National Center for Research in Vocational Education.

Hooks, B. (1994). Teaching to transgress. New York: Rutledge.

Hort, L. (2002). Striving for Quality at UNU Course Evaluation and Enhancement. http://www.anu.edu.au/cabs/educationcom/ANUSEQ%20call%20for%20comment.pdf

Hostetler. K.D. (1997). Ethical judgment in teaching. Boston. MA: Allyn and Bacon.

Howard, G. S., Conway, C. G. & Maxwell, S. E. (1985). Construct validity of measures of college teaching effectiveness, Journal of Educational Psychology, 77, pp. 187-196

Howe, Robert W.; Warren, Charles R. (1998). Teaching Critical Thinking through Environmental Education. ERIC/SMEAC Environmental Education Digest No. 2. ED324193. http://ericae.net/edo/ed324193.htm

Howey, K. (1996). Designing coherent and effective teacher education programs. In J. Sikula (Ed.), Handbook of research on teacher education: A project of the Association of Teacher Educators (2nd ed.). (pp. 143-170). New York: Macmillan.

Huba, Mary E. & Freed, Jann E. (2000). Learner-centered assessment on college campuses / shifting the focus from teaching to learning. Needham Heights, MA: Allyn & Bacon.

Hudgins, B., and Edelman, S. (1986). "Teaching Critical Teacher-Led Small-Group Discussions". Journal of Educational Research .79/6. PP.333-342.

Hughes, J. (1999) Improving communication skills in student music educators: a case study, Music Education Research, 1(2), 227.

Hulpiau, Veerle. (2001). Improving quality of education: what makes it actually work? A case study. University Educational Support Office, University of Leuven, Belgium. http://www.leeds.ac.uk/educol/documents/00001810.htm

Hunsaker, Richard A. (1998). Critical thinking: A neglected skill. [On-line]. Listening Skills. Abstract from: MediaLit/FC/WFAEBIBO: Item: (ED347578).

HVW. (2003). Teacher as Evaluator, http://www.thecoo.edu/~hevanwyh/evaluator.htm

Idaho State University College of Education (undated). Use of Data for Program Improvement. http://ed.isu.edu/accweb/NCATE/PDFs/Assessment/Program%20Improvement-Other.pdf

Impara, J. C., & Plake, B. S. (1996). Professional development in student assessment for educational administrators. Educational Measurement: Issues and Practice, 15(2), 14-19.

Ingersoll, G. M., Kinman, D. (2002) Development of a teacher candidate performance Self-assessment instrument. Action in Teacher Education, 23: 4-9

Institute for the Transfer of Technology to Education, National School Boards Association. (2002). Education leadership toolkit: Change and technology in America's schools. Retrieved October 18, 2002. http://www.nsba.org/sbot/toolkit/tiol.html

International Society for Technology in Education. (2004). A preparing tomorrow's teachers to use technology project. Retrieved February 16, 2005, from. http://cnets.iste.org/teachers/

Jacobs,H.H., (1997). Mapping the big picture: Integrating curriculum and assessment K-12, Alexandria, VA: Association for Supervision and Curriculum Development.

Jakku-Sihvonen, R. (2002). Evaluation and Outcomes in Finland - main results in 1995-2002. National Board of Education. Evaluation 10/2002. Helsinki

Jakku-Sihvonen, R. & Niemi, H. (2005). Thirty years research-based teacher education - a Finnish case [Electronic] http://neraoslo2005.uio.no/Abstracts1.pdf, NERA congress: A Nordic dimension in education and research - myth or reality? Abstracts, Nordic Educational Research Association, 33rd Congress, March 10–12, 2005. Oslo: University of Oslo, NERA 2005, 141

James, Davis. (1993). Better teaching, more learning: Strategies for success in postsecondary settings. Phoenix, AZ: American Council on Education and Oryx Press, pp. 173-178.

Jasman, A. (2001). The role of teacher educators in the promotion, support and assurance of teacher quality. http://www.atea.schools.net.au/ATEA/papers/jasman.pdf

Jeffrey W. Drake (2000). Communication Keys for Success. http://www.achievemax.com/newsletter/00issue/communication-keys.htm

Jegede, O., Fraser, B. & Fisher, D. (1995). The development and validation of a distance and open learning environment scale. Educational Technology Research and Development, 43, 90-93.

Jernigan, L. & Langer, G. (1997). 1996-1997 Follow-up Study of the College of Education Graduates (Bachelors Degree). Eastern Michigan University. http://www.emich.edu/NCATE1997/Docs/I.A.3/I.A.3.8/

Jiang, Y. H.; Smith, P.; and Nichols, P. L. (1997). Error Sources Influencing Performance Assessment Reliability or Generalizability: A Meta Analysis. Paper presented at the Annual Meeting of the American Educational Research Association, Chicago, IL. (ERIC Document Reproduction Service No. ED 409 342).

John, J. Ray (1982).The construct validity of balanced likert scales. The Journal of Social Psychology, 118, 141-142.

Johnson, D.W., R.T. Johnson, and K.A. Smith. (1998). Active Learning: Cooperation in the College Classroom. 2nd ed. Edina. MN: Interaction Book Co.

Johnson, D.W., R.T. Johnson, and M.B. Stanne. (2000). Cooperative Learning Methods:

Johnson, S.D. (1992). A framework for technology education curricula which emphasizes intellectual processes. Journal of Technology Education,

Jonassen, D. H. (1992). Acquiring Structural Knowledge from Semantically Structured Hypermedia. A paper presented in the AECT annual convention, Washington, D.C.

Jonassen & et al, (1999). Design of Constructivist Learning Environments.

http://www.coe.missouri.edu/~jonassen/courses/CLE/index.html
JMU (2000). Summary of the General Section of the 1999-2000 Alumni Survey. James Madison University. http://centennial.jmu.edu/portfolio/pdfs/AlumniSurvey9900.pdf
Judith, A. (1994). Follow-Up Survey, Graduates of 1992-1993. ERIC Document Reproduction Service. ED369471.
Judith, A. (1995). Follow-Up Survey, Graduates of 1993-1994. Macomb Community College. ERIC Document Reproduction Service. ED386241.
Kalb, J. (1999). The Survey of the Bachelor's degree recipients from the graduating classes of 1997 – 1998, http://www.fsu.edu/~rsect/muppets/sorgroli.pdf#search='Survey%20of%20Recent%20Graduates%20at%20Florida%20State
Kalman, C.S. (2002). "Developing Critical Thinking in Undergraduate Courses: A Philosophical Approach." Science & Education 11: 83-94.
Kanji, G. P. Tambi, A. M. (1999) Total Quality Management in UK higher education institutions, Total Quality Management, vol. 10, no. 1, pp. 129-153.
http://www.unige.ch/formcont/ressources/qualite_site.pdf
Kansanen, P. (2003). Teacher education in Finland: current models and new developments. 85-108. U: Moon, B., Vlasceanu, L., & Barrows, L. C. (ur.): Institutional approaches to teacher education within higher education in Europe: Current models and new developments. Bucharest: UNESCO-CEPES.
http://www.helsinki.fi/~pkansane/Cepes.pdf
Karel, G. (2002). My Teaching Beliefs,
http://garnet.acns.fsu.edu/~ghk9406/power/sld001.htm
Karvonen, (1967). The Structure, Arousal Change of the Attitudes of Teacher Education Students. PP. 1-64.
Katz, L. (1981). Follow - up studies: Are they worth the trouble? Journal of teacher education. (32), 2, 18-24.
Katz, L. (1978). Ethical issues in working with young children. Washington, D.C.: National Association for the educational young children.
Kaufman DM. (2003). Applying educational theory in practice. BMJ. 326:213-6.
Kazanas, H. C. (1978). Affective work competencies for vocational education. Columbus, Ohio: ERIC Clearinghouse on Vocational and Technical Education.
Keating, Daniel. (1988). Adolescents' Ability to Engage in Critical Thinking, National Center for Effective Secondary Schools, Madison, WI, November. ED 307 508.
Keith, N. (197). A study of the Ph.D. graduates of the University of Georgia. ERIC, ED 076128.
Kelly, A. V. (1983; 1999). The Curriculum: Theory and practice 4e, London: Paul Chapman.
Kember D, Leung DYP & Kwan KP (2002). Does the Use of Student Feedback Questionnaires Improve the Overall Quality of Teaching? Assessment & Evaluation in Higher Education, 27: 411-425
Kennedy, M. Fisher, M.B. & Ennis, R.H. (1991). Critical Thinking: literature Review and Needed Research, in: Idol, L and Fly Jones, B. (eds.) Educational Values and Cognitive Instruction: Implications for reform (Hillsdale, Lawrence Erlbaum).
Kern DE, Thomas PA, Howard DM, Bass EB. (1998). Curriculum Development for Medical Education: A Six Step Approach. Baltimore, MD: The Johns Hopkins University Press.
Khalili, A., & Shashoani, L. (1994). The effectiveness of computer applications: A meta-analysis. Journal of Research on Computing in Education, 27(1), 48-61.
Kilgore et al. (1990). Understanding the Teaching Perspectives of First-Year Teachers. Journal of Teacher Education, 41, 28
kipnis, K. (1978). How to discuss professional ethics. Young Children 42 (4), PP. 26-30.
Kirkpatrick, D.L. (1987). Evaluation Training Programs in ASTD reference guide to professional training roles & competencies. G. Sredl, ed.vol.2 New York.
Klaczynski, P.; Gordon, D. & Fauth, J. (1997). Goal-oriented critical reasoning and individual differences in critical reasoning biases. Journal of Educational Psychology, 89, PP. 470-485.
Kliebard, H. M. (1995). The Tyler Rationale Revisited, Journal of Curriculum Studies, 27(1), pp. 81–88.

Knezevich, S.J. & Eye, G.G. (Eds.). (1970). Instructional technology and the school administrator. Washington, DC: American Association of School Administrators.

Kohlberg, L. (1971). Stages of moral development as a basis for moral education. In C. M Beck, B. S. Crittenden, &E. V. Sullivan (Eds.) Moral Education Interdisciplinary Approaches. Toronto: University of Toronto Press. pp. 23-112.

Kohlberg, L., Selman, R.I, & Lickona, T.A. (1972). A strategy for teaching values. In first Things: Values. New York: Guidance Associates.

Kohlberg, L. (1982). "A Reply to Owen Flanagan and Some Comments on the Puka-Goodpaster Exchange", Ethics, 92(3), pp. 513-528.

Kohonen, V. (2000) Facilitating transformative learning for teacher growth. In B. Beairsto and P. Ruohotie (eds) Empowering Teachers as Lifelong Learners (pp. 127–45). Research Centre for Vocational Education, University of Tampere

Konyar, K. (2001). Assessing the role of US agriculture in reducing greenhouse gas emissions and generating additional environmental benefits. Ecol. Econ. 38, pp. 85–103

Konyar, K. (Nov. 2001). California State University. San Bernardino Outcomes Assessment Status report for 00/01 AY, Department Of Economics. Bachelor of Art. http://gradstudies.csusb.edu/outcome/EconBA_98-99_SR.pdf

Koon, J. & Murray, H. G. (1995). Using multiple outcomes to validate student ratings of overall teacher effectiveness, Journal of Higher Education, 66, pp. 61-81

Kozma, R. (1987). The Implications of Cognitive Psychology for Computer-based Learning Tools. Educational Technology, Vol. 27, pp. 20-25.

Krahn, H. & Sorensen, M. (Nov.1999). Student Satisfaction in Alberta Universities and University College, 1999. http://www.athabascau.ca/reports/survey99.htm

Krahn, H. & Sorensen, M. (2001). Student Satisfaction in Alberta Universities and University College, 2001. http://www.athabascau.ca/reports/survey2001.htm

Kuhn, D., E. Amsel, and M. O'Loughlin. (1988). The Development of Scientific Thinking Skills, Academic Press, San Diego, CA, 1988

Kulik, C., & Kulik, J. A. (1991). Effectiveness of computer-based instruction: An updated analysis. Computers in Human Behavior, 71, 75-94.

Kulik, James A. (2001). Student Ratings: Validity, Utility, and Controversy. NEW DIRECTIONS FOR INSTITUTIONAL RESEARCH, no. 109

Kumpulainen, K. (2000). In Search of Powerful Learning Environments for Teacher Education the 21st Century. Department of Education, University of Oulu. P. 12 & 129

Kupila, P. (1999). Itsearviointi oppimisprosessin ja asiantuntijuuden kehittymisen tukena, Journal of Teacher Researcher, 3, 145–153

Kuse, L. & Kuse, H. (Unknown). The Discussion Method, http://ci.coe.uni.edu/facstaff/kuse/Methods/textmethods/methoddiscussion.html

Kyriacou, C. (1998). Essential Teaching Skills. (Second Edition). Stanley Thornes(Publishers) Ltd. Cheltenham. UK. P 1.

Lamb, A. (2002). Building Tree houses for Learning: Technology in Today's Classrooms. http://eduscapes.com/v2a/tree.html

Lampert, M. (1986). Knowing, doing, and teaching multiplication. Cognition and Instruction, 3, 305-342.

Lankard, B. A. (1990). Employability--the fifth basic skill. ERIC Digest No. 104. Columbus, Ohio: ERIC Clearinghouse on Adult, Career, and Vocational Education.

Leckey, JF, Neill, NT (2001). "Quantifying Quality: The Importance of Student Feedback", Quality in Higher Education, Vol. 7, No. 1, pp 19-32

Laczko-Kerr, I & Berliner, D.C. (2002). The effectiveness of "Teach for America" and other under-certified teachers on student academic achievement: A case of harmful public policy. Education Policy Analysis Archives. 10(37). Retrieved September 16, 2003 from http://epaa.asu.edu/epaa/v10n37/

Leigh, D. (1999). A Brief History of Instructional Design. Retrieved August 31, 2004, http://www.pignc-ispi.com/articles/education/brief%20history.htm

Leinhardt, G. (1988). Getting to know: Tracing students' mathematical knowledge from intuition to competence. Educational Psychologist, 23(2), 119-144

Leinhart, G., and Greeno, J. G. (1986). The cognitive skill of teaching. Journal of Educational Psychology, 78, 75-95.

Leinhardt, G., and Smith, D. (1985). Expertise in mathematics instruction: Subject matter knowledge. Journal of Educational Psychology, 77, 247-271.

Leonard, Jacqueline. (1999). From Monologue to Dialogue: Facilitating Classroom Debate in Mathematics Methods Courses. U.S. Pennsylvania.

Lerer, N. & et al. (2002). Recent Graduate Survey 1999-2000. Office of Research, Assessment and Planning. http://administration.adelphi.edu/orap/pdfs/recentgrads99-00.pdf

Lever, J. (1976). Sex differences in the games children play. Social Problems. 23, 478-487.

L'Hommedieu, R., Menges, R. J. & Brinko, K. T. (1990). Methodological explanations for the modest effects of feedback from student ratings, Journal of Educational Psychology, 82, pp. 232-241

Lijnse, P. (2000). Didactics of science: The forgotten dimension in science education research? In R. Millar, J. Leach, & J. Osborne (Eds.), Improving Science Education: The Contribution of Research (pp. 308-326). Buckingham, UK: Open University Press.

Linn, R. (1987). Accountability: The comparison of educational systems and the quality of test results. Educational Policy, 1(2): 181-198.

Linn, R., Baker, E., & Dunbar, S. (1991). Complex, performance-based assessment: Expectations and validation criteria. Educational Researcher, 20(8), 15-21.

Linn, R.L., Kiplinger, V.L., Chapman, C.W., & LeMahieu, P.G. (1991). Cross-state comparability of judgments of student writing: Results from the New Standards Project workshop (CSE Tech. Rep. No. 335). Los Angeles: University of California, Center for the Study of Evaluation.

Linn, R. L. and et al (1991). The use of differential item functioning statistics: A discussion of current practice and future implications. In H. Wainer & P. W. Holland (Eds.), Differential item functioning: Theory and practice. Hillsdale, NJ: Erlbaum.

Lipman, M. (1985). Thinking skills fostered by philosophy for children. In Segal, J. W. (Ed.), Thinking and learning skills: Relating instruction to research. Hillsdale, NJ; earlbaum. PP 83-108.

Lipset, S. M. (1990). The work ethic--then and now. Public Interest, Winter 1990, 61-69.

Longstreet, W.S. and Shane, H.G. (1993). Curriculum for a new millennium. Boston: Allyn and Bacon.

Lonsway, Francis A. (2001). The graduating Student Questionnaire, a Study of Five Years of Use 1996-97 through 2000-2001. http://www.ats.edu/download/student/5year.pdf

Lotfabadi, H. (1981). Higher Education Evaluation, Investigations of graduate studies in education in Sweden. P 19.

Lovat. T.J. (1998). Ethics and ethics education: Professional and curricular best practice. Curriculum Perspective, 18(1), 1-7.

Lubawy, W. C. (2003). Evaluating teaching using the best practices model. American Journal of Pharmaceutical Education, 67(3): article 87

Lund, J. (1997). "Authentic Assessment: Its Development and Application." Journal of Physical Education, Recreation and Dance 68, no. 7: 25-28.

Lundeberg, M., S. Zeon, L. Bieging, A. Brown, and M. Ingebrand. (2001). "Pre-service Teachers' Reflections on Technology Leadership: I'll Take Risks if There is a Net to Catch Me." Paper presented at the American Educational Research Association Annual conference, Seattle, Washington

Lunenberg, F. C. (1998). Constructivism and technology: Instructional designs for successful education reform. Journal of Instructional Psychology. 25 (2), 75-81.

Lu, J., & Molstad, L. (1999). Instructional effectiveness of computer technology in non computer-oriented courses as perceived by South Dakota high school business teachers, The Delta Pi Epsilon Journal, 39(3), 159-176.

Mabry L. (1999). Portfolios plus: A Critical Guide to Alternative Assessment. Thousand Oaks, CA: Corwin Press.

Maccoby, M. (1988). Why work. New York: Simon and Schuster.

Maier, D (2004b). Instructional Technology Timeline, Retrieved August 31, 2004 http://www.ittheory.com/timelin2.htm

Madaus, G. (1985). Public policy and the testing profession-you've never had it so good? Educational Measurement: Issues and Practices, 4 (1): 5-11.

Maiorana, V. P. (1992).Critical thinking across the curriculum: Building the Analytical Classroom.

Malandro, Loretta A. Larry L. Barker and Deborah Ann Barker (1989). Nonverbal Communication, 2nd ed. Reading MA: Addison-Wesley.

Manitoba Education and Youth. (2002). Grades 5 to 8 Physical Education/Health Education: A Foundation for Implementation. Winnipeg, MB: Manitoba Education and Youth.

Maor, D. & Fraser, B. J. (1996). Use of classroom environment perceptions in evaluating inquiry-based computer assisted learning. International Journal of Science Education, 18, 401-421.

Maricopa Center for Learning and Instruction-mcli-.(2005). All of the SyRIS Quotes About Education. http://www.mcli.dist.maricopa.edu/syris/quotes.php?show=all

Margerum-Leys, J. (2000). Computer applications by student and experienced teachers. New Orleans, Louisiana: Annual Meeting of the American Educational Research Association.

Margerum-Leys, J. (2004). The nature and sharing of teacher knowledge of technology in a student teacher/mentor teacher pair. Journal of Teacher Education, 01-NOV-04. http://goliath.ecnext.com/coms2/gi_0199-3055085/The-nature-and-sharing-of.html

Margerum-Leys, J. & Marx, R. (2000). Technology knowledge in student/experienced teacher pairs, New Orleans, Louisiana: Annual Meeting of the American Educational Research Association

Market Data Retrieval. (2003). Trends in the K-12 education market. Slide presentation retrieved November 18, 2003. http://www.schooldata.com/Trends/trends_files/frame.htm

Marsh, H.W. (1987). Students' evaluations of university teaching: Research finding methodological issues and directions for future research. International Journal Educational Research, 11(3), 253-388

Marsh, H. W. (1984). "Students' Evaluations of University Teaching: Dimensionality, Reliability, Validity, Potential Biases, and Utility." Journal of Educational Psychology, 76, 707–754.

Marsh, H. W., and Dunkin, M. J. (1997). "Students' Evaluations of University Teaching: A Multidimensional Perspective." In R. Perry and J. Smart (eds.), Effective Teaching in Higher Education: Research and Practice. New York: Agathon Press.

Marsh, H. W. & Dunkin, M. J. (1992). Students' evaluations of university teaching: A multidimensional perspective, in: J. C. SMART (Ed.) Higher Education: Handbook of Theory and Research, Vol. 8, pp. 143-233 (New York, Agathon Press).

Marsh, H. W., & Hocevar, D. (1991). Students evaluations of teaching effectiveness: The stability of mean ratings of the same teachers over a 13-year period. Teaching & Teacher Education, 7, 303-314.

Marsh, H.W., & Overall, J.U. (1981). The relative influence of course level, course type, and instructor on students' evaluations of college teaching. American Educational Research Journal, 18(l), 103-112

Marsh, H. W. & Roche, L. (1993). The use of students' evaluations and an individually structured intervention to enhance university teaching effectiveness, American Educational Research Journal, 30, pp. 217-251

Mathew, D. Staver. (2005). Teachers' Rights on Public School Campuses. Published by Broadman & Holman Publisher, Nashville, Tennessee http://www.ceai.org/post_file/teachers_rights.pdf

May, W. T., & Zimpher, N. L. (1985, April). Perceptions of preservice field supervision: A call for theoretical recognition. Paper presented at the Annual Meeting of the American Educational Research Association, Chicago

Mayo, S. T. (1967). Pre-service preparation of teachers in educational measurement. U.S. Department of Health, Education and Welfare. Washington, DC: Office of Education/Bureau of Research.

McBrien, j. l. & Brandt, R. S. (1997). Adapted from The Language of Learning: A Guide to Education Terms. Alexandria, VA: Association for Supervision and Curriculum Development. PP 77 – 78.

MCC Office of Institutional Research (2001). Students' Satisfaction with MCC'S Quality of Education. http://www.monroecc.edu/depts/research/perform/pind2000.htm

McCain, T. (2000, April). New schools for the new millennium. Concurrent session presented at the Georgia Educational Technology Conference, Macon, Georgia

McCarthy, R., (1989).Multimedia: What the Excitement's All about. Electronic Learning, Vol. 8, No. 8, pp. 26-31.

McCarthy, J., & Riley, S. (2000). A new vision for teacher professional development. Leadership, 30, 34-36.

McCloskey, D. (1993). The neglected economics of talk. Planning for Higher Education, 22, pp. 11-16.

McConnell, D. (2000) Implementing Computer Supported Cooperative Learning, Kogan Page, London

McCoy, R. W. (2001). Computer competencies for the 21st century information systems educator. Information Technology, Learning, and Performance, 19(2), 21-35.

McDonald, B. & Boud, D. (2003). The impact of self-assessment on achievement: The effects of self-assessment training on performance in external examination. Assessment in Education. 10 (2), 209-220.

McGhee, R. & et al. (2003). New Teacher and Student Roles in the Technology-Supported Classroom. http://www.edtechcases.info/papers/teacherstudentroles.pdf

Mckeachie, W. J. (1990). Research on college teaching: The historical background, Journal of Educational Psychology, 82, pp. 189-200.

Mckeachie, W. J. (1979). Student ratings of faculty: A reprise, Academe, 65, pp. 384-397

McMillan, J. H. (2001). Essential assessment concepts for teachers and administrators. Thousand Oaks, CA: Corwin Publishing Company.

McMillan, James H. (2000). Fundamental assessment principles for teachers and school administrators. Practical Assessment, Research & Evaluation, 7(8).

McNeil, S. (2004). What is Instructional Design?. Retrieved online May 30, 2004: http://www.coe.uh.edu/courses/cuin6373/whatisid.html

Mcpeck, J. E. (1981). Critical thinking and Education. Oxford: Martin Robertson.

Meijer et al. (1999). Exploring language teachers' practical knowledge -about teaching reading comprehension, Teaching and Teacher Education, 15, 59-84

Melancon, Burton, Shaughnessy, Michael, Acheson-Brown, Dan, Gaedke, Bill, Moore, Jack, (1997). Critical Thinking Skills: Levels of Preservice Elementary, Secondary, and Special Education Students. ED430788.

Menges, R. J. (1991). The real world of teaching improvement: A faculty perspective, in: M. THEALL & J. FRANKLIN (Eds) Effective Practices for Improving Teaching, New Directions for Teaching and Learning, Vol. 48, pp. 21-37 (San Francisco, Jossey-Bass).

Messick, S. (1992).The Interplay of Evidence and Consequences in the Validation of Performance Assessments. Princeton, NJ: Educational Testing Service. (ERIC Document Reproduction Service No. ED 390 891).

Messick, S. (1989). Validity. In R. L. Linn (Ed.), Educational, Measurement, 3rd edition (pp. 13-104). New York, Macmillan.

Messick, S. (1996). "Validity of Performance Assessments." In Technical Issues in Largescale Performance Assessment, NCES 96-802, edited by G. W. Phillips, pp. 1-18. Washington, DC: National Center for Education Statistics, Office of Educational Research and Improvement, U.S. Department of Education. (ERIC Document Reproduction Service No. ED 399 300).

Miller, Pamela J.; Wolosyk, Carl A. (Dec. 2002). Where Do CTE Teacher Education Graduates Go? Career and Technical Teacher Education Five-Year Graduate Follow-Up Study. ERIC, (ED 474 527).

Miller, P. F. & Coady, W. T (1984). Vocational ethics: Toward the development of an enabling work ethic. Springfield: Illinois State Board of Education. PP. 5-6.

Miller, Susan A. (1998). Learning to listen and listening to Learn: Fun With talking, fun with listening. Parent and Child. Pp. 24-25.

Mingers, J. C. (1995). "Information and meaning: Foundations for an inter subjective account," Inform. Syst. J., vol. 5, pp. 285–306.

Ministry of Education. (2004). The Development of Education. National Report of Finland by the National Board of Education.

Ministry of Education. (2003). Attracting, Developing and Retaining Effective Teachers: Country background report for Finland. http://www.see-educoop.net/education_in/pdf/erasmus2003-oth-enl-t03.pdf

Ministry of Education. (2001). Teacher Education Development Programme. Helsinki: Department of Education and Research Policy.

Molenda, M., & Bichelmeyer, B. (2005). Issues and trends in Instructional Technology: Slow growth as economy recovers. Educational Media and Technology Yearbook 2005.

Molenda, M., Russell, J. D., & Smaldino, S. (1998). Trends in media and technology in education and training. In R. M. Branch & M. A. Fitzgerald (Eds.), Educational media and technology yearbook (Vol. 23, pp. 2-10). Englewood, CO: Libraries Unlimited.

Moore, G. (1965). Cramming more components onto integrated circuits. Electronics. 38(8).

Moore, K.B. (2000). Successful & effective professional development. Scholastic Early Childhood Today, 15, 14-16.

Moore, M. G., & Kearsley, G. (1996). Distance education: A systems view. Belmont, CA: Wadsworth Publishing Company.

Moore, K. (2002). Helping teachers build a challenging but achievable curriculum [Electronic version]. Scholastic Early Childhood Today, 3-16.

Moore, Janet C. (Dec.2002). Element of Quality: The Sloan-C Framework. LEARNING ABSTRACTS Vol 5, NO. 12. http://www.league.org/publication/abstracts/learning/lelabs1202.html

Moos, R.H. (1979). Evaluating educational environments: Procedures, measures, findings and policy implications. San Francisco: Jossey-Bass.

Morine-Dershimer, G. (1989). Preservice teachers' conceptions of content and pedagogy: Measuring growth in reflective, pedagogical decision-making. Journal of Teacher Education, 40(5), 46-52

Morris, Anne K. and et al. (2007). Preparing teachers to learn from teaching. Journal of Teacher Education, 01-JAN-07. http://goliath.ecnext.com/coms2/gi_0199-6135577/Preparing-teachers-to-learn-from.html

Mosca, J. & Howard, L. (1997). Grounded learning: Breathing live into business education. Journal of Education for Business. 73, 90-93.

Moschovitis, C. J. P., Poole, H., Schuyler, T., & Senft, T. M. (1999). History of the Internet: A Chronology, 1843 to the Present. ABC-CLIO.

Mosteller, F., and D.P. Moynihan, eds. (1972). On Equality of Educational Opportunity. New York: Random House

Moursund, D., & Bielefeldt, T. (1999). Will new teachers be prepared to teach in a digital age? Santa Monica, CA: International Society for Technology in Education [ISTE] & Milken Exchange on Education Technology.

MSCD Institutional Research (1999). Results of a Survey of the 1997-98 Graduates of Metropolitan State College of Denver. http://www.mscd.edu/facstaff/oir/Survey97-98.htm

MSCD Institutional Research (2000). Results of a Survey of the 1998-99 Graduates of Metropolitan State College of Denver. http://www.mscd.edu/facstaff/oir/Survey98-99.htm

MSCD Institutional Research (2001). Results of a Survey of the 1999-00 Graduates of Metropolitan State College of Denver. http://www.mscd.edu/facstaff/oir/Survey99-00.htm

MSCD Institutional Research (2002). Results of a Survey of the 2000-01 Graduates of Metropolitan State College of Denver. http://www.mscd.edu/facstaff/oir/Survey00-01.htm

MSU Office of Institutional Research (Sep.2002). MSU Graduates 1995 - May 2001. Office of Institutional Research. DATA BRIEF. Vol. 2002, No. 1, September 2002. http://www.msstate.edu/dept/opeie/

MU Department of Education Opinion Poll, (1995). Attitudes and Satisfaction With Education. Memorial University. http://www.gov.nf.ca/youth/pub/ind97/CHAPT5.PDF

Muchmore, John, and Kathleen Galvin. (1983). " A report to the Task Force on Career Competencies in Oral Communication Skills for Community College Students Seeking immediate Entry into the Work Force". Communication Educator. 32.2. Pp. 207-20.

Muffoletto, R. (1994). Technology and restructuring education: Constructing a context. Educational Technology, 34(2), 247-28.

MUR Academic Assessment, (1998). Surveys: Satisfaction – Academic Assessment & student Research Alumni Provide Feedback about Their Undergraduate Experiences. http://web.umr.edu/~assess/98sript/title.html

Murane, R. & Levy, F. (1996). Teaching the New Basic Skills. New York, NY: Free Press.

Murray, Corry. (2002). "Web cast Probes Meaning of "Scientifically-Based Research." School News.

Murray, & et al (1997). New direction in teaching and learning. Vol. 66.

Murray, F. B., & Porter, A. (1996). Pathway from the liberal arts curriculum to lessons in the schools, In F. B. Murray (Ed.), Teacher educator's handbook: Building a knowledge base for the preparation of teachers (pp. 155-178). San Francisco: Jossey-Bass.

Murray, H. G., Rushton, P. J. & Paunonen, S. V. (1990). Teacher personality traits and student instructional ratings in six types of university courses, Journal of Educational Psychology, 82, pp. 250-261

Nadler, Leonard (1984). The Handbook of Human Resource Development (Glossary). New York: John Wiley & Sons.

NAIT Institutional Research (Dec.2002). Five Years out Survey of the Class of 1997. Bulletin. Vol 4, No. 1, fall / winter 2002. www.nait.ab.ca

Nancy, Everhart. (1998). Evaluating the School Library Media Center. http://www.psla.org/pslaworkshops/fall2002_files/psla2002workshop.ppt

Nash. R. (1996). Real word ethics: Frameworks for educators and human service professionals. New York: Teachers College Press.

National Center for Education Statistics [NCES]. (2000). Teacher's tools for the 21st century: A report on teacher's use of technology. Washington, D.C.: Author.

National Center for Education Statistics (NCES). (1998). Toward better teaching: Professional development in 1993-94. NCES 98230. Washington, D.C.: NCES. http://nces.ed.gov/pubs98/teaching9394/index.html [April, 2001].

National Center for Education Statistics, U.S Department of Education, (2000). Pursuing excellence: Comparisons of international eighth-grade mathematics and science achievement from a U.S. perspective, 1995 and 1999. P. Gonzales, C. Calsyn, L. Jocelyn, K. Mak, D. Kastberg, S. Arafeh, T. Williams, and W. Tsen. NCES 2001-028. Washington, DC: U.S. Government Printing Office.

National Commission for the Principalship (1990). Principals for our changing schools; Preparation and certification. Fairfax, VA.

National Commission on Teaching and America's Future. (1996). What Matters Most—Teaching for America's Future (New York: Columbia University, Teachers College).

National Commission on Teaching and America's Future. (2003). No Dream Denied: A Pledge to America's Children (Washington, D.C.), p. 5

National Council for Accreditation of Teacher Education. (2001). Professional standards for the accreditation of schools, colleges, and departments of education. Washington, DC: National Council for Accreditation of Teacher Education.

National Council for Accreditation of Teacher Education (1997). Technology and the new professional teacher. Preparing for the 21st century classroom. Washington, DC: Author.

National Council for Accreditation of Teacher Education (1977). Standards for accreditation of teacher education. Washington, D.C., NCATE.

National Council of Teachers of Mathematics (1989). Curriculum and evaluation standards for school mathematics. Reston, VA: Author.

National Institute of Education US, (1984). Involvement in learning: realizing the potential of American higher education. Final report of the Study Group on the Conditions of Excellence in American Higher Education. Washington DC: Stock No. 065-000-00213-2. Superintendent of Documents. Washington DC: US Government Printing Office.

National Institute for Science Education. (2003). Field-tested Assessment Learning Guide. Madison WI: University of Wisconsin – Madison. 2003. Available at: www.flaguide.org. Accessed June 10.

National Staff Development Council. (2000). The National Partnership for Excellence and Accountability in Teaching (NPEAT). Revisioning professional development. Journal of Staff Development, 21, supp1-20.

NBCC Department of Training and Employment Development (May 2001). Three-Year Graduate Follow-Up Survey 2001 Survey of 1997-98 Graduates. New Brunswick Community College. http://www.gnb.ca/0343/GFU3yrReport-E.pdf

NCES. (2000d). Monitoring School Quality: An Indicators Report. NCES 2001-030. Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement

Nelson, R. & et al. (1994). Survey of 1990-1991 Graduates. UC Santa Cruz. http://planning.ucsc.edu/irps/Enrollmt/GRADS/1990/Grad90.htm

Newby, M. & Fisher, D. (1997). An instrument for assessing the learning environment of a computer laboratory. Journal of Educational Computing Research, 16, 179-190.

Nicol, David. J. (1997). Research on Learning and Higher Education Teaching. http://www.uclan.ac.uk/ldu/resources/toolkit/sm_groups/ucosda_briefing_paper_forty-five.doc

Niemi, H. (2000).Teacher education in Finland: current trends and future scenarios. University of Helsinki. PP. 5-8.

Niemi, H. & Jakku-Sihvonen, R. & (2005). In the front of the Bologna process: Thirty years research-based teacher education - a Finnish case. A Nordic dimension in education and research - myth or reality? Abstracts, Nordic Educational Research Association, 33rd Congress, March 10-12, 2005. Oslo: University of Oslo, NERA, 141

Niemi, H. & Tirri, K. (1996). Effectiveness of Teacher Education, New Challenges and Approaches to Evaluation. P. 50.

Noddings, N. (1991). Values by deliberation or default, The Clearing House. 64. 320-322.

Norris, S. P. (1985)."Synthesis of Research on Critical Thinking." Educational Leadership. 42/8. PP. 40-45.

O'Brien, S. (2003). GRADUATING STUDENTS SURVEY 2003; University of Calgary; Prepared for: Canadian Undergraduate Survey Consortium. http://www.ucalgary.ca/sas/sas_site/PDFs/GradStudentSurvey2003.pdf

O'Day, J.A. and M. Smith (1993). Systemic school reform and educational opportunity. In S, Fuheman (Ed.), Designing coherent educational policy: Improving the system. San Francisco: Jossey-Bass, pages 250-311.

OECD (2003). Attracting, Developing and Retaining Effective Teachers. Country background report for Finland. http://www.oecd.org/dataoecd/43/15/5328720.pdf

O'Hanlon, J. and Mortensen, L. (1980). "Making teacher evaluation work", Journal of Higher Education, 51: 664-672

O'Hara, Michael. M. (2002). Teacher as Performer: A confluence of ideas. http://www.bsu.edu/web/mmohara/teachport/pedarts/teachper/index.htm

Office of Science and Technology Policy [OSTP]. (1997). Report to the President on the use of technology to strengthen K-12 education in the United States. Retrieved August 7, 2001. http://www.ostp.gov/PCAST/k-12ed.html

Office of Technology Assessment [OTA]. (1995). Teachers and technology: making the connection. Washington, DC: U.S. Government Printing Office. Retrieved May 28, 2001.

Ololube, Prince. O. (2005). Teacher Education, School Effectiveness and Improvement: A Study of Academic and Professional Qualification on Teachers' Job Effectiveness in Nigerian Secondary Schools. PP. 71-72

Omaggio, Hadley, A. (1993). Teaching language in context. Boston: Heinle & Heinle.

O'Neil, H. F., Jr., Allred, K., and Dennis, R. A. (1992). Simulation as a Performance Assessment Technique for the Interpersonal Skill of Negotiation. CSE Tech. Report 343. Los Angeles: University of California Center for Research on Evaluation, Standards, and Student Testing.

Oser, F. (1991). Professional morality. A discourse approach (the case of the teaching profession). In kurtines, W & Gewirtz, J. (Eds.). Handbook of moral behavior and development. Volume 2: Research. New Jersey: Lawrence Erlbaum Associates.

Osre, F. (1994a). Moral perspectives on teaching. Review of research in education. Washington: American Educational Research Association. 20. 57-128.

Osterman, K. P., & Kottkamp, R. B. (2004). Reflective practice for educators: Improving schooling through professional development. Thousand Oaks, CA: Corwin Press

O'Sullivan, R. G., & Chalnick, M. K. (1991). Measurement-Related course work requirements for teacher certification and recertification. Educational Measurement: Issues and Practices, 10(1), 17–19.

Overall, J. U. & Marsh, H. W. (1979). Midterm feedback from students: Its relationship to instructional improvement and students' cognitive and affective outcomes, Journal of Educational Psychology, 72, pp. 321-325

Padilla, Bennie J. (1974). Follow-Up Study of Graduates from the 1973 Los Angeles City College Registered Nurse Program. ERIC: ED088556.

Papert, S. (2000). What's the big idea? Toward a pedagogy of idea power. IBM Systems Journal. 39(3/4), 720-729.

Papert, S. (2001). Jean Piaget. http://www.time.com/time/time100/scientist/profile/piaget.html

Parkes, J. (1997). "Performance Assessment and Student Motivation: Questioning Construct Relevant Variance." Paper presented at the Annual Meeting of the American Educational Research Association, Chicago, IL. (ERIC Document Reproduction Service No. ED 411 312).

Parks, Malcolm R. (1985). "Interpersonal Communication and the quest for Personal Competence." Handbook of Interpersonal Communication. Eds. Mark.

Parsons, T. (1966). Societies: evolutionary and comparative perspectives. Englewood Cliffs: Prentice-Hall.

Pauker, R. (1987). Teaching thinking and reasoning skills. In Brodinsky, Ben (Ed.), AASA Critical Issues Report. Arlington, VA: American Association of School Administrators. P. 27.

Passe, J. (1999. The elementary school curriculum (2nd Ed.). Boston: McGraw-Hill.

Paul, R. (1982). Teaching critical thinking in the 'strong' sense: A focus of self-deception, world views, and a dialectical mode of analysis. Informal Logic, 4, 3-7.

Paul, R., Binker, A., Jensen, K., & Kreklau, H. (1990). Critical thinking handbook: A guide for remodeling lesson plans in language arts, social studies and science. Rohnert Park, CA: Foundation for.

Paul, R. (1990). Critical thinking what every person needs to survive in a rapidly changing world. CA: Center for Critical Thinking and Moral Critique.

Park, J., & Staresina, L. N. (2004). Education Week. http://www.edweek.org/sreports/tc04/article.cfm?slug=35tracking.h23

Pass, G. W. C. (1999). The Teacher as Designer, Educational Technology Expertise Center Open University of the Netherlands. http://www.ou.nl/Docs/Expertise/OTEC/Projecten/onderzoeksvoorstellen%20PDF/voorstel_13_aho.pdf

Pearson, A.T. (1989). The teacher: Theory and practice in teacher education. New York: Routledge.

Parsons, M. & Stephenson, M. (2005). Developing reflective practice in student teachers: collaboration and critical partnerships. Teachers and Teaching: theory and practice, Vol. 11, No. 1, pp. 95–116

Peck, K., & Dorricott, D. (1994). Why use technology? Educational Leadership, 51. http://www.ascd.org/readingroom/edlead/9404/peck.html

Perrin, Donald G. (2005). A Comparative Analysis of Two Methods of Teaching Financial Accounting at Senior Secondary School, http://www.itdl.org/Journal/Nov_05/article03.htm

Petty, G. C. (1993). Development of the occupational work ethic inventory. Paper presented at the 1993 annual American Vocational Association meeting, Nashville, Tennessee.

Peutherer, R. (Sep.2001). Graduates' Ratings of Satisfaction in Australian Universities –An exploration of the relationship between graduate satisfaction and their responses to other questions in the Graduate Destination Survey/Course Experience Questionnaire. Reporting & Information Manager, Technology, Systems & Information Unit. University of Technology, Sydney. http://www.aair.org.au/2001Papers/paper_14.pdf

Piaget, J. (1954). Construction of reality in the child. New York: Basic Books.

Piaget, J. (1973). To understand is to invent. New York: Grossman.
Piascik P. (2002). What if we approached our teaching like we approach our research? Am J Pharm Educ. 66:461-2.
Piscitelli, B. (1989). Transactions in early childhood education - Module 3: Notes – Draft.
Plucker and et al. (Sep. 2004). A Follow-up Study of Three Cohorts of IUB Teacher Education Graduates. Indiana University Bloomington School of Education. http://www.indiana.edu/~tep/soe_alumni_study.pdf
Polland, Ronald J. (2002). Survey Evaluation of Former UNF Baccalaureate Graduates. University of North Florida. http://www.unf.edu/dept/inst-research/pgs.pdf
Posner, G. (1992). Analyzing the Curriculum. McGraw-Hill, Inc., pp.5, 9.
Prater, D., & MacNeil, A. J. (2001). The uses of computers for instruction in the classroom: A comparison of teachers' and principals' perceptions. Proceedings of the Society for Information Technology and Teacher Education (SITE) 12th Annual Conference (Association for the Advancement of Computing in Education), Orlando, FL, [CD], 2383-2389.
Prawatrungruang, P. (1998). Student Satisfaction in Thai Private and Public Vocational Schools in Bangkok. http://www.coe.ilstu.edu/eafdept/Thai/proposals/pattama.doc
President's Committee of Advisors on Science and Technology. (1997). Report on the use of technology to strengthen K-12 education in the United States. http://www.whitehouse.gov/WH/EOP/OSTP/NSTC/PCAST/k-12ed.html
Presseisen, B. Z. (1986). Critical Thinking and Thinking Skills: State of the art definitions and practice in public schools. Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, CA, (ED 268 536).
Prillaman, S. (2001). Instructional Technology at Guy B. Phillips Middle School. http://phillips.chccs.k12.nc.us/~sprillaman/
Provost, David P. (Feb.1998). The Issue of Educational Quality. http://www.gmu.edu/news/gazette/9802/potter.html
Pruden, Linda K. (1990). Listen to learn. Bedford, TX: GG Publishing.
Purpel, D. E. (1991). Moral education: An idea whose time has gone, The Clearing House. 64. 309-312.
Purpel, D., & Ryan K. (1976). Moral education: What is it and where are we? In D. Purpel and K. Ryan (Eds.). Moral education… it comes with the territory. Berkeley, CA: McCutchen Publishing Corporation. pp. 3-10.
Quinn, J. F. (1983). The work ethic and retirement. In Barbash, J., Lampman, R. J., Levitan, S. A., & Tyler, G. (Eds.), The work ethic: A critical analysis. Madison, Wisc: Industrial Relations Research Association. pp. 87-100.
Räsänen, R. & Sunnari, V. (2000). Ethical Challenges for Teacher Education and Teaching. Faculty of Education, University of Oulu. PP. 173-176
Räsänen, R. (2000) Ethics, education and teacher education. In: Kumpulainen K (ed) In search of powerful learning environments for teacher education in the 21st century. Acta Univ Oul E 39: 127 –136.
Rahn, M. L. (1995). Emerging National Influences in Education Policy. Doctoral Dissertation (unpublished). University of California at Berkeley.
Ramsden, P. (1991). A performance indicator of teaching quality in higher education: The course experience questionnaire, Studies in Higher Education, 16, pp. 129-150
Ranjan, N. & Rahman, N. (2002). Role of Teacher in Enhancing Learning Achievement of Child and Emphasis on Teacher Skill Development, Knowledge Building and ICT http://www.azimpremjifoundation.org/downloads/role_tech.pdf
Rains, J. (1998). Overview of Northern Kentucky University. School of Education, Highland Heights, Kentucky 41099-0800. http://www.nku.edu/~education/ncate/carreport.html
Reay, D. (1998) 'Always Knowing and Never Being Sure: Familial and Institutional Habituses and Higher Education Choices', Journal of Education Policy, 13(4), pp. 519-29.
Reed, S.J. (2000). The importance of professional development for teachers. Educational Horizons, 78, 117-118.
Rees CE, Garrud P. (2001). Identifying undergraduate medical students' attitudes towards communication skills learning: a pilot study. Med Teacher 2001;23:400–6. Reis-Bergan, M. (2003). On the distinction between the scholarship of teaching and scholarly

teaching. In W. Buskist, V. Hevern, & G. W. Hill, IV, (Eds.). Essays from e-xcellence in teaching, 2002 (Chap. 12). Retrieved [insert date] from the Society for the Teaching of Psychology. http://teachpsych.lemoyne.edu/teachpsych/eit/index.html

Reiser, R., & Dempsey, J. (2002). Trends and Issues in Instructional Design and Technology. New Jersey: Merrill Prentice Hall.

Reiser, R. A. (2001). A history of instructional design and technology. Part I: A history of instructional media. Educational Technology Research & Development, 49(1), 53-64.

Resnick, L. (1987). Education and learning to think. Washington, D.C.: National Academy Press. PP. 34-35.

Reynolds, D. and Muijs, R.D. (1999). The effective teaching of mathematics: a review of research. School Leadership and Management, 19(3), 273-88

Rice, M. L. & Wilson, E. K. (1999). Says 1998 in text on pg. 19/20 How technology aids constructivism in the social studies classroom. Social Studies. 90(1), 28-33.

Rice, J.K. (2003). Teacher quality understanding the effectiveness of teacher attributes. Washington, D.C.: Economic Policy Institute. Retrieved September 18, 2003 from http://epinet.org/content.chm/books_teacher_quality_execsum_intro

Richardson, John T. E. (2005) 'Instruments for obtaining student feedback: a review of the literature', Assessment & Evaluation in Higher Education, 30:4, 387 — 415

Riel, M., (1994) Educational change in a technology-rich environment. Journal of Research on Computing in Education, Vol. 26.

Rika. Spungin, (1996). First- and Second-Grade Students Communication in Mathematics. Teaching Children Mathematics, December, v 3, n 4, pp174-79.

River, D. (2002). The Seven Challenges A Workbook and Reader About Communicating More Cooperatively. http://www.newconversations.net/w7a2intr.htm

Rivkin, S.G., E.A. Hanushek, and J.F. Kain. (1998). "Teachers, Schools and Academic Achievement." Paper presented at the Association for Public Policy Analysis and Management, New York City

Roberts, M. (2005). Program and Curriculum Planning in CTE. http://jan.ucc.nau.edu/~mr/cte592/

Roblyer, M.D. (2003). Integrating educational technology into teaching. (3rd Ed.). Columbus, OH: Merrill Prentice Hall.

Roblyer, Edwards, and Havriluk, M.D., Edwards, Jack, & Havriluk, Mary Anne (1997) Integrating Educational Technology into Teaching, Merrill, Upper Saddle river, NJ.

Roblyer, M., & Edwards, J. (2000). Integrating educational technology into teaching (2nd ed.). Columbus, OH: Prentice Hall.

Roblyer, M.D. (2003). Integrating educational technology into teaching. (3rd Ed.). Columbus, OH: Merrill Prentice Hall.

Roche, L.A., & Marsh, H.W. (2002). Teaching self-concept in higher education. In N. Hativa & P. Goodyear (Eds.), Teacher thinking, beliefs and knowledge in higher education (pp. 179-218). London: Kluwer Academic Publishers

Rodgers, D. T. (1978). The work ethic in industrial America, 1850-1920. Chicago: The University of Chicago Press.

Rohn, Charles A. (Sep. 2005). EIU Teacher Graduates. Connections: College of Education and Professional Studies Newsletter. Eastern Illinois University. http://www.eiu.edu/~cepsnews/Archived%20Issues/September2005.pdf

Rolheiser, C. & Ross, J. (2000). Student evaluation- What do we know? Orbit. 30 (4), 33-36.

Roodt, K. (1997).A Reliability and Validity Study on the Discus Personality Profiling System. http://www.axiomsoftware.com/disc/validity.asp

Ropp, M. M., (1999). Visions of the past, present and future: Exploring the diversity of pre-service teachers' experiences with technology. Paper presented at the annual meeting of the American Educational Research Association (AERA), Montreal, Canada.

Rose, M. (1985). Reworking the work ethic: Economic values and socio-cultural politics. London: Schocken.

Rosen, J. (2000). The unwanted gaze: The destruction of privacy in America. New York: Random House.

Rosenshine, B., & Stevens, R. (1986). Teaching functions. In M. C. Wittrock (Ed.), Handbook of research on teaching (Third Edition, pp. 376-391). New York: Macmillan.

Rosenthal J, Ogden J. (1998). Changes in medical education: the beliefs of medical students. Med Educ;32:127–32.
Ruben, Brent D. (1976). "Assessing Communication Competency for Intercultural Adaptation". Group and Organizational Studies. 1.3 Pp. 334-54.
Rubin, Rebecca B. (1981). Conceptualizing Communication Competence: Direction for research and Instruction.
Rugg, H. O. (1947). Foundations for American Education, 1st edn. World Book Company, Yonkers-on-Hudson, New York
Russell, T. (1988). From pre-service teacher education to first year of teaching: a study of theory and practice. In J. Calderhead (Ed.), Teachers' professional learning. London: Falmer Press
Ryan, K. (1975). Some feedback is better than other: Implication of a study of first year teachers for the follow - up teacher education graduates. (ERIC, No .ED 204328).
Ryan. K. (1993). Why a center for the advancement of ethics and character. Journal of Education, 175(2), 1-11.
Saari, S. (2003). Saatu ennakkotieto 21.3.2003 Korkeakoulujen arviointineuvoston suorittamasta arvioinnin seurannasta. [Advance information provided on 21st March 2003 on the follow-up of evaluation carried out by the Higher Education Evaluation Council. In Finnish]
Sackett, P. R. (1987). Assessment centers and content validity: Some neglected issues. Personnel Psychology, 40, 13-25.
Saettler, P. (1968). A history of instructional technology. New York: McGraw-Hill Book Company.
Saettler, P. (1990). The evolution of American educational technology. Englewood, CO: Libraries Unlimited Inc.
Sanders, J. R., & Vogel, S. R. (1993). The development of standards for teacher competence in educational assessment of students, in S. L. Wise (Ed.), Teacher training in measurement and assessment skills, Lincoln, NB: Burros Institute of Mental Measurements.
Sanders, L. Burton, J. D., & Chan, S. (1994, May). From retention to satisfaction: New outcomes for assessing the freshman experience. Paper presented at the annual meeting of the Association for Institutional Research, New Orleans, and LA.
Sandholtz, J. H., Ringstaff, C., & Dwyer, D. C. (1997). Teaching with technology: Creating student-centered classrooms. New York: Teachers College Press.
Sandholtz, J.H. (2000). Interdisciplinary team teaching as a form of professional development. Teacher Education Quarterly, 4, 26-29.
Sandholtz, J.H., & Dadlez, S.H. (2000). Professional development school trade-offs in teacher preparation. Teacher Education Quarterly, 21, 7-27.
Santiago, P. (2005). Teachers Matter: Attracting, Developing and Retaining Effective Teachers. http://www.oecd.org/dataoecd/3/8/34391276.ppt
Santiago, P. (2002). Teacher Demand and Supply: Improving Teaching Quality and Addressing Teacher Shortages. OESD Education Working Paper No. 1. P. 8
Saskatchewan Education (1991). Instructional Approaches: A Framework for Professional Practice. http://www.sasked.gov.sk.ca/docs/policy/approach/
Saskatchewan Institute of Applied Science and Technology (1999). 1997 Aboriginal Graduate Employment Report. http://www.siast.sk.ca/departments/prd/docs/9904.pdf
Saskatchewan Institute of Applied Science and Technology (1998). 1996 Graduates Employment statistics Report. http://www.siast.sk.ca/departments/prd/docs/9913.pdf
Sass. (2004). Teacher as Decision-Maker Conceptual Framework, http://www.csbsju.edu/education/academic/conceptualmodel.htm
Saylor, J. Galen, and et al. (1981). Curriculum planning for better teaching and learning, 4th Ed. New York: Holt, Rinehart and Winston.
Schacter, J. (2001). The impact of education technology on student achievement: What the most current research has to say. Santa Monica, CA: Milken Exchange on Education Technology.
Schafer, W. D. (1991). Essential assessment skills in professional education of teachers. Educational Measurement: Issues and Practice, 10, (1), 3-6.

Schafersman, S.D. (1991). An Introduction to Critical Thinking. http://www.freeinquiry.com/critical-thinking.html

Schamel, D. and Ayres, M. (1992). "The hands-on approach: Student creativity and personal involvement in the undergraduate science laboratory." Journal of College Science Teaching 21: 226-229.

Schank, R. & Cleary, C. (1994). Engines for education [Online]. http://www.ils.nwu.edu/~e_for_e/nodes/I-M-INTRO-ZOOMER-pg.html.

Scherr L. A., Schwoerer C. E. (1995). "Continuous Improvement in Education: The Process of Learning in an Introductory Statistics Class". In Roberts, H. V. (ed.), Academic Initiatives in Total Quality for Higher Education, ASQC Quality Press, Milwaukee: pp. 453-469.

Schissel, B.; Zong, Li. & Nelson, J. (June.2000). Survey of University of Saskatchewan 1994 Graduates, 2000 A Reports Submitted to the Planning Committee of Council University of Saskatchewan. http://www.usask.ca/university_council/planning/usgsurvey.pdf

Schoenfeld, A. H. (1991). On mathematics as sense-making: an informal attack on the unfortunate divorce of formal and informal mathematics. In D. N. Perkins, J. Segal, and J. Voss (Eds.), Informal reasoning in education. Hillsdale, NJ: Erlbaum.

Schrage, M. (1990). Shared Minds: The Technologies of Collaboration. New York: Randon House.

Schrum, L (1995) Educators and the Internet: a case study of professional development, Computers and Education, 24, 3, 221–228.

Schubert, W. H. (1986). Curriculum: perspective, paradigm, and possibility. New York: Macmillan.

Schwab, J. J. (1969). The practical: A language for curriculum. School Review (76), pp. 1-23.

Sc0ttish CCC (1999). Designing for Progression: A Practical Guide to Curriculum Planning. http://www.ltscotland.org.uk/Images/part1_tcm4-122187.pdf

Scott DM, Roche EB, Augustine SC, Robinson DH, Ueda CT. (2001). Assessment of students' abilities and competencies using a curriculum mapping procedure. Am J Pharm Educ. 65(suppl):XXS.

Seels, B. B, & Richey, R.C. (1994). Instructional technology: The definition and domains of the field. Washington, DC. The Association for Educational Communications and Technology. http://www.ittheory.com/define.htm)

Seels, B. B., & Richey, R. C. (1994). Instructional technology: The definition and domains of the field. Washington, DC: Association for Educational Communications and Technology. Pp. 12-45.

Seels, B. & Richey, R.C. (1994). Redefining the Field - A Collaborative Effort. Tech Trends, March

Seitz, R. (1999). Short Paper: Cognitive Apprenticeship. http://chd.gmu.edu/immersion/knowledgebase/strategies/constructivism/CognitiveApprenticeship.htm

Seldin, P. (1993). Improving and evaluating teaching. Paper presented at the American Council on Education Department Chairs Seminar, Washington, DC.

Seldin, P. (1993). The use and abuse of student ratings of professors, Chronicle of Higher Education, 39(46), p. A40

Seldin, P. (1989). Using student feedback to improve teaching, in: A. F. LUCAS (Ed.) The Department Chairperson's Role in Enhancing College Teaching. New Directions for Teaching and Learning, Vol. 37, pp. 89-97 (San Francisco, Jossey-Bass)

Seldin, P. (1984). Changing Practices in Faculty Evaluation (San Francisco, Jossey-Bass)

Sells, Suzanne. G. (2003). Teacher as Educator, http://students.ou.edu/S/Suzanne.G.Sells-1/artifact1.htm

Sells, Suzanne. G. (2004).Teacher as communicator, http://students.ou.edu/S/Suzanne.G.Sells-1/artifact4.htm

Seppala, K. (2002). Evaluation of Adult Education at the University of Turku, Finland. http://distance.ktu.lt/thenuce/ebook/Chapter_9/2903.html

Shavelson, R. J. & Towne, L. (2002). Scientific research in education. Washington, DC: National Academy Press.

Shavelson, R. J, Webb, N. M., & Rowley, G. (1989). Generalizability theory. American Psychologist, 922-932.

Shavelson, R. J., Mayberry, P., & Li, W. (1990). Generalizability of military performance measurements: Marine Corps Infantryman. Military Psychology.

Sheingold, K. & Hadley, M. (1990). Accomplished teachers: Integrating computers into classroom practice. New York: Center for Technology in Education, Bank Street College of Education.

Sherard, Austell O. (1976). Follow-up Study, IVTC Graduates, 1973-74 School Years. ERIC: ED124259.

Shields. Jennifer A. (2001). Follow –Up Survey of PVCC Graduates of the Class of 1999-2000. http://www.gseis.ucla.edu/ERIC/abstracts/JC010621.htm

Shields, Jennifer A. (2002). Follow-up Survey of Piedmont Virginia Community College Graduates of the Class of 2000-01. ERIC: JC020507.

Shields, M. K., & Behrman, R. E. (2000). Children and computer technology: Analysis and recommendations. In the David and Lucille Packard Foundation (Ed.), The future of children: Children and technology (pp. 4-30). Los Altos, CA: The David and Lucille Packard Foundation.

Shroyer, J. (1981). Critical moments in the teaching of mathematics: What makes teaching difficult? Unpublished doctoral dissertation, Michigan State University, East Lansing.

Sichel, B. A. (1991). Virtue and character: Moral languages and moral education. The Clearing House. 64(4), 297-300.

Shulman, L. S. (1987). Knowledge and teaching: Foundations of the new reform. Harvard Educational Review, 57, 1-23.

Shulman, L. S. (1986). Those who understand: knowledge growth in teaching. Educational researcher, 15(2), 4-14

Siegel, H. (1988). Educating reason: Rationality, critical thinking, and education. New York: Rout ledge.

Silverman, B. (2001). 1998 Alumni: Two – Year Post – Graduation. Insights on the college. Vol 12, No. 3. http://www.mtsac.edu/college/institution/research

Simon, H. A. and C. A. Kaplan (1989). In MI. Posner (Ed), Foundations of cognitive sciences. Cambridge, MA, MIT Press: 1-47.

Simonson & Russo-Converso. (Unknown). Managing the Mandate: Role of the Teacher in Distance Education. http://www.icte.org/T01_Library/T01_203.PDF

Sivin-Kachala, J. (1998). Report on the effectiveness of technology in schools, 1990-1997. Washington, DC: Software Publisher's Association.

SJSU. (2003). Domains of Instructional Technology. Schematic from University of Potsdam. http://www2.sjsu.edu/depts/it/edit188/IT%20270/domainsit.pdf

SJSU Instructional Technology Program Evaluation (2000). San Jose State University Instructional Technology Program Evaluation report. Fall 2000. http://sweeneyhall.sjsu.edu/depts/it/iteval00b.pdf

Smart, J. C. (1987). Student satisfaction with graduate education. Journal of College Student Personnel, 28(3), 218-222.

Smith, C. (1998). How can Parents model good listening skills? [On-line]. ACCESS ERIC. Number RI890120. Listening Skills.

Smith, B. O, Stanley, W. O. and Shores, J. H. (1957). Fundamentals of Curriculum Development, rev. edn. Harcourt, Brace and World, New York.

Smoot, Sharene L. (2003). Follow Up Study: John H. Lounsbury School of Education Field-Based Program Graduates Now Teaching in Partner and Professional Development Schools of Georgia College and State University. (ERIC Document Reproduction Service No. 481 052).

SMSU Office of Institutional Research, (2001). Graduating Student Satisfaction Survey Results 5/2001. Office of Institutional Research.

http://www4.semo.edu/insresearch/Surveys/graduating_student_satisfaction_May01.htm

Smylie, M. A., Bay, M., & Tozer, S. E. (1999). Preparing teachers as agents of change. In G. Griffin (Ed.), The education of teachers: Ninety-eighth yearbook of the National Society in the Study of Education (pp. 29-65). Chicago: The University of Chicago Press.

Sockett, H. (1993). The moral base for teacher professionalism. New York: Teacher College Press.

Sockett, H. (1990). Accountability, trust. and ethical codes of practice. in J. Goodlad, R. Soder, and K. Sirotnik (Eds.), The moral dimensions of teaching (PP. 224-250). San Francisco. CA: Jossey-Bass.

Soltis, J. & Strike, K. (1985). The ethics of teaching. New York: Teacher College Press.

Sosniak, L. A. (1999). Professional and subject matter knowledge for teacher education. In G. A. Griffin (Ed.), The education of teachers: Ninety-eighth yearbook of the National Society in the Study of Education (pp. 184-204). Chicago: The University of Chicago Press.

Spanbaure S. J. (1999). Reactivating higher education with TQM, Total quality management, Vol 6. No. 5 & 6, pp. 519-538.

Sparks, D. (2000). High Powered professional development for high poverty schools. Principal Leadership, 1(4), 26-29.

Sparks, D., & Hirsh, S. (1997). A new vision of staff development. Oxford, Ohio : National Staff Development Council.

Spltzberg, Brian H. and H. Tomas Hurt, (1987). "The Measurement of interpersonal skills in instructional contexts". Communication Education 36.1. Pp. 28-45.

Springer, L., M.E. Stanne, and S. Donovan. (1998). Effects of small-group learning on undergraduates in science. mathematics. engineering. and technology: A meta-analysis. Madison, WI: National Institute for Science Education.

SSU Office of Institution Research, Assessment and Accountability (Oct.2000). A Report on the Year 2000 Alumni Survey of 1998-1999 Baccalaureate Degree recipients. The Salisbury State University. http://www.salisbury.edu/iara/ReportsDocuments/Report.pdf

Stahl, G, Sumner, T and Owen, R (1995) Share globally, adapt locally: software assistance to locate and Taylor curriculum posted to the Internet, Computers and Education, 24, 3, 237–246.

Standards for teacher competence in educational assessment of students. (1990). American Federation of Teachers, National Council on Measurement in Education, National Education Association. http://www.unl.edu/buros/article3.html

Standards for educational and psychological testing (1999). Washington, DC: American Educational Research Association, American Psychological Association, National Council on Measurement in Education.

Starratt, R. (1994). Building an ethical school: A practical response to the moral crisis in schools. London: Flamer press.

Stecher, B. M., and Herman, J. (1997). "Using Portfolios for Large- Scale Assessment." In G. D. Phye (ed.), Handbook of Classroom Assessment. San Diego: Academic Press.

Stecher, B. M.; Rahn, M. L.; Ruby, A.; Alt, M. N.; Robyn, A.; and Ward, B. (1997) Using Alternative Assessment in Vocational Education. Berkeley: National Center for Research in Vocational Education, University of California. (ERIC Document Reproduction Service No. ED 400 465).

Stephens, Karen. (1996). the child care professional. Peoria, IL: Glencoe/McGraw-Hill.

Steven J. McGriff. (2000). Instructional System Design (ISD): Using the ADDIE Model. College of Education, Penn State University

Stiggins, R. J. (2000). Classroom assessment: A history of neglect, a future of immense potential. Paper presented at the Annual Meeting of the American Educational Research Association.

Stiggins, R. J. (1992). High quality classroom assessment: What does it really mean? Educational Measurement: Issues and Practice, 11(2), 35–39.

Stiggins, R. J. (1997). Student-centered classroom assessment (2nd ed.). Upper Saddle River, NJ: Prentice-Hall.

Stiggins, R. J. (2001). Student-involved Classroom Assessment 3rd edition. Upper Saddle River, New Jersey. Merrill-Prentice Hall.

Stiggins, R.J. (June, 2002). Assessment crisis: The absence of assessment for learning. Phi Delta Kappan. 83 (10), 758-765.

Stiggins, R. J., & Conklin, N. F. (1992). In teachers' hands: Investigating the practices of classroom assessment. Albany, NY: State University of New York Press, Albany.

Stiggins, R. J. (1987). Design and development of performance assessments. Educational Measurement: Issues and Practice, 6(3), 33-42.

Stodolsky, S. (1988). The subject matters: Classroom activity in math and social studies. Chicago: University of Chicago Press.

Strike. K., Haller, E. & Soltis. J. (1998). The ethical of school administration. New York: Teachers College Pres.

Strike. K., & Soltis, J. (1985). The ethical of teaching: New York: Teachers College Pres.

Strike. K., & Ternasky, L. (1993). Ethical for professional in education . Perspectives for preparation and practice. New York: Teachers College Press.

Strommen, E. F. & Lincoln, B. (1992). Constructivism, technology, and the future of classroom learning. Education & Urban Society. 24(4), 466-476.

Sullivan and et al. (1996). Delivering Effective Lectures, U.S. Agency for International Development, http://www.reproline.jhu.edu/english/6read/6training/lecture/sp605web.pdf

SUNJ Office of Institutional Research & Academic Planning, (1997). 1997 Graduating Student Opinion Survey. http://oirap.rutgers.edu/surveys/unexp/GSOS.pdf

SUU Office of Institutional Research, (Oct. 2000). How Satisfied are Graduates of Southern Utah University? http://www.suu.edu/general/ir/satisfied.html

Sven-Erik, H. (1999). Teacher Education in Finland - updating the 1996 SIGMA report. TNTEE Publications Volume 2, Nr 2, December 1999, PP. 106-107

Swanson, D., Norcini, J. & Grosso, L. (1987). Assessment of clinical competence: Written and computer-based simulations. Assessment and Evaluation in Higher Education, 1; l, 220-246.

Sypher, Bevely Davenport (1984). "The Importance of Social Cognitive Abilities in Organizations". Robert Bostrom, Beverly Hills, CA: Sage.

Taba, H. (1962). Curriculum Development: Theory and Practice. Harcourt, Brace and World, New York.

Tanner, D. Tanner, L. N. (1975). Curriculum Development: Theory into Practice. Macmillan, New York.

Tardif, J. (1998). Intégrer les nouvelles technologies de l'information. Quel cadre pédagogique? Paris, ESF.

Tawney, R. H. (1958). Forwards. In Talcott Parsons (Trans), The Protestant Ethic and the spirit of capitalism. New York: Scribner's and Sons. PP. 1-11.

Taylor, P. & Maor, D. (2000). Assessing the efficacy of online teaching with the Constructivist On-Line Learning Environment Survey. In A. Herrmann and M.M. Kulski (Eds.), Flexible futures in tertiary teaching. Proceedings 9th Annual Teaching Learning Forum, 2-4 February 2000. Perth: Curtin University of Technology. http://lsn.curtin.edu.au/tlf/tlf2000/taylor.html

Taylor, Patricia D. M. (Dec. 2004). Perspectives of Teacher Education Graduates about Their Cooperating Teachers during Preservice Placements. A dissertation presented to the faculty of the Department of Educational Leadership and Policy Analysis. East Tennessee State University.

Teh, G. P. L., & Fraser, B. J. (1995). Development and validation of an instrument for assessing the psychosocial environment of computer-assisted learning classrooms. Journal of Educational Computing Research, 12, 177-193.

Terenzini, P.T., and et al. (2001). Collaborative learning vs. lecture/ discussion: Students' reported learning gains. Journal of Engineering Education. 90(1): 123–130.

Terenzini, T. Springer, L., Pascarella, E., & Nora, A. (1994). The Multiple Influences of College on Students' Critical Thinking Skills. Paper presented at the meeting of the Association for the Study of Higher Education, Tucson, AZ, November 1994.

The Central Washington University, (1997). 1997 Survey of 1995-96 Alumni. http://www.cwu.edu/~ir/Surveys/surv97_9596alum.html

The Code of Ethics for Idaho Professional Educators (2003 & 2004). The Professional Standards Commission. (IDAPA 08.02.02.076).

Thompson, S. (2003). Curriculum Management Plan. Jerome School District # 261. 23 http://www.d261.k12.id.us/NewCurriculum/Documents/Curr%20Management%20Plan%202005.pdf

The National Board of Education. (2004). The Development of Education. National report of Finland. http://www.ibe.unesco.org/International/ICE47/English/Natreps/reports/finland.pdf

The University Presidents' Council of British Columbia (2001). BC University Student Outcomes, Class of 1996: Five Years after Graduation.

http://www.tupc.bc.ca/graduate_outcomes/graduate_followup_survey_2001/highlights2001.pdf

Tiberius, R. G., Sackin, D. H., Slingerland, J. M., Jubas, K., Bell, M. & Matlow, A. (1989). The influence of student evaluative feedback on the improvement of clinical teaching, Journal of Higher Education, 60, pp. 665-681

Tickton, S. G. (1971). To improve learning: An evaluation of instructional technology (Vol. 1). New York: R.R. Bowker.

Tom, A. (1984). Teaching as a moral Craft. New York: Longman.

Tomei, L.A., (1997). Instructional technology: Pedagogy for the future. T.H.E. Journal-Online. http://www.duq.edu/~tomei/pedagogy/

Towne, L. (2002). The logic and the basic principles of scientific based research. Presentation given at a seminar on the use of scientifically based research in education, Washington, DC.

Traub, J. (1999). Better by design? A consumer's guide to school reform. The Thomas B. Fordham Foundation. http://www.edexcellence.net/library/bbd/better_by_design.html

Tri-UTC Institutional Effectiveness Assessments, (1999). Institutional Effectiveness Summary Report – 1999. http://www.tctc.edu/instdev/1999.html

Tri-UTC Institutional Effectiveness Assessments, (2000). Institutional Effectiveness Summary Report – 2000. http://www.tctc.edu/instdev/2000.html

Tri-UTC Institutional Effectiveness Assessments, (2001). Institutional Effectiveness Summary Report – 2001. http://www.tctc.edu/instdev/2001.html

Tri-UTC Institutional Effectiveness Assessments, (2002). Institutional Effectiveness Summary Report – 2002. http://www.tctc.edu/instdev/2002.html

Tri-UTC Institutional Effectiveness Assessments, (2006). Institutional Effectiveness Summary Report – 2006. http://www.tctc.edu/visitors_media/college_information/instdev/iesummary06.htm

Trinidad, S., Macnish, J., Aldridge, J., Fraser, B. & Wood, D. (2001). Integrating ICT into the learning environment at Sevenoaks Senior College: How teachers and students use educational technology in teaching and learning. Paper presented at the annual conference of the Australian Association for Research in Education, Perth, December. http://www.aare.edu.au/01pap/ald01027.htm

Trinity College (2004). The Instructional Technology Primer. http://www.trincoll.edu/depts/cc/documentation/fachbk/primer/index.html

Tyler, R. W. (1975). Have educational reforms since 1950 created quality education? Viewpoints, 51(2), 35-57.

Tyler, R. W. (1949). Basic Principles of Curriculum and Instruction. Chicago: University of Chicago Press.

UG Department of Science Education, (Nov.2000). Undergraduate Major for which assessment results are reported: Secondary science. http://ncate.coe.uga.edu/programs/science/assessment/ncatefile.728.html

UH Office of vice president for planning & policy, (Oct.2001). University of HAVAI'I – West O'AHU Survey of recent Graduates – spring 2001. http://socrates.uhwo.hawaii.edu/SocialSci/oshiro/html/assessment/documents/surveys/alumsp01/alumsp01.PDF

UMD Department of Education, (2002). Survey of Graduates 2000. http://www.d.umn.edu/educ/ncate/standards/standard2/graduates_survey.doc

UNESCO, (1996). Learning: the treasure within. Paris: UNESCO.

U. S. Congress, Office of Technology Assessment (1992). Testing in American Schools: Asking the Right Questions. Office of Technology Assessment.

U.S. Department of Labor Report (1995). Career Projections to 2005: Fastest Growing Careers. Chevy Chase, MD.

United States Department of Defense Training Document, (1975). Pamphlet 350-30.

University of Georgia (2002). Department of Instructional Technology website. http://it.coe.uga.edu/program.htm

University of Northern Iowa. (2000). INTIME: Integrating new technologies into the methods of education. Retrieved December 2, 2001, www.intime.uni.edu

UTA Office of Graduate Studies (1997). Graduate Studies: Quality of Indicators. The University of Texas at Austin. http://www.utexas.edu/ogs/quality/student.html

U.T. a Team Research (2001). Summary Of The Psychology Alumni Survey. http://www.psy.utexas.edu/psy/ALUMNI/survey.html

U.T. a Team Research (2001). Summary Of The Psychology Alumni Survey. http://www.psy.utexas.edu/psy/alumni/survey2005.html

UW-Stout Budget, Planning and Analysis (2000). UW-Stout Graduate and Undergraduate Follow-Up Surveys Conducted in spring 2000. http://www.uwstout.edu/bpa/ir/gfu/gs2000.htm

Välijärvi, J. (toim.) (2000). Koulu maailmassa – maailma koulussa. Haasteet yleissivistävän opetuksen ja opettajankoulutuksen tulevaisuudelle. Opettajien perus- ja täydennyskoulutuksen ennakointihankkeen (OPEPRO) selvitys 9. Opetushallitus. Helsinki. [VÄLIJÄRVI, J. (ed.) (2000). School in the world – the world in school. Future challenges for general education and teacher training. Anticipatory project to investigate teachers' initial and continuing training needs (OPEPRO), report 9. National Board of Education. Helsinki. Summary available in English]

Valker, C. & Branch, K. (1999). Results of NBCC Graduates Follow-Up Survey (99-09-27). New Brunswick Community College. http://www.gnb.ca/education/docs/colleges/99/3y.pdf

Van Dijk, S. (1989). Talking in the writing conference. In A Sea of Talk. Rozelle, Australia: Primary English Teaching Association.

Van D. Vleuten CPM, Dolmans DHJM, Scherpbier AJJA. (2000).The need for evidence in education. Med Teach. 22:246-50.

Van Es, E. A., & Sherin, M. G. (2002). Learning to notice: Scaffolding new teachers' interpretations of classroom interactions. Journal of Technology and Teacher Education, 10, 571-576

VanLeuvan, P. (1997). Using concept maps of effective teaching as a tool in supervision, Journal of Research and Development in Education, 30 (4), pp. 261–277

Vannatta, R. A. (2000). Evaluation to planning: Technology integration in a school of education. Journal of Technology and Teacher Education, 8(3), 231 246.

VCU Institutional research and Evaluation, (Nov.2001). Satisfaction with Education Support Services Recent Graduate Surveys Undergraduate Classes of 1994, 1996 and 1998. http://www.vcu.edu/ireweb/reports/stuindex.htm#studsatis

Viennot, L. (2001, August). Relating research in didactics and actual teaching practice: Impact and virtues of critical details. Paper presented at the 3rd conference of the European Science Education Research Association, Thessaloniki, Greece.

Villa, R.A., Thousand, J.S., & Chapple, J.W. (1996). Preparing teachers to support inclusion: Pr-eservice and in-service programs. Theory into Practice, 35, 42-50.

Villegas-Reimers, E. & Reimers, F. (2000). Professional development of teachers as lifelong learning: Models, practices and factors that influence it http://www7.nationalacademies.org/bicse/Villegas_Reimers.pdf

Villegas-Reimers, E. (2003). Teacher professional development: an international review of the literature. International Institute for Educational Planning. UNESCO 2003. pp. 20-22 http://unesdoc.unesco.org/images/0013/001330/133010e.pdf

Wachtel, H. K. (1994). A critique of existing practices for evaluating mathematics instruction. Doctoral dissertation, University of Illinois at Chicago, Dissertation Abstracts International, 56, p. 0129. WILSON, R. C. (1986) Improving faculty teaching: Effective use of student evaluations and consultants, Journal of Higher Education, 57, pp. 196-211.

Wachtel, H. K. (1998). "Student evaluation of college teaching effectiveness: A brief review." Assessment and Evaluation in Higher Education, 23 (2), 191-211

Walker, S. (2002). Insight: Distance education learning environments survey. [viewed 10 Jan 2003, verified 15 Jan 2005] http://insight.southcentralrtec.org/ilib/delesa/delesainfo.html

Walsh, D., & Paul, R. (1988). The goal of critical thinking: From educational ideal to educational reality. Washington, D.C.: American Federation of Teachers.

Walton, R. E. (1974). Alienation and innovation in the workplace. In J. O'Toole (Ed.), Work and the quality of life (pp. 227-245). Cambridge, Mass.: MIT Press.

Walleri, Dan R. (1981). Three Year Follow-Up Study, 1977-1978. Opinions from 1977-78 Graduates and Former Full-Time Students. ERIC: ED212314.

Walsh, E. Michael & Reynolds, R. John (1976). The School of Technical Careers Baccalaureate Program: A Follow-Up Study of Graduates of 1974 and 1975. ERIC: ED170494.

Walsh, D., & Paul, R. (1988). The goal of critical thinking: From educational ideal to educational reality. Washington, D.C.: American Federation of Teachers. P.49.

Warburton, E. and Torff, B. (2005). The effect of perceived learner advantages on teachers' beliefs about critical-thinking activities. Journal of Teacher Education, 01-Jan 2005. http://goliath.ecnext.com/coms2/gi_0199-3567728/The-effect-of-perceived-learner.html

Wardlow, G., & Johnson, D. (1999). Level of teaching skills and interest in teaching improvement as perceived by faculty in a land-grant college of agriculture. Journal of Agricultural Education, 40(4), 47-56.

Waxman, H.C., Connell, & J. Gray (December 2002). Meta-analysis: effects of educational technology on student outcomes. North Central Regional Education Laboratory. Available: http://www.ncrel.org/tech/effects/

Weber, M. (1904, 1905). Die protestantische ethik und der geist des kapitalismus. Archiv fur sozialwissenschaft. 20-21. Translated by T. Parsons. The protestant ethic and the spirit of capitalism. New York: Charles Scibner's Sons.

Weber, E. (1999).Student Assessment that Works: A Practical Approach. Boston: Allyn and Bacon.

Webster's II New Riverside Dictionary (1984). New York: Berkley Books. p176.

Webster's Encyclopedic Unabridged Dictionary (2003). New York: Gramcy Books.

Weinstein, C. (1989). Teacher education students' preconceptions of teaching, Journal of Teacher Education 40 (2), pp. 53–60

Wenglinsky, H. (1998). Does it compute? The relationship between educational technology and student achievement in mathematics. Princeton, NJ: Educational Testing Service Policy Information Center.

Westbury, I. and Steimer, W. (1971). Curriculum: A discipline in search of its problems. Sch. Rev. 79: 243-67.

Western State College, (2003). 1999-2004 Strategic Plan. http://www.western.edu/acadaff/strategicplan/purposeofInstructionaltech

Wheeler, M. M., and Feghali, I. (1983). Much ado about nothing: Preservice elementary school teachers' concept of zero. Journal for Research in Mathematics Education, 1(3), 144-155

Whelchel, N. (Sep.2002). North Carolina State University 2001-2002 Graduating Senior Survey: College Comparisons of Academic Environment. http://www2.acs.ncsu.edu/UPA/survey/reports/gss02/gss02over.htm

Whitehead, W. John. (2002). TEACHERS' RIGHTS IN PUBLIC EDUCATION. A Publication of the Rutherford Institute™ With a Special Introduction http://www.rutherford.org/Resources/Pamphlets/Teachers_Rights_Education.pdf

Whittier, D. (2005). The teacher as software developer: Contemporary Issues in Technology and Teacher Education [Online serial], 5(1) http://www.editlib.org/index.cfm/files/paper_6255.pdf?fuseaction=Reader.DownloadFullText&paper_id=6255

Wiemann, John M. (1977a). A Description of Competent and Incompetent Communication Behavior. ED 147902.

Wiemann, John M. (1977b). "Explication and Test of a Model of Communication Competence". Human Communication Research. 3.3 Pp. 195-213.

Wiggins, G. P. (1993). Assessing Student Performance: Exploring the Purpose and Limits of Testing. San Francisco: Jossey-Bass Publishers.

Wild, Nancy. (2001). Student Satisfaction Survey: Winter 2001. Rogue Community College Redwood and Riverside Campuses. Management Report. ERIC: JC020277.

Wild, M and Stoney, S (1998) Motivation and interface design: maximizing learning opportunities, Journal of Computer Assisted Learning, 14, 1, 40–50.

Wiles, J. and Bondi, J. (2002). Curriculum Development: A Guide to Practice. 6th Ed. Upper Saddle River, N.J: Merrill/Prentice Hall.

Wilmore, D., & Henrickson, L. (2001). Establishing a Community of Learners: the use of information technology (IT) as an effective learning tool in rural primary or elementary schools. Educational Technology & Society. http://ifets.ieee.org/periodical/vol_3_2001/discuss_summary_april2001.html

Wilson, Julie Anne (1997). A program to develop the listening and speaking skills of children in a first grade classroom. Research Report, 44 pages. (ED415566).

Wilson, L. O. (1990 and 2004). Curriculum course packets ED 721 & 26, unpublished.

Wilson, R. C. (1986). Improving faculty teaching: Effective use of student evaluations and consultants, Journal of Higher Education, 57, pp. 196-211.

Wilson, Suzanne M. (2002). Teacher preparation research: an insider's view from the outside. Journal of Teacher Education, 01-MAY-02. http://goliath.ecnext.com/coms2/summary_0199-1696982_ITM

Wilson, S. M., Shulman, L. S., & Richert, A. E. (1987). '150 different ways' of knowing: representations of knowledge in teaching. In J. Calderhead (Ed.), Exploring teachers' thinking (pp. 104-124). London: Cassell

Wilson, S. M. (1988). Understanding historical understanding. Unpublished doctoral dissertation, Stanford University.

Wilson, S. M., and Wineburg, S. (1988). Peering at American history through different lenses: The role of disciplinary knowledge in teaching. Teachers College Record, 89, 525-540.

Winsor, J.L., Curtis, D.B., & Stephens, R.D. (1997). National preferences in business and communication education: A survey update. Journal of the Association for Communication Administrators, 3, pp. 170-179.

Wise, A. E., Leibbrand, J. A., & Williams, B. C. (1997). NCATE.s response to critical issues in teacher preparation. Action in Teacher Education, 19, l-6.

Wittmer, J. & Myrick, R.D. (1989). The Teacher as Facilitator. Minneapolis, MN: Educational Media Corporation.

Wolfgang, Charles H. (2001). Solving Discipline and Classroom Management Problems: Methods and Models for Today's Teachers; U.S.A, John Wiley and Sons, Retrieved, http://wik.ed.uiuc.edu/index.php/Teacher%E2%80%99s_rights

Wood, R.K. (1994) [Handout on Definitions of Terms]

WP Office of Planning, Research, and Evaluation (1999). Survey of undergraduates Alumni/ae, spring 1998. William Paterson University. http://ww2.wpunj.edu/research/opre/opre_reports/oprealum1.pdf

Wynd CA, Schmidt B. & Schaefer MA (2003).Two quantitative approaches for estimating content validity. West J Nurs Res. 25(5):508-18.

Yap, Kim & et al. (2000). Evaluating Whole-School Reform Efforts: A Guide for District and School Staff. Second Edition, P. 8. http://www.nwrac.org/whole-school/overview_h.html

Yankelovich, D. & Harmon, S. (1988). Starting with the people, Boston: Houghton Miffin.

Yankelovich, D. & Immerwahr, J. (1984). Putting the work ethic to work, Society, 21(2), 58-76.

Yates, Russell (2000). Curriculum in Multiage Learning Environments (online), Retrieved July 18, 2000 from the World Wide Web: http://www.multiage-education.com/multiagen-b/curriculum.html.

Yildirim, S., & Kiraz, E. (1999). Obstacles to integration of on-line communication tools into preservice teacher education. Journal of Computing in Teacher Education, 15 (3), 23-28.

Yinger, R. J. (1999). The role of standards in teaching and teacher education, In G. A. Griffin (Ed.), the education of teachers: Ninety-eighth Yearbook of the National Society for the Study of Education (pp. 85-113). Chicago: The University of Chicago.

Young et al, (1999). Student Evaluation of Faculty: Effects of Purpose on Pattern, Journal of Personnel Evaluation in Education; 13, 2; 179-190

Young, R.E. (1980). Teaching for critical thinking: Issues and resources. In R.E. Young (Ed.), new directions for teaching and learning: Fostering critical thinking. San Francios, CA: Jossey-Bass, PP 77-97.

Zandvliet, D. (2003). Learning environments in Malaysian "Smart School" classrooms. Paper presented at the annual meeting of the American Educational Research Association, April, Chicago.

Zavod RM, Zgarrick DP. (2001).Appraising general and professional ability based outcomes: curriculum mapping project. Am J Pharm Educ. 65(suppl):XXS.

Zeichner, K. M. (1983). Alternative paradigms of teacher education. Journal of Teacher Education, 34(3), 3-9. Zeichner, K. M., & Liston, D. P. (1987). Teaching student teachers to reflect. Harvard Educational Review, 57, 23-48.

Zeichner, K. M., Tabachnick, B. R., & Densmore, K. (1987). Individual, institutional and cultural influences on the development of teachers' craft knowledge. In J. Calderhead (Ed.), Exploring teachers' thinking (pp. 21-59). London: Cassell

Zelazek, and et al. (1998). 1998 Teacher Education Follow-up Study. Missouri State University.

Zhao, Y. & Cziko, G. A. (2001). Teacher adoption of technology: A perceptual control theory perspective. Journal of Technology and Teacher Education, 9(1), 5-3.

Zheng, L. & Hui, S. (2005). Survey of Professional Ethics of Teachers in Institutions of Higher Education. Chinese Education and Society, vol. 38, no. 5, September/October 2005, pp. 88–99.

Zumwalt, K. (1989). "Beginning professional teachers: The need for a curricular vision." In Maynard C. Reynolds (Ed.), Knowledge base for the beginning teacher. (pp. 101-116). Oxford: Pergamon Press.

INTERNET SOURCES

1. http://www.edu.utu.fi/KV/Index_e.htm
2. http://www.edu.utu.fi/tokl/tokle.htm
3. http://define.ansme.com/words/p/perception.html
4. http://classweb.howardcc.edu/jbell/booklets/Ch1_Critical_Thinking_F01.pdf
5. http://classweb.howardcc.edu/jbell/booklets/Ch1_Critical_Thinking_F01.pdf
6. http://edis.ifas.ufl.edu/HE747
7. http://www.nwlink.com/~donclark/leader/leadcom.html
8. http://www.aaeteachers.org/code-ethics.shtml
9. http://www.highered.nysed.gov/tcert/resteachers/statement
10. http://www.charactered.org/ethicstext.htm
11. http://www.btr.qld.edu.au/pdf/ethicspaper.pdf
12. http://www.prs-ltsn.leeds.ac.uk/ethics/documents/ethics_project.ppt
13. http://www.ironworkerslocal402.org/apprn2.htm
14. http://www.fairtest.org/Prin1
15. http://www.ncrel.org/sdrs/areas/stw_esys/4assess.htm
16. http://www.uga.edu/effectiveness/prac.pdf
17. http://www.temple.edu/CETP/temple_teach/a-task.htm
18. http://www.iupui.edu/~anth/practicums.html
19. http://www.pgcps.pg.k12.md.us/~croom/types_of_assessment.htm
20. http://www.edu.gov.mb.ca/ks4/cur/physhlth/foundation_s1-2/appendixg.pdf
21. http://www.wccnet.edu/departments/curriculum/assessment.php?levelone=tools
22. http://www.ncrel.org/sdrs/areas/stw_esys/4assess.htm
23. http://www.hyperdictionary.com/dictionary/instruction
24. http://www.mcps.k12.md.us/departments/policy/pdf/ifa.pdf
25. http://www.mcps.k12.md.us/departments/policy/pdf/ifa.pdf

26. http://www.alnujaidi.com/index/8
27. http://www.dese.state.mo.us/divimprove/curriculum/What%20is%20curriculum
28. http://www.mcps.k12.md.us/departments/policy/pdf/ifa.pdf
29. http://www.dese.state.mo.us/divimprove/curriculum/What%20is%20curriculum
30. http://www.accelerated-learning-online.com/process/
31. http://cd.ed.gov.hk/maths/syllabi/sec%20mathsyll(new)_e/rCHAP5.PDF
32. http://gse.uml.edu/lebaron/JBCurrDevel.htm
33. http://www.pde.state.pa.us/a_and_t/lib/a_and_t/curriculumalignment.pdf
34. http://www.neasc.org/caisa/b_curriculum.pdf
35. http://cmc.ihmc.us/papers/cmc2004-069.pdf
36. http://www.numeronetti.fi/
37. http://www.tele.sunyit.edu/rmnotes.htm
38. http://www.tele.sunyit.edu/rmnotes.htm
39. http://www.edu.utu.fi/english/index.htm
40. http://www.thefreedictionary.com/microteaching
41. http://www.viheaf.net/module2/VIHEAF-Mod2Wk1-Lesson5.htm

Appendixes

Questionnaire for Study 1

FOLLOW-UP QUESTIONNAIRE FOR MASTERS' DEGREE TEACHER EDUCATION STUDENTS/GRADUATES AT THE FACULTY OF EDUCATION, UNIVERSITY OF TURKU

Dear Student/Graduate,

Please help us evaluate the quality of the Masters' Degree Class Teacher Education programs by completing this survey and return it as soon as possible. Your perceptions of courses and experiences are important us in evaluating faculty programs. If you have any questions, do not hesitate to contact:

valmeh@utu.fi

You can answer to this survey **online** in:
http://www.mehdinezhad.com/feedback.htm
Thank you for taking the time to complete this questionnaire.

Background Information

Please check (√) the appropriate blank. No. Q. :

Note: In this part, students in 4th grade just answer to questions 1 to 3. Please

1. Year of Graduation/Education

2000 ❒ 2000 ❒ 2002 ❒ 2003 ❒ 2004 ❒ Student ❒

2. Gender

Male ❒ Female ❒

3. Age

21-24 ❒ 25-29 ❒ 30-34 ❒ 35-44 ❒ 44/Over ❒

4. Do you currently have paid employment?

No ❒ Go to Q. 5 and continue from of 8 Yes ❒ Go to Q. 6 and continue

5. Which best describes why you are not employed for pay at this time? (Please check one)

Full-time homemaker ❒ Full-time student ❒
Family responsibilities ❒ Health disability ❒
Other:

6. What is your current employment status? (Please check one)

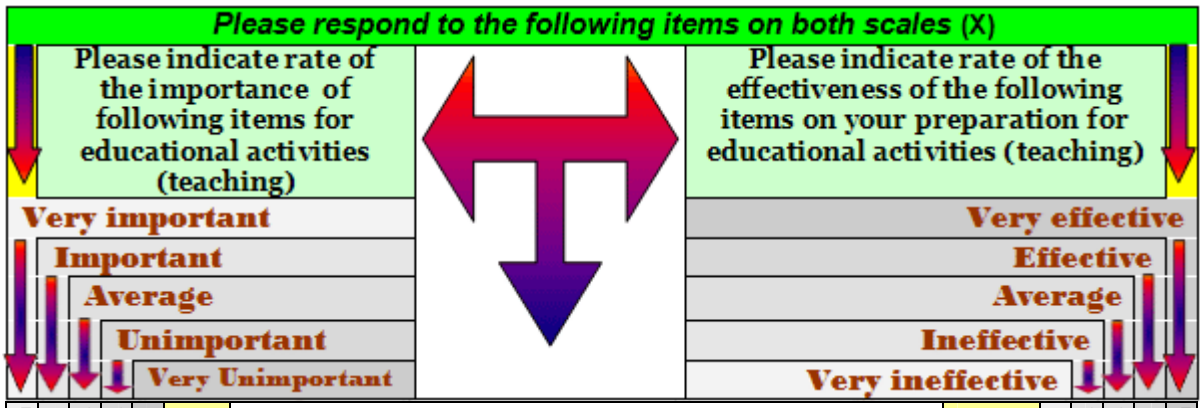
Full-time ❒ Not working but looking ❒
Part-time ❒ Not working & not looking ❒

7. Are you working in the field for which you were prepared?

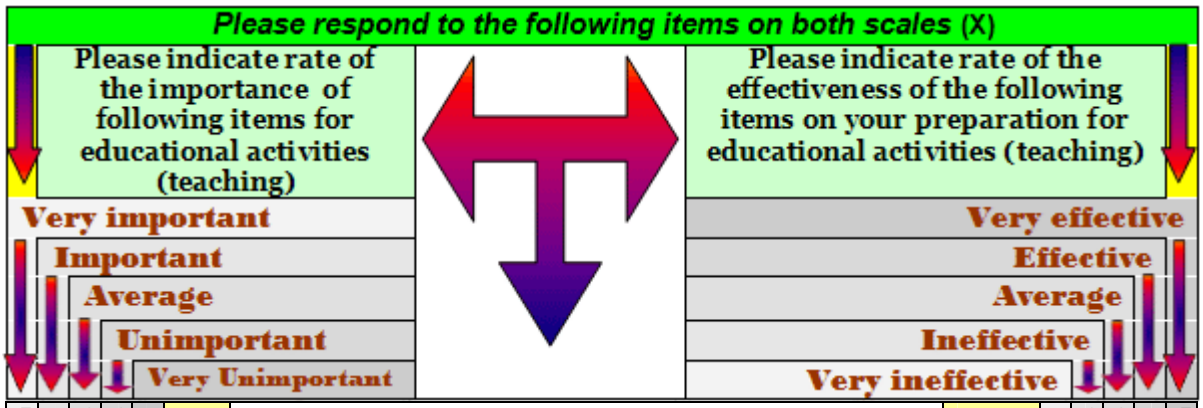
Yes ❒ No ❒

8. How long after graduation did it take you to obtain your first job?

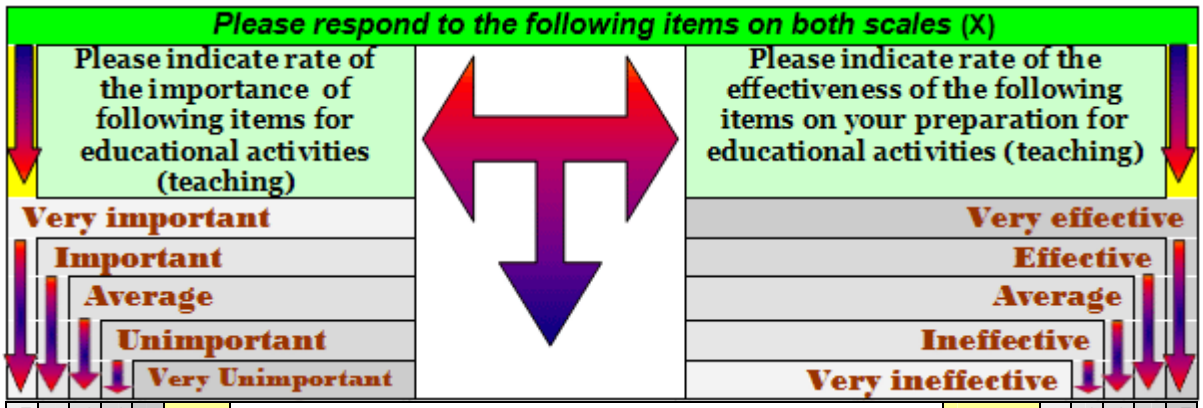
0 – 3 months ❒ 4 – 6 months ❒
7 – 11 months ❒ 12 months or more ❒



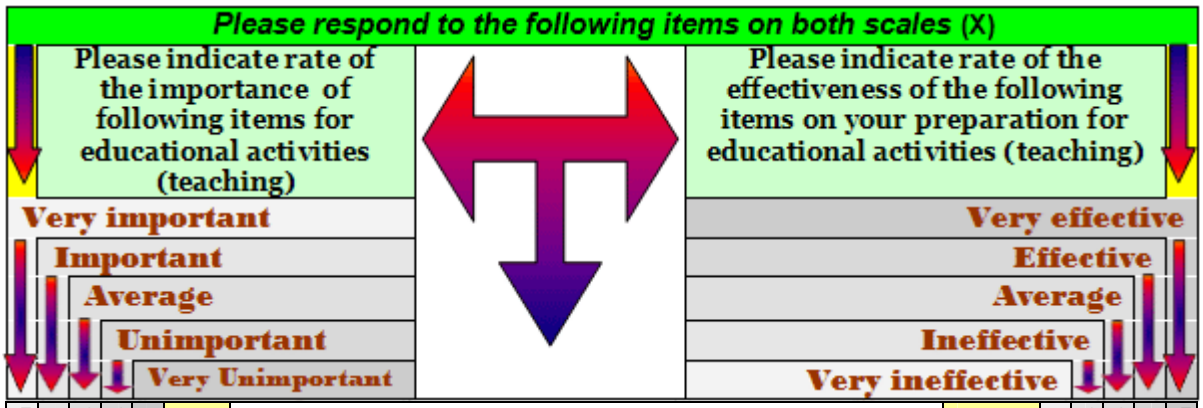
5	4	3	2	1	**1**	Ability to think critically & analytically	**80**	1	2	3	4	5
5	4	3	2	1	**2**	Ability to solve problems and make good decisions	**81**	1	2	3	4	5
5	4	3	2	1	**3**	Trying different approaches to solving a problem	**82**	1	2	3	4	5
5	4	3	2	1	**4**	Ability to analyze student performance standards to identify associated higher-order thinking skills, and design learning and performance strategies to evoke these higher-order skills	**83**	1	2	3	4	5
5	4	3	2	1	**5**	Ability to choose varied teaching strategies, materials, and technologies to expand students' thinking abilities	**84**	1	2	3	4	5
5	4	3	2	1	**6**	Ability to assist students in selecting projects and assignments that involve the need to gather information and solve problems	**85**	1	2	3	4	5
5	4	3	2	1	**7**	Ability to engage in critical thinking related to practical and theoretical educational issues	**86**	1	2	3	4	5
5	4	3	2	1	**8**	Ability to participate in teamwork	**87**	1	2	3	4	5
5	4	3	2	1	**9**	Ability to communicate effectively with students to foster learning	**88**	1	2	3	4	5
5	4	3	2	1	**10**	Communication skills -orally, visually & in writing-	**89**	1	2	3	4	5
5	4	3	2	1	**11**	Ability to interact with students, teachers, administrator, parents and community members	**90**	1	2	3	4	5
5	4	3	2	1	**12**	Ability to establish positive interaction in the learning environment that uses incentives and consequences for students to promote excellence	**91**	1	2	3	4	5
5	4	3	2	1	**13**	Ability to maintain standards of mutually respectful interaction during individual work, cooperative learning and whole group activities	**92**	1	2	3	4	5
5	4	3	2	1	**14**	Ability to motivate, encourages, and support individual and group inquiry	**93**	1	2	3	4	5
5	4	3	2	1	**15**	Ability to make reasonable effort to protect students from conditions harmful to learning and/or to the students' mental and/or physical health and/or safety	**94**	1	2	3	4	5
5	4	3	2	1	**16**	Awareness and understanding of ethics	**95**	1	2	3	4	5
5	4	3	2	1	**17**	Clarifying values that relate to instruction	**96**	1	2	3	4	5
5	4	3	2	1	**18**	Ability to provide for student access to diverse points of view	**97**	1	2	3	4	5
5	4	3	2	1	**19**	Understand the ethics of teaching	**98**	1	2	3	4	5
5	4	3	2	1	**20**	Ability to provide curriculum leadership	**99**	1	2	3	4	5
5	4	3	2	1	**21**	Knowledge of instructional strategies	**100**	1	2	3	4	5
5	4	3	2	1	**22**	Awareness with lesson planning	**101**	1	2	3	4	5



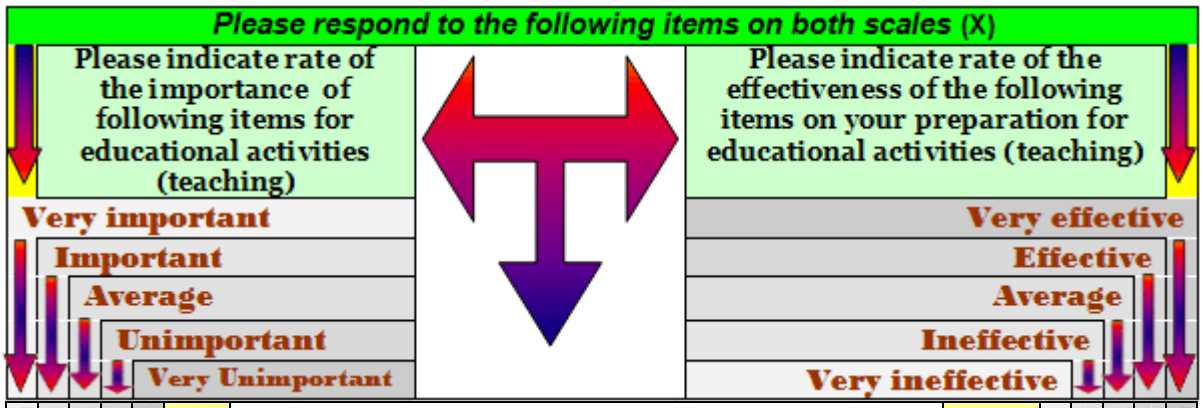
5	4	3	2	1	**23**	Ability to manage the time demands of teaching effectively	**102**	1	2	3	4	5
5	4	3	2	1	**24**	Ability to establish clear goals / objectives for each lesson and statement of its in to start of lesson	**103**	1	2	3	4	5
5	4	3	2	1	**25**	Ability to develop student performance outcomes, benchmarks, and evidence of adequate progress to guide planning for instruction	**104**	1	2	3	4	5
5	4	3	2	1	**26**	Ability to integrate student performance and outcomes into lesson designs and delivery services	**105**	1	2	3	4	5
5	4	3	2	1	**27**	Ability to provide comprehensible instruction to enable every student to meet the performance required of students in the schools	**106**	1	2	3	4	5
5	4	3	2	1	**28**	Managing time and space effectively to promote active engagement of all students in learning	**107**	1	2	3	4	5
5	4	3	2	1	**29**	Planning activities that utilize a variety of support and enrichment activities and materials	**108**	1	2	3	4	5
5	4	3	2	1	**30**	Ability to provide for instructional flexibility by adapting plan while a lesson is in progress to address unexpected problems or to benefit from unexpected opportunities	**109**	1	2	3	4	5
5	4	3	2	1	**31**	Ability to create approaches to learning that are interdisciplinary and that integrate multiple subject areas	**110**	1	2	3	4	5
5	4	3	2	1	**32**	Working cooperatively with colleagues in planning for instruction	**111**	1	2	3	4	5
5	4	3	2	1	**33**	Ability to serve as a student advocate in the school and with the social, legal, and health agencies in the community	**112**	1	2	3	4	5
5	4	3	2	1	**34**	Knowledge of methods and achievements in science	**113**	1	2	3	4	5
5	4	3	2	1	**35**	Understanding development levels of students	**114**	1	2	3	4	5
5	4	3	2	1	**36**	Knowledge and application of consultation	**115**	1	2	3	4	5
5	4	3	2	1	**37**	Ability to use of principles and theories of learning	**116**	1	2	3	4	5
5	4	3	2	1	**38**	Ability to use a wide variety of teaching methods	**117**	1	2	3	4	5
5	4	3	2	1	**39**	Awareness with classroom control techniques	**118**	1	2	3	4	5
5	4	3	2	1	**40**	Giving direction to students	**119**	1	2	3	4	5
5	4	3	2	1	**41**	Ability to use of phrasing questions	**120**	1	2	3	4	5
5	4	3	2	1	**42**	Using reinforcement techniques	**121**	1	2	3	4	5
5	4	3	2	1	**43**	Ability to understand how children/young adults learn	**122**	1	2	3	4	5



5	4	3	2	1	**44**	Ability to understand the research on which current educational theory and practice is based	**123**	1	2	3	4	5
5	4	3	2	1	**45**	Knowledge of professional role and expected professional behavior	**124**	1	2	3	4	5
5	4	3	2	1	**46**	Ability to communicate with families including those of culturally and linguistically diverse students to become familiar with the students' home situation and background	**125**	1	2	3	4	5
5	4	3	2	1	**47**	Focusing on urban contexts and the opportunities and challenges present in those contexts	**126**	1	2	3	4	5
5	4	3	2	1	**48**	Appropriate use of assessments	**127**	1	2	3	4	5
5	4	3	2	1	**49**	Interpreting test results	**128**	1	2	3	4	5
5	4	3	2	1	**50**	Evaluating grading systems	**129**	1	2	3	4	5
5	4	3	2	1	**51**	Continually evaluate the effectiveness of your teaching	**130**	1	2	3	4	5
5	4	3	2	1	**52**	Ability to diagnose students' readiness to learn and their individual learning needs and plan appropriate intervention strategies	**131**	1	2	3	4	5
5	4	3	2	1	**53**	Ability to assess individual and group performance to design instruction that meet students' current needs in the cognitive, social, linguistic, cultural, emotional, and physical domains	**132**	1	2	3	4	5
5	4	3	2	1	**54**	Employing performance-based assessment approaches to determine students' performance of specified outcomes	**133**	1	2	3	4	5
5	4	3	2	1	**55**	Ability to assist students in maintaining portfolios of individual work and progress toward performance outcomes	**134**	1	2	3	4	5
5	4	3	2	1	**56**	Ability to provide feedback and encouragement to students	**135**	1	2	3	4	5
5	4	3	2	1	**57**	Ability to function as a facilitator in the school, actively applying accepted principles and strategies for affecting change	**136**	1	2	3	4	5
5	4	3	2	1	**58**	Working in general group settings and on focus groups in cooperation with other educators and families to analyze the effectiveness of instruction in the school and to develop improvement strategies	**137**	1	2	3	4	5
5	4	3	2	1	**59**	Ability to use data from your own learning environments (classroom observation, audio/video recordings, students' results and feedback, and research) to reflect upon and experiment with personal teaching practices	**138**	1	2	3	4	5



5	4	3	2	1	**60**	Ability to create and monitor a personal professional development plan to guide your own improvement	**139**	1	2	3	4	5
5	4	3	2	1	**61**	To reflect and improve on your performance in teaching/learning activities and increase your capacity to facilitate learning for all students	**140**	1	2	3	4	5
5	4	3	2	1	**62**	Teaching subject matter content	**141**	1	2	3	4	5
5	4	3	2	1	**63**	Ability to use of a wide variety of instructional resources including print material, manipulative and information technology	**142**	1	2	3	4	5
5	4	3	2	1	**64**	Doing research on an issue or topic before planning a course of action	**143**	1	2	3	4	5
5	4	3	2	1	**65**	Ability to communicate accurate knowledge of subject matter in a comprehensible manner using language and style appropriate to the learner	**144**	1	2	3	4	5
5	4	3	2	1	**66**	Ability to demonstrate a breadth of subject matter knowledge that enables students to approach and to interrelate topics from a variety of perspectives, interests, and points of view	**145**	1	2	3	4	5
5	4	3	2	1	**67**	Ability to demonstrate a breadth of subject matter that enables you to collaborate with colleagues from other subject fields in the integration of instruction.	**146**	1	2	3	4	5
5	4	3	2	1	**68**	Remaining current to changes to the subject field	**147**	1	2	3	4	5
5	4	3	2	1	**69**	Ability to create of positive classroom climate that promotes openness and mutual respect	**148**	1	2	3	4	5
5	4	3	2	1	**70**	Ability to create a positive learning environment in your classes	**149**	1	2	3	4	5
5	4	3	2	1	**71**	Ability to create varied learning environments and identifies those that work best in various situations	**150**	1	2	3	4	5
5	4	3	2	1	**72**	Arranging and manage the physical environment in which I work to facilitate instruction and ensure student safety	**151**	1	2	3	4	5
5	4	3	2	1	**73**	Ability to create and/or support environments that encourage students' positive learning	**152**	1	2	3	4	5
5	4	3	2	1	**74**	Integration of technology	**153**	1	2	3	4	5
5	4	3	2	1	**75**	Ability to use audio-visual media	**154**	1	2	3	4	5
5	4	3	2	1	**76**	Ability to utilize appropriate learning media, computer applications, and other technology to address students' needs and learning objectives	**155**	1	2	3	4	5



5	4	3	2	1	**77**	Using a wide range of instructional technologies, such as CD-ROM, interactive video, videotaping, and electronic libraries to enhance the subject matter and assure it is comprehensible to all students	**156**	1	2	3	4	5
5	4	3	2	1	**78**	Ability to teach students to use available computers and other forms of technology at the skill level appropriate to enable success and maintain interest	**157**	1	2	3	4	5
5	4	3	2	1	**79**	Working with technical and instructional specialists available to the school, teacher and students to collaborate on instructional design and delivery	**158**	1	2	3	4	5

Please rate the adequacy of each of the following support secrecies or instructional resources in meeting your needs while you were taking courses at the Faculty of Education		Very Poor	Poor	Average	Good	Excellent
159	Quality of teaching by teachers(faculty) in your major area	1	2	3	4	5
160	Teacher's knowledge of subject(s)	1	2	3	4	5
161	Course objectives and requirements made clear	1	2	3	4	5
162	Content of course(s) in your major area	1	2	3	4	5
163	Advice/counsel you received from the advisor in your major department	1	2	3	4	5
164	Your teacher preparation program(s)	1	2	3	4	5
165	Your student teaching experiences	1	2	3	4	5
166	Methods of instruction	1	2	3	4	5
167	Testing and grading	1	2	3	4	5
168	Required courses outside your major area(general education requirements)	1	2	3	4	5
169	Opportunities to increase your self-understanding	1	2	3	4	5
170	Opportunities to work with other students in groups or teams	1	2	3	4	5
171	Opportunities to engage in extra-curricular activities	1	2	3	4	5
172	Opportunities to participate in faculty members' research	1	2	3	4	5
173	Availability of courses at convenient times	1	2	3	4	5
174	Class size	1	2	3	4	5
175	*Please indicate your overall evaluation about quality of instructions you received at the faculty of education*	1	2	3	4	5

Thank you for completing the survey. Please use the space provided to write any additional thought or information that you would like to share with us.

Please write your e-mail for sending results of this research:

Appendix Three

The Letters

Cover Letter of Explanation

Vali Mehdinezhad
Yo-Talo 4 C 405
20500, Turku
valmeh@utu.fi

January 30, 2006

Dear Student/Graduate:

My name is Vali Mehdinezhad. I am a Doctoral student at Faculty of Education, University of Turku.

I am conducting a follow-up study of the Teacher Education Masters' Degree graduates for my dissertation as a partial fulfillment of the requirements for Doctor of Education Degree *in* the Faculty of Education, University of Turku.

As a Faculty of Education graduate, you are in an excellent position to provide information needed. Thus, please help me evaluate the quality of the Masters' Degree Teacher Education programs by completing this survey. Your perceptions of courses and experiences are important me in evaluating faculty programs. Please return the questionnaire in the enclosed stamped and self-addressed envelope as soon as possible (Seven-day period).

You can also answer to this survey online in:
http://www.mehdinezhad.com/feedback.htm

If you have any questions, do not hesitate to contact: valmeh@utu.fi

Thank you for taking the time to complete this questionnaire.

Sincerely,

Mehdinezhad V, PhD. Student
Faculty of Education
University of Turku

Follow-Up Cover Letter 1

Vali Mehdinezhad
Yo-Talo 4 C 405
20500, Turku
valmeh@utu.fi

February 6, 2006

Dear Student/Graduate:

Last week, you have received a mail from me containing a survey about evaluation of Masters' Teacher Education programs. If you have completed and submitted the survey, please accept my thanks.

If you have not yet returned / submitted it, I would like to encourage you to do so. This survey is a crucial component of my doctoral dissertation and without an appropriate response rate I will be unable to complete my research.

I remember again you can answer to this survey online in:
http://www.mehdinezhad.com/feedback.htm

If you have any questions, do not hesitate to contact: valmeh@utu.fi

Thank you again for your consideration and cooperation.

Sincerely,

Mehdinezhad V, PhD. Student
Faculty of Education
University of Turku

Follow-Up Cover Letter 2

Vali Mehdinezhad
Yo-Talo 4 C 405
20500, Turku
valmeh@utu.fi

February 27, 2006

Dear Student/Graduate:

Three weeks ago, you have received a mail from me containing a survey about evaluation of Masters' Teacher Education programs.

I would appreciate your assistance. I am asking that you complete the enclosed self stamped questionnaire and return it to me as soon as possible.

This information and any additional comments you make will be most helpful to me as a student completing the requirement for the Doctor of Education Degree.

I remember again you can answer to this survey online in:
http://www.mehdinezhad.com/feedback.htm

If you have any questions, do not hesitate to contact: valmeh@utu.fi

Thank you again for your consideration and cooperation.

Sincerely,

Mehdinezhad V, PhD. Student
Faculty of Education
University of Turku

Questionnaire for Study 2

Hyvä opettaja,

Olemme tekemässä tutkimusta opiskelijoiden ja jo valmiiden opettajien arvioinneista saamastaan peruskoulutuksesta. Olemme koonneet tästä aiheesta laajan aineiston, jota käytetään hyväksi opettajankoulutusohjelmien kehittämisessä. Keräämämme aineiston täydennykseksi haluamme nyt tiedustella kouluissa toimivilta opettajilta, miten he katsovat lisääntyneen työkokemuksen vaikuttaneen heidän käsityksiinsä aikoinaan saamastaan opettajan peruskoulutuksesta. Toivomme, että voisitte vastata alla oleviin muutamiin kysymyksiin. Teemme tätä tutkimusta Turun ja Rauman opettajankoulutuslaitosten yhteistyönä ja aineiston analysoinnista vastaa tutkija Vali Mehdinezhad.

Yhteistyöstä kiittäen

Juhani Peltonen
Professori
ROKL

Erno Lehtinen
Professori
TOKL

1. Miten monta vuotta olette toimineet opettajana luokanopettajaksi valmistumisenne jälkeen.

2. Miten lisääntynyt työkokemus on vaikuttanut arvioonne saamastanne opettajan peruskoulutuksesta? Jos katsotte käsitystenne muuttuneen, niin täsmentäkää miten.