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TEACHERS' COMPETENCY TESTS IN ONTARIO:

A SURVEY OF TEACHERS' OPINIONS

By

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A thesis submitted in partial conformity with the requirements

for the degree of Master in Education

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Abstract

The Government of Ontario has introduced a teacher competency program in the province. Under the program, all new teachers will now have to pass a standard, province-wide qualifying test before they can start teaching in schools. In Ontario, teacher competency testing is a relatively new concept. However, such tests are already in practice in almost all states in the USA. The initial reaction of Ontario teachers' associations and their leaders was quite critical of the competency testing. However, the statements opposing competency testing were made by the associations and their leaders; to the knowledge of the researcher, no study or research available showing the opinions of Ontario teachers themselves. This study aims to ascertain the opinions of the teachers of Eastern Ontario about the teacher competency testing program.

After comparing various popular models of educational program evaluation, the CIPP model was selected for this study. CIPP is an acronym for the four basic components of evaluations this model recommends, namely: context evaluation, input evaluation, process evaluation and product evaluation. Thirty closed-ended questions were prepared in light of a review of the literature on these four types of evaluations. In addition to these questions about teacher competency evaluation, the questionnaire contained eight questions about the personal and professional background of the respondents in the sample group. Finally, one open question provided an opportunity to the respondents to express his or her views on any issues not covered in the closed-ended questions. For the selection of the sample group the quota sampling method was employed and 137 teachers enroled in summer courses at the Faculty of Education at the University of Ottawa were surveyed.

The data relating to the personal and professional characteristics of respondents indicates that with respect to (a) teaching certification, (b) length of service, (c) age group, and (d) level of teaching, the sample group contained fair representation from each category of teachers. Representation of teaching certification levels from A2 to A4 was quite balanced: A2 = 29.5%, A3 = 32.6%, and A4 = 34.9%. Seventy eight percent of the respondents were B.Ed. qualified teachers. More than half of the educators had service experience of less than six years. The participation of respondents from the age groups 21-30 and 31-40 years was also quite balanced (39.7% and 34.6% respectively). The vast majority of respondents (above 94%) were of school teachers. Almost three quarters (75%) of them were affiliated with the Ottawa Carleton District School Board, and 80% of respondents were female teachers.

Overall trends in responses indicate that the majority of teachers in Eastern Ontario is not in favor of a teacher competency testing program. They prefer the continuation of the existing evaluation system in the province albeit necessary improvements. Nevertheless, the teachers are conscious of their professional weaknesses and would like to improve their teaching expertise with the help of training or workshops. Rather than have their performance evaluated by non-professionals, they prefer to be evaluated by professionals like the principals or vice principals with whom they regularly work. They are opposed to any role for students or their parents in teacher evaluation. Similarly, an overwhelming majority of teachers is opposed to the inclusion of students' achievements as part of their overall evaluation.

The majority of teachers considers classroom observation to be a better method of evaluation than competency testing. Among various teaching skills, a vast majority supports the evaluation of (a) a teacher's interaction with students in the classroom and (b) his or her ability to convey knowledge.

An overall trend in teacher responses also indicates a profound failure of communication about the teacher competency testing between the Provincial Government of Ontario and the teaching community. The study concludes that it is essential that this communication gap between the two camps be bridged. The provincial government, as the major party in this issue, as well as the initiator of the program, has much more responsibility in this regard. The government should take some initiative in attempting to win the teaching community's confidence about this issue. It should show an open approach and should not hesitate to incorporate changes in the teacher competency testing program on the recommendation of the teaching community.

On the other hand, the teachers should realize that the teacher competency testing is already working smoothly in almost all states of the USA and that, despite its unpopularity among teachers, it is a well-recognized norm of the evaluation system there. Instead of rejecting the entire scheme, the teaching community should come forward with proposals for reasonable changes in the program in order that it could be revised to better suit the Canadian educational environment.

I dedicate this study to

My deceased mother, Mrs. Khursheed Sarwar

who, despite her love for learning, could not complete her school education. She wanted to see all her children well educated

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I have a long list of people who directly or indirectly helped me in accomplishing this academic project.

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CHAPTER 1

Introduction

Background

Accountability is one of the cherished values of today's democratic society. People today consider it their right to be informed about the performance of public institutions concerned with health, social welfare, and education. As part of this movement toward accountability, the drive for accountability in the public education system is gaining momentum. Taxpayers want schools to deliver evidence that teachers are giving society its money's worth. Obviously, this demand leads to critical evaluation of the educational system, including teaching.

The evaluation of teachers' performance is part and parcel of the overall education system. In the words of Stiggins & Duke (1988), "Teachers' evaluation can serve two basic purposes - accountability and professional development." Stiggins (1990) further elaborates:

> The accountability purpose involves the collection of data to determine the extent to which teachers have achieved minimum acceptable levels of competence and prescribed areas or performance standards. Concern over accountability has tended to dominate the thought and actions of school officials charged with the responsibility for teacher evaluation.

The Provincial Government of Ontario has recently introduced a competency testing program for teachers. In justifying this new program, the Government of Ontario (April 28, 2002) explains, "The Ontario teacher testing program is being designed so that all teachers have the up-to-date skills, knowledge, and training to provide Ontario students with the high-quality education they need and deserve."

In order to familiarize teachers with this new concept, the government is gradually introducing a teacher competency testing program in the province. As an initial step, since September 2000 all teaching certificate applicants from outside Ontario who obtained their teacher training in a language other than English or French have been required to pass an oral and written language proficiency test. The test ensures that the applicants are able to communicate clearly in either English or French before they receive certification to teach in Ontario.

According to the Ministry of Education website (April 28, 2002), the government plan for the year 2002 includes the following provisions:

1. New teachers in Ontario will now have to pass a standard, province-wide qualifying test before they can start teaching in Ontario schools.
2. The Ontario teacher qualifying test will ensure that all new teachers know their curriculum subjects and teaching strategies before they stand in front of a classroom. Both new graduates from Ontario faculties of education and teachers coming to Ontario from outside the province will have to pass the new qualifying test.

The basic rationale behind the Ontario government's initiative to introduce teacher testing is that the public has a right to expect a quality education system with quality teachers. As long as education is supported by the tax dollar of the public, this attention to accountability in the field of public education system will continue.

In the US, France, England and Australia, the movement for accountability of public education systems led to the introduction of some form of teacher testing/examination. However, teacher competency testing is relatively a new concept in Ontario. But competency testing in

some other self-regulated professions has existed in Ontario for many years. Normally, tests are administered prior to entry into a profession in order that a candidate may show that he or she has the skills and knowledge needed to perform professional tasks without risk to the public. However, in some professions a regular testing procedure is followed to ensure the maintenance of professional levels. For example, as part of practice review, pharmacists and respiratory therapists are tested for their competencies in their respective fields. Similarly, in the field of law, lawyers who are certified as specialists (in immigration law, labor law, family law, etc.) are required to demonstrate that they have participated in continuing legal education for a minimum of 12 hours a year when they re-apply for specialist certification at the end of a five-year cycle.

The proponents of teacher testing in Canada seem to be attracted by the US experiments in this field. In the USA, teacher competency tests were introduced in 1970's, and by the mid-1980's all but a few states reported using some form of teacher testing in a continuing effort to ensure quality education. Today, almost all states have some sort of teacher-testing requirement. Several varieties of tests are in current use, most particularly in the pre-service area of teacher education. In most states, one of the instruments used as part of the initial licensing criteria for new teachers is some form of modified standardized test with an open-ended component. A few states, such as California, Texas, and Massachusetts, have experimented with fully customized tests. Regardless of the fact that the specific purpose of teacher testing varies from state to state in the USA, the main objectives of the process are: (a) to control the entry of teacher candidates into teacher training programs, (b) to certify the successful completion of a teacher training program, and (c) to control initial certification or licensing of teachers.

The field of teacher testing in the USA is currently dominated by two corporations: Educational Testing Service (ETS) of Princeton, New Jersey, and National Evaluation Systems, Inc. (NES) of Amherst, Massachusetts. The Praxis Series, introduced by ETS, is used by 35 of the 43 states that include tests as part of their teacher licencing process. The Praxis Series consists of Praxis I tests, which assess reading, writing, and math ability and are generally required for admission into a college of education, and Praxis II tests, which focus on content and pedagogical knowledge in specific subject areas and are used by states to grant initial teaching licenses. The Praxis population (the teachers tested under Praxis program) represents a substantial portion of the potential teaching population.

The NES approach to the teacher testing market appears very different from that of ETS. Rather than developing a series of tests to market nation-wide, NES customizes individual tests to the specifications of each state for whose contract they are bidding. Individual states using NES generally specify different testing objectives, so that their test in Texas may be different from their test in Colorado (Maloy and Seidman, 1999).

Apart from the USA, competency testing for teachers is in practice in many other countries. For example, in France there are seven different examinations for the teaching profession. Teachers in England and Wales are required to obtain the 'Qualified Teacher Status' which is awarded after successful completion of a course of initial teacher training at an accredited institution. In accordance with the requirement, the successful completion of a course or program of initial teacher training must involve the assessment of all teacher candidates with respect to their ability to achieve all standards specified. Teachers' performance in Australia and New Zealand is also judged on the basis of teaching standards.

However, despite its popularity in the USA and many other countries, the teacher testing movement remained highly controversial. According to some critics, teacher testing requirements resulted in a shortage of teachers in some states, and educational authorities had to circumvent testing conditions by granting emergency licenses. Haney, Madaus & Kritzer (as cited in Bernie Froese-Germain, 2000) describe competency testing as "charms talismanic, " explaining their opinion that "the US public had been convinced that teacher tests have a magical property of warding off, of preventing bad teachers from entering the workforce in much the same way that people in medieval times thought that the magical symbols that they hung from their necks would ward off bubonic plague."

Some other critics say that tests are not fair for all teachers, for example, minorities, veteran teachers who have lost test-taking abilities through years of not taking tests, and good teachers who do not function well in performance limited to two hours (Peterson, 1995). Ayers (1988) studied a different aspect of these tests: the relationship between NTE (National Teacher Examination) scores and principals' ratings of teachers in the classroom. He found no relationship whatsoever: high scores did not necessarily produce good ratings, nor did low scores necessarily produce bad ratings. There was no connection whatsoever between how well teachers did on the test and how well they did in the classroom. He did, however, find one significant relationship, namely that test scores on the NTE correlated highly with scores on other tests. "So what the test was measuring were test taking skills, not necessarily qualities that I would want my child's teacher to have, " he concluded.

In Canada, the concept of teacher competency tests is not new and some provinces have already implemented some kind of testing requirements. In Alberta, the Annual Professional Growth Plan was introduced in 1998. The Teacher Growth, Supervision, and Evaluation Policy requires that during the school year, teachers complete an annual teacher professional growth plan. The plan is prepared by the individual teacher in the context of his/her employment settings.

In Ontario, the initial response of the province's teaching community to the proposed scheme is not very encouraging for the government. While providing advice to the government on this issue, the Ontario College of Teachers (Feb. 9, 2000) did not recommend that teachers be required to participate in mandatory professional development including written tests. Instead, the College recommended that teachers be required to prepare a professional growth plan and that the plan be part of a teacher's performance appraisal. The Organization for Quality Education, a group of parents, teachers, trustees, ratepayers and business people dedicated to reforming school education in the province of Ontario, while rejecting the concept of teachers' testing, remarked:

> It would be prohibitively expensive and time-consuming to create, administer, and mark meaningful tests for teachers of every subject at every level. Huge bureaucracies would spring up and, since they would employ large numbers of status quo educators, the testing process would inevitably be corrupted and neutralized.

The Canadian Teachers' Federation (CTF) also described the exercise as "expensive and time-consuming." In the editorial of his organization's magazine, the President of CTF, Rettig (2000) wrote:

> ..... Teacher testing cannot improve teacher quality nor can it enhance student learning or result in genuine educational accountability. Rather, it is an extension of the growing trend toward high-stakes, measurement-driven pseudo-accountability in which standardized test results are used to dole out rewards and sanctions to students, teachers and schools.

The Ontario English Catholic Teachers' Association (OECTA), at its annual general meeting (March 12, 2000), decided to direct all its members to refuse to participate in any written test for the purpose of re-certification of teachers.

The above-mentioned statements and comments, on the competency testing issue, by Ontario teachers' associations and their leaders lead to the following conclusions:

1. The teaching community of Ontario is opposed to any change in the existing performance evaluation system.
2. Teachers are opposed to the introduction of competency testing as a means of evaluating their performance and would not cooperate with the provincial administration in the implementation of the new scheme.
3. Teachers feel that they are being made scapegoats for the sake of the political agenda of the provincial government.
4. Teachers dislike interference in their professional matters by nonprofessionals, like politicians and bureaucrats.

5. Teachers feel that this is no more than another punitive measure by the provincial government to restrain them from criticizing the government's educational policies.

These are some of the major issues which were highlighted in media reports on this topic. Obviously, issues of a political nature lie outside the purview of this study, but those related to the administration of teacher evaluation or competency testing could be further studied. It may be noted here that in general, positions on teacher competency testing have been taken by the organizations or groups and their leaders. These critical views may or may not be an accurate reflection of the sentiments of the entire teaching community of Ontario on this issue. Another noteworthy aspect of these comments is that they are general statements reported through media and need to be qualified through a research study.

Purpose and Justification of Study

As mentioned in the preceding section, the statements and comments, made by various associations and leaders of the Ontario teaching community were projected through media reports, columns, press releases or websites. In these statements the associations and leaders did claim to represent the sentiment on this issue of the entire teaching community of the province; and the media reports similarly portrayed them as representative of the group as a whole. However, no efforts seem to have been made by any organization to validate such a claim. To the knowledge of the researcher, no opinion survey or study was conducted to establish whether or not Ontario teachers unanimously reject various aspects of the scheme, nor to determine their opinions on this issue. Despite the fact that the initial reaction of teachers' associations and their leaders was hostile to the scheme, it would be unfair to presume that the entire teaching community in the province holds this view.

Teachers are part of our society. In addition to their official roles in schools, they have social roles as parents and community members. It is quite possible for a teacher to think differently as a parent than as a teacher. As a teacher he/she may be opposed to a strict teacher evaluation system while feeling as a parent or member of society that teachers should be held to a high standard of excellence in educating children and that their performance should be judged critically.

Even if the general impression that the Ontario teaching community is opposed to teacher testing is taken as valid, it is quite possible that individual teachers oppose testing for different reasons.

Opposition to teacher competency testing should not be taken to imply that teachers are totally against any type of formal performance evaluation. As a matter of fact, they might have different opinions about an ideal performance evaluation system. They must have some suggestions regarding how to make the existing system more effective or how to formulate some alternative system.

On the other hand, the provincial authorities claim that teacher testing is a very popular idea and that the people of Ontario have welcomed its introduction in the province. Unfortunately, there is no authoritative study or survey to substantiate this claim either. Before initiating the program, the Education Minister did write letters to various education stakeholders to get their opinion on this issue. But again, this was an effort to determine the view point of associations and their leaders but not individual teachers. On the website of Ontario P. C. (May 28, 1999) there is a vague reference to a telephone survey saying, "... . . A telephone survey by Northstar Research Partners found 71% of the general public, and 73% of parents with school-aged children, support the Mike Harris plan for regular testing and re-certification of teachers."

Although teacher competency testing was part of the election manifesto of Ontario P. C. during the 1999 election, the party's victory in that election cannot be described as the validation by the Ontario public of the entire election manifesto. Given that teacher competency testing comprised only a part of the entire election manifesto, which covered other aspects of public life such as finance, health, and social welfare as well. Since the deciding factor for many voters may have been, for example, the financial or social welfare part of the election program, it cannot be assumed that voters supported the whole manifesto, including the teacher competency testing program.

There is also lack of literature on teacher competency testing in Canada. The available literature deals mainly with the US experiments. The reason for this non-availability of Canada-related material is obvious - this is a new experiment in Canada. Irrespective of the fact that some provinces, like Alberta, have adopted the system of the annual professional growth plan, these types of US-style competency tests have never before been introduced in Canada.

All the above-mentioned factors demonstrate the necessity of conducting a detailed study on teacher competency testing in Ontario. The study should at least provide answers to the following questions:

1. What are the opinions of teachers about various aspects of their regular performance evaluation?
2. What is their opinion about teacher competency testing as a means of evaluating their performance?
3. Is there any relationship between their opinions and the personal or professional characteristics of teachers such as: age, gender, education, level of teaching, teaching qualification, professional experience?

Detailed answers to these research questions demand an opinion survey of teachers of Ontario. Their opinions could be analyzed quantitatively, covering graphic presentation of data, measures of central tendencies and variability, and the tests for comparison of different variables. Finally, on the basis of data analysis, some useful recommendations could also be made.

CHAPTER 2

Review of Literature

In this chapter teacher evaluation is discussed in light of previous research and available literature. A brief survey of prominent evaluation models is presented; the classification of evaluation models, done by various educators and researchers, is analyzed; and suitable model is selected for this study. Finally, the model selected is elaborated.

Teacher Evaluation

Although educators agree that the major purpose of teacher evaluation is to maintain and improve, the quality of instruction, it nevertheless remains an emotional, controversial, and disruptive issue (Finkel, 1983).

Basically, teacher competency testing is a method of teacher performance evaluation. Despite their divergent opinions about the purpose and objectives of teacher evaluation, educational writers agree that a teacher evaluation program should serve at least two basic purposes: the improvement of teacher performance and the provision of a measure of accountability. The first purpose, the professional improvement of teachers, implies that evaluation methods are used to help teachers diagnose weaknesses in, and suggest ways of improving their teaching skills. This type of evaluation is known as formative evaluation.

Formative teacher evaluation can help an ineffective teacher become a better teacher or an effective teacher become an excellent teacher. It is an ongoing evaluation process which provides continuous feedback. Formative evaluation is a helping, caring process that provides data to teachers for making decisions about how they can best improve their own teaching techniques, styles, or strategies (Barber, 1990).

The second purpose, accountability, involves evaluation methods employed by administrators to determine retention and tenure, hiring or firing, promotion or reassignment of teachers. Such a process is called summative evaluation. About summative evaluation Popham (1988) writes, "A second, and equally important, function of teacher evaluation is to isolate those weak teachers who, if they cannot be improved, should be removed from their teaching positions. This latter mission, of course, is summative teacher evaluation."

In order to study teacher evaluation objectively, it is necessary to look at it through the lense of an evaluation model. The required model for this study should at least meet the requirements of summative and formative evaluations. Instead of arbitrarily selecting an evaluation model, a comparison of popular evaluation models is conducted. The comparative study of various models will lead to the selection of the most appropriate model for this study.

Survey of Various Theoretical Models of Evaluation

In the field of education, numerous and overlapping evaluation models are available. In order to limit the search for an appropriate model for this study, the models recommended by well-recognized experts in the field of educational program evaluation are being compared. The following evaluation models are being compared here:

1. Stake's (1967) countenance model which emphasizes two chief operations: description and judgement.
2. Scriven's (1972) goal-free model which focuses on the outcomes of an educational program - planned as well as unanticipated outcomes.
3. Malcolm Provus' (1971) discrepancy model which is attentive to the discrepancies between posited standards and actual performance.

4. CIPP (context, input, process, and product) model, originated by Stufflebeam (1971) and further developed by some other experts, which distinguishes between evaluation for decision making and evaluation for accountability.

In the following section, brief descriptions, and criticisms, of these four models of educational program evaluation are presented.

Stake's Countenance Model

Robert E. Stake's model emphasizes two chief operations of evaluation: description and judgment. According to Stake (1967), "Both description and judgement are essential - in fact, they are the two basic acts of evaluation." He further explains:

> Any individual evaluator may attempt to refrain from judging or from collecting the judgements of others. Any individual evaluator may seek only to bring to light the worth of the program. But their evaluations are incomplete. To be fully understood, the educational program must be fully described and fully judged.

Stake's countenance model suggests two descriptive evaluation methods: (a) finding the contingencies among antecedents, transactions, and outcomes, and (b) finding the congruence between intents and observations. Regarding judgmental evaluation, the model recommends following two bases of judging the characteristics of an educational program: (a) judgement with respect to absolute standards as deflected by personal judgements and (b) judgement with respect to relative standards as reflected by characteristics of alternate programs (Stake, 1967).

Pointing out the shortcomings of Stake's countenance model, Guba and Lincoln (1981) write, "Stake left the means for deriving standards largely unspecified, providing little operational guidance to the evaluator on this important point." Stufflebeam (1983) criticized

Stake's model for its failure to provide any analogue for input evaluation. He remarks, "By relegating concerns for assessing needs and project plans to the category of antecedents, Stake seemed to assume that the evaluator would enter during the implementation stage, when it would be most appropriate to look at ongoing transactions."

Scriven's Goal-Free Model

Michael Scriven tried to reduce the effects of bias in evaluation. His goal-free model advocates that the evaluator conduct a study in which he/she is not in direct contact with the project people at all. Justifying his goal-free approach, Scriven (1993) writes, "For an external evaluator, or for a new staff person, the so-called goal-free approach to program evaluation has the special merit of avoiding much of cueing toward goals that occurs when an evaluator is exposed to program documents and goal directed personnel."

Under the goal-free evaluation approach, the evaluators do not know the goals of the program and so they are able to focus on how the program is actually administered and assess the total impact on the program's clients.

Scriven's goal-free model is criticized for being one of the most complicated models of evaluation as it considers many outcome variables including secondary and tertiary effects. Stake's (1975) criticized Scriven's goal-free model of evaluation saying, "I fault Scriven for expecting us evaluators to be as sensitive, rational, and alert as his designs for evaluation require. I sometimes think that Mike Scriven's designs evaluation studies that perhaps only Mike Scriven is capable of carrying out."

Guba and Lincoln (1981) object to the goal-free model, "Despite Scriven's earlier insistence that evaluators should assume the burden of making judgements, the goal-free model did not take up the question of how judgmental standards are to be derived."

On Stake's countenance and Scriven's goal-free evaluation approaches, Popham (1988) comments, "Both Scriven's approach and Stake's 1967 model are rooted in the belief that the capable evaluator will be able to make subtle judgements about various facets of an educational program. Although their emphasis is on judgment of outputs, it should be obvious that their models reflect considerable concern with a number of additional factors."

Provus' Discrepancy Model

Malcolm Provus devised a systematic approach to evaluation based on the premise that evaluation involves the comparison of performance with standards. Because Provus' model is particularly attentive to the discrepancies between posited standards and actual performance, it is generally referred to as the discrepancy model of evaluation of educational programs.

According to Provus (1971), the discrepancy model posits the following five stages of evaluation: (a) design, (b) installation, (c) process, (d) product, and (e) cost (or program comparison). He further explains:

> At each of these stages, a comparison is made between reality and some standard or standards. The comparison often shows differences between standard and reality; this difference is called discrepancy. On the basis of comparison made at each stage, discrepancy information is provided to the program staff, giving them a rational basis on which to make adjustments in their program.

For the purpose of comparison, Provus suggests the setting of a standard. According to him, "The standard for stages 2, 3, and 4 (installation, process and product) is the design of the program established in stage 1." He recommends a comparison of the educational program with other programs having the same product or goal (standard). On the basis of this comparison, it is possible to make a policy decision to continue or discontinue the program.

Stufflebeam (as cited in Provus, 1971) objected to the idea of five stages of evaluation on the grounds that, "We need the rationale for those five stages. Maybe we need to investigate whether there might be alternative shortcuts that might apply to different kinds of programs." Guba (as cited in Provus, 1971) objected to the cost evaluation of stage 5:

> Here we are at a different level of discourse, because obviously we are comparing at least two programs that are designed to have the same output. When one begins to think that way, it is perfectly clear that cost is only one of a number of ways in which one can begin to compare programs. A whole set of new criteria or standards can be generated when one compares programs with one another.

CIPP Model

CIPP stands for the four types of evaluations recommended under this evaluation model: (a) context, (b) input, (c) process, and (d) product evaluations. This model was designed by Daniel Stufflebeam and Egon Guba. According to Stufflebeam (1983), "Evaluation is the process of delineating, obtaining, and providing useful information for judging decision alternatives." Actually, the entire model is based on this definition of evaluation process.

On the CIPP model Scriven (1993) comments:

> The CIPP model was a little overgeneralized in that it claimed all (program) evaluation was oriented to decision support. It seems implausible to insist that a historian's evaluation of the 'bread and circus' programs of Roman emperors, or even of the Works Progress Administration, is or should be designed to serve some contemporary decision maker rather than the professional interest of historians and others concerned with the truth about the past.

In the above section, a description of popular evaluation models designed by four well-known educational program evaluation experts was presented. The discussion of these four popular evaluation models continues in the next section where the opinions of some other researchers in the field of evaluation are presented.

Classification and Critical Analysis of Evaluation Models

As mentioned earlier, numerous and overlapping models exist in the field of education program evaluation. Some evaluation experts have grouped these model on the basis of their styles, approaches, or objectives. In this section, the four evaluation models discussed earlier are viewed from the angle of this classification of evaluation models.

House (1983) classifies educational program evaluation models on the basis of the following eight approaches: system analysis, behavioral objectives, decision making, goal-free, art criticism, accreditation, adversary, and transaction. In accordance with this classification, Stake's Countenance model is a transaction approach as "it uses various informal methods of investigation and has been drawn increasingly to the case study as the major methodology." Scriven's Goal-Free model is obviously the goal free approach. The CIPP model, according to House, is a decision making approach as "the evaluation is structured by the decisions to be made."

Worthen, Sanders & Fitzpatrick (1997) categorize these approaches as: objective-oriented approach; management-oriented approach; consumer-oriented approach; expertise-oriented approach; adversary-oriented approach; participant-oriented approach. According to their classification of evaluation approaches:

1. Stake's countenance model is a participant-oriented approach due to the active involvement of stakeholders in determining the data for the evaluation;
2. Scriven's goal-free model is a consumer-oriented approach as the products are the major targets of evaluation;
3. Provus' discrepancy model comes under the category of objective-oriented approach because in this model the focus is on specifying goals and objectives and determining the extent to which they have been attained;
4. The CIPP model is a management-oriented approach as its major evaluation concern is identifying and meeting the informational needs of managerial decision makers.

Popham (1988) classifies the educational evaluation models as: goal-attainment models; judgmental models emphasizing inputs; judgmental models emphasizing outputs; decision-facilitation models; and naturalistic models. He puts Stake's countenance model and Scriven's goal-free model under the category of judgmental models emphasizing outputs. The reason is obvious; in both models educational outputs, and not inputs, are given importance. Both the discrepancy model and the CIPP model fall into the category of decision facilitation models; these models are so overwhelmingly oriented toward servicing educational decision-makers that some of their proponents conceive of the evaluator as the decision maker's handmaid (Popham, 1988).

In table-2. 1 the classification of the four evaluation models, as done by House (1983), Worthen, Sanders & Fitzpatrick (1997), and Popham (1988), is summarized.

Table 2. 1

Classification of Various Evaluation Models

Model ▸ / **Classification by ▾**	*Stake's Countenance Model*	*Scriven's Goal-Free Model*	*Provus' Discrepancy Model*	*CIPP model*
House (1983)	Transaction Evaluation Approach	Goal-free Evaluation Approach		Decision Making Evaluation Approach
Worthen, Sanders & Fitzpatrick (1997)	Participant Oriented Approach	Consumer Oriented Approach	Objective Oriented Approach	Management Oriented Approach
Popham (1988)	Judgmental Model Emphasizing Output	Judgmental Model Emphasizing Output	Decision Facilitation Model	Decision Facilitation Model

As the above table indicates, the experts in the field of educational program evaluation are almost unanimous about the CIPP model's decision making, decision facilitation and management oriented approaches. These qualities make it the pertinent model for this study for the following reasons:

1. The issue under study (teacher competency testing) arose as a result of an administrative decision of the provincial authorities.

2. The educational authorities justify teacher competency testing program on the basis of the concept of the accountability of public institutions, including education and teaching. In fact, the originator of the CIPP model, Stufflebeam (1983), describes the concept of accountability as one of the major reasons for the development of this model.
3. The public education system at the provincial level is vast and complicated. High level decisions are required at each stage of the context, input, process, and product evaluations of teaching. Only a model like the CIPP, which has both qualities of decision making and decision facilitation could meet such major evaluation challenges.
4. As discussed earlier, a suitable model for this study should possess the qualities of formative and summative evaluations. Stufflebeam (1971) characterizes the CIPP evaluation for decision making as formative or proactive in nature, and evaluation for accountability mainly as summative or retroactive.

Due to the above factors, the CIPP model is the most suitable model for this study. In the following section a description of various aspects of the CIPP model is presented.

The Context, Input, Process and Product (CIPP) Evaluation Model

As stated earlier, CIPP is an acronym for the four basic components of evaluation this model identifies, namely, context evaluation, input evaluation, process evaluation, and product evaluation. This model was developed by Daniel Stufflebeam (1971) and Guba (1981) and later updated by Stufflebeam & Shinkfeld (1985). It defines the major purpose of evaluation as the provision of useful information for decision making. According to Stufflebeam (1971), "Evaluation is the process of delineating, obtaining, and providing useful information for judging decision alternatives."

Guba and Lincoln (1981) explain the CIPP evaluation process:

> Evaluation within the CIPP model is a process for delineating, obtaining and applying descriptive and judgmental information concerning some object's merit as revealed by its goals, structure, process, and product. In addition, it is a process undertaken for some useful purpose such as decision making or accountability.

Comparing the CIPP model with Stake's countenance and Scriven's goal-free models, Stufflebeam (1983) writes:

> Compared to Stake and Scriven orientations, CIPP evaluation is geared more to a system view of education. It is concentrated not so much on guiding the conduct of an individual study but on providing ongoing evaluation services to the decision makers in an institution.

Worthen, Sanders & Fitzpatrick (1997), while comparing various evaluation models, remark:

> The CIPP model, in particular, is a useful and simple heuristic tool that helps the evaluator generate potentially important questions to be addressed in an evaluation. For each of the four types of evaluation (CIPP), the evaluator can identify a number of questions about an educational undertaking. The model and the questions it generates also make the evaluation easy to explain to lay audiences.

Popham (1988) describes the CIPP model as "One of the best known of the decision-facilitation evaluation schemes." Norris (1990), while discussing evaluation models, is of the opinion:

> Perhaps the best-known American attempt to link evaluation with program decision-

making was the CIPP framework articulated by Daniel Stufflebeam and colleagues as a result of their experience of evaluating Elementary and Secondary Education Act projects for the Columbus, Ohio Public Schools District during the 1960's.

The CIPP model, in addition to identifying several decision settings, also distinguishes among four types of educational decisions. For each of these four types of decisions, a corresponding type of evaluation is recommended.

In the following section, context, input, process and product evaluations recommended under the CIPP model are described in light of a review of the literature. As the CIPP model is used for the evaluation of education programs, the issues related to teaching evaluation are raised during the process of review of the literature.

Context Evaluation

Stufflebeam (1971) describes the concept of context evaluation as the most basic type. Its purpose is to provide a rationale for the determination of objectives. Specifically, it defines the relevant environment, describes the desired and actual conditions pertaining to that environment, identifies unmet needs and unused opportunities, and diagnoses the problems that prevent needs from being met and opportunities from being utilized.

The expanded focus of context evaluation is to identify the strengths and weaknesses of an institution, a program, a target population, or a person, and to indicate direction for improvement. The objectives are: (a) to assess the object's overall status; (b) to identify its deficiencies and the strengths available to correct them; and (c) to diagnose problems that are limiting the object's well being (Stufflebeam, 1983).

According to Taylor (1974), "A context evaluation of a reading program might involve an analysis of the existing objectives of the reading program, reading achievement scores, staff concerns, reports of reading conferences, and community concerns."

The following issues concerned with teaching emerge as result of the above explanations about context evaluation:

1. Identification of strengths and weaknesses of teachers and the education system as a whole;
2. Diagnosing problems limiting teachers' professional competencies;
3. Setting job objectives for teachers.

According to some educators, context also refers to the larger political and situational context in which the entire educational system is embedded. Worthen, Sanders, & Fatzpatric (1997) observe, "The evaluator must also analyze the political context for the evaluation. Evaluation is inherently a political process. Whenever resources are redistributed or priorities are redefined, political processes are at work."

Highlighting the importance of social factors in the evaluation process, Papagueli-Vouliouris (1999) remarks:

> The evaluation strategy developed within a country depends upon the social, cultural and educational context of it. It is also related to the degree of educational variety of a system and thus to the degree of decentralization and autonomy that characterizes it.

Closely linked to social context is issue of teachers' overall status in the society, about which the ILO/UNESCO (as cited in Educational International's reference paper, 1996) has recommended:

> The status of teachers should be commensurate with the needs of education as assessed in the light of educational aims and objectives; it should be recognized that the proper status of teachers and due public regard for the profession of teaching are of major importance for the full realization of these aims and objectives.
>
> With regard to teaching, the discussion highlights the following issues:
>
> 1. Accountability of teaching profession in a democratic society;
> 2. Status of teachers in the society;
> 3. Balance between the teacher evaluation system and the social and political constraints.

In summary, the context evaluation is the most basic kind of evaluation and normally covers broader educational issues. It aims to provide a justification and rationale for the continuation of an educational program. The methods of context evaluation are mainly descriptive and comparative. The results of context evaluation should provide a sound basis for adjusting the existing goals and priorities of the educational program and targeting needed changes in the program.

Input Evaluation

Regarding the input evaluation of an educational program, Stufflebeam (1971) explains:

> The original focus of input evaluation was to provide information for three key decisions. Specifically, Is outside assistance needed to achieve the objectives? Should the project adopt available solutions or develop new ones? and What procedural plan should be used to implement the selected solution?

The input evaluation should also search the client's environment for barriers, constraints, and potentially available resources that need to be taken into account in the process of activating the program (Stufflebeam, 1983).

According to Anderson, Ball & Murphy (1974), "The process of input evaluation describes the resources available and determines the best use of those resources in terms of costs and benefits, resulting in a design to meet the goals."

Highlighting the importance of teaching inputs, Popham (1988) explains:

> The quality of a particular teacher's efforts are, of course, dependent on the kinds of supporting instructional resources available. To be sure, given two teachers of equal ability, one with a galaxy of modern instructional devices and the other with only a chalkboard and a half-dozen pieces of chalk, the teacher suffering from resource deprivation will obviously have a tougher time of it.

Viewed from a broader perspective, factors such as the personal problems faced by teachers could also be included in the list of inputs. In this regard McKenna (1981) opines:

> Like students who may be in a poor frame of mind to learn if they begin the school day without breakfast and in uncomfortable classrooms, teachers who arrive at school insecure about health protection and financial security for their families and who must work in poorly lighted, poorly ventilated, cramped conditions are in a poor condition to demonstrate their highest levels of proficiency.

If the teaching inputs are viewed with the perspective afforded by this literature, the following issues emerge:

1. Pointing out problems limiting teachers' performance;
2. Providing feedback to the teacher about his or her strengths and weaknesses;
3. Helping teachers in the achievement of their job objectives;
4. Arranging professional training for teachers;
5. Providing the latest teaching material to teachers;
6. Solving day-to-day problems faced by teachers.

To summarize, input evaluation is conducted to identify and assess: (a) an educational and teaching system's capabilities, (b) alternative strategies, (c) procedural designs for implementing those strategies, and (d) issues related to teaching equipment and budget. Through input evaluation, the barriers or weaknesses of a teaching environment are identified so that they can be removed and any impediments or hurdles in the smooth running of the program may be avoided. Its main purpose is to provide alternatives to various problems faced in teaching.

Process Evaluation

Once the designed course of action has been approved and implementation has begun, process evaluation is necessary to provide periodic feedback to persons responsible for the implementation of plans and procedures. Stufflebeam (1971) explains the stage of process evaluation:

> Process evaluation has three main objectives - the first is to detect or predict defects in the procedural design or its implementation during the implementation stages, the second is to provide information for program decisions, and the third is to maintain a record of the procedure as it occurs.

A process evaluation should provide an extensive record of the program that was actually implemented and how it compared to what was intended, and a full account of the various costs incurred in carrying it out and how observers and participants judged the quality of the effort overall (Stufflebeam, 1983).

In fact, the process of any educational program is its implementation, the stage which ultimately results in the program's product. The teaching process (or the teaching activity) takes place in the classroom. DeRoche (1987) mentions the following classroom activities which he considers significant in the teaching process: questioning, reading, discussing, observing; collecting data, identifying variables in the data; listening, conferring, reporting and interviewing; classifying data; discovering principles, making hypotheses; drawing, photography, lettering; analyzing the material; displaying, exhibiting, graphing and mapping; generalizing from data, recognizing the material, making relationships; testing data for social and personal use; and creating and imagining. He recommends the evaluation of these teaching processes through observation.

Discussing the characteristics of a good teacher, Brain's (1998) main emphasis is on the quality of teaching activities:

> When you strive and work to become a good teacher and to create a good class, the four core qualities are essential: knowledge, the skills to convey that knowledge, the ability to make the material you are teaching interesting and relevant, and a deep-seated respect for the student. Without these four qualities, good teaching will not exist.

Harris (1986) describes teacher's behavior and student reaction as the key elements in the teaching process. He also highlights the importance of interaction between the teacher and the students. Berliner (1987) suggests the involvement of students in small group activities. He recommends that the teacher pay attention to students' behavior, verbal as well as non-verbal, to gain insight into their learning.

Fitzpatrick (as cited in McGreal 1983) recommends the evaluation of the following basic elements of the teaching process: (a) observance of rules and procedures, (b) consequences for unacceptable behavior on the part of students, (c) elimination of constraints and interruptions, (d) emphasis placed on academic goals, (e) pre-dominance of whole group activities, (f) clarity of presentation, (g) practice of skills or concepts, (h) feedback and evaluation, (i) reviews of previously learned material, (j) monitoring student behavior, (k) transitions activities, (l) accountability for homework and class-work, and (m) classroom climate.

As the literature demonstrates, the list of teaching processes is quite long. Nevertheless, the majority of researchers agree on the significance of the following attributes of the teacher which make the teaching process result-oriented:

1. Communication skills to convey knowledge;
2. Good interaction with students;
3. Method of questioning;
4. Method of promoting reading;
5. Conducting classroom discussion;
6. Observation of student behavior;
7. Giving individual attention to students;
8. Knowledge of subjects taught; and
9. Use of teaching material.

It should be noted that all these teaching activities could only be evaluated through classroom observation. As Fleischman and Williams (1996) explain, "Process evaluation refers to a set of activities in which administrators and/or evaluators observe classroom activities and interact with teaching staff and/or students in order to define and communicate more effective ways of addressing curriculum goals."

In fact, some educational researchers describe classroom observation as a very effective method of evaluating the teaching process. According to Evertson and Burry (1989), "The classroom observation is probably the single most important element in systems that assess the competence of classroom teachers." It may be noted that the existing system of teacher evaluation in Ontario also has the component of classroom observation by principal or administrator.

The students' reports about a teacher's performance is another source of feedback about the teaching process. As Peterson (1995) observes, "Indeed a very good source of information about teacher quality is that group of people with whom teachers work most directly and spend the most time." In this regard Scriven (1981) suggests that the student questionnaire should be a key component in the evaluation process beginning around the sixth grade. By contrast, Aleamoni (1981) is of the view that, "Students cannot make consistent judgments about the instructor and instruction because of their immaturity, lack of experience, and capriciousness."

In summary, the process evaluation is the stage of assessment of actual teaching activities in the classroom. Many aspects of teaching could be observed. The focus of a process evaluation includes a description and assessment of the curriculum, teaching methods used, staff experience and performance, in-service training, and the adequacy of equipment and facilities. The changes

made as a result of a process evaluation may involve immediate small adjustments (e. g., a change in how one particular curriculum unit is presented), minor changes in design (e. g., a change in how aides are assigned to classrooms), or major design changes (e. g., dropping the use of ability grouping in classrooms). As we see, the process evaluation covers both the formative and the summative aspects of evaluation.

Product Evaluation

The fourth and final type of evaluation recommended under the CIPP model is product evaluation. Its purpose is to measure and interpret attainments not only at the end of the project cycle, but as often as necessary during the project term (Stufflebeam, 1971).

Stufflebeam (1983) further explains:

> Product evaluation, therefore, should determine the extent to which identified needs were met, as well as identify the broad effects of the program. The product evaluation is used to determine whether an educational program should be continued, repeated and/or extended to other settings.

Generally, student achievements or progress indicators are taken as teaching products because they are the evidence most prone to misinterpretation. Educational Policy Analyst Hepburn (2000) holds the opinion that methods of measuring student achievement, such as TVAAS (Tennessee Value-Added Assessment System), which assess the progress students make in the course of a year under an individual teacher, may in fact be a better way of evaluating teachers. King (1981) also describes "student status and growth" as the most direct measures of teaching competence because they involve actual measurement of student growth. In the opinion

of McGreal (1983):

> There is no question that data about student learning are an important source of information about the effect of teaching. But, like so many other issues concerned with teaching and learning, the logic of the idea is often overwhelmed by the practical and political implications.

Peterson (1995) points out problems in using student achievement in teacher evaluation:

> There are three major obstacles to using student achievement in teacher evaluation. First, the logical connections between teacher performance and student learning are indirect and have mixed causality. Second, there are many technical problems in getting defensible data about teacher effects on student learning. Third, the distorting effects of pupil-gain-based teacher evaluation on the educational system are significant.

Armiger (1981) also describes student achievement as a flawed indicator of teacher competence:

> Most leading educators reject the notion that a teacher can be evaluated fairly on the basis of pupil progress. Most would agree with Soar and Soar (1973) who showed that the influence of the teacher on pupil progress is minor when compared to out-of-the-classroom influences.

In the words of Millman (1981), "The best teacher in the world would not fare very well if faced with slow learners, unmotivated students, a poor learning environment, and an achievement measured out of harmony with the teacher's goal."

Another group of educators argues for making self-assessment a part of the evaluation process. Barber (1990) is of the view that, "Self-assessment, where it is allowed to flourish in a non-punitive environment, supports an internal drive in all professional teachers to constantly improve their teaching behavior." Carroll (1981) writes, "Self-rating appears to be most helpful for comparisons with and interpretations of other sources of data, such as student ratings, student achievement, classroom observation, and videotape feedback."

Nevertheless, the two major problems with the use of self-report data in teacher evaluation are the teacher's perspective which may produce inaccurate data and conflict with objective data, and a fatal conflict of interest (McNeil & Popham 1973; Peterson & Kauchak, 1982 as cited in Peterson, 1995).

Closely linked to the teacher's self-evaluation is the issue of evaluation by parents. Some educators believe that parents can best judge the performance of teachers as they know what product the teacher is producing through his or her teaching. Systematic (valid and reliable) inclusion of parental views in teacher evaluation recognizes the partnership of parents in education. Parents are clients and tax payers; the rights of consumers have been established in evaluation practice (Mark & Shotland, 1985 as cited in Peterson, 1995).

McGreal (1983) opines:

> Principals evaluate teachers, teachers evaluate teachers, students evaluate teachers, so why not parents? It seems only fair that taxpayers, particularly parents of students attending schools, should have the opportunity of formally evaluate the performance of teachers.

The following issues emerge out of a review of the literature on the product evaluation of teaching:

1. The consideration of students achievements as the product evaluation of teacher;
2. Inclusion of a teacher's self-assessment as part of his or her overall performance evaluation;
3. Giving parents a role in teacher evaluation

As the above discussion on product evaluation shows, the emphasis in this type of evaluation is clearly on the outcomes or end-results produced by the teaching process. This outcome information is obviously related to the objectives of the program. Therefore, the data obtained enables the evaluators to make a comparison between the expected outcomes and actual results. At this stage, the evaluator takes the decision whether to continue, modify, terminate or refocus the teaching program.

Basically, the CIPP model is used for the evaluation of a given educational program as a whole. However, in this study the model is being used for a particular aspect of educational programs - namely the teaching. In order to review teacher evaluation in the context of the CIPP model, various teaching-related issues were raised during the review of the literature. All such teaching evaluation related issues are summarized in table 2. 2 under the relevant headings of context, input, process and product evaluations.

Table 2. 2

CIPP Model and Issues Related to Teaching

Evaluation Category	Items/Issues
Context Evaluation	Accountability of teaching profession in a democratic society Status of teachers in the society; Balance between the teacher evaluation system and the social and political constraints; Identification of strengths and weakness of teachers and the educational system; Diagnosing problems limiting teachers' professional competencies; Setting observable and measurable job objectives.
Input Evaluation	Pointing out problems limiting a teacher's performance; Providing feedback from the evaluation to the teacher; Suggesting means to correct a teacher's weaknesses; Arranging courses/training for teachers; Providing the latest technical and professional support to teacher; Taking into account the availability of teaching material; Solutions of day-to-day problems faced by teachers.
Process Evaluation	Teacher's ability to: (a) communicate knowledge, (b) interact with students, (c) encourage questioning, (d) promote reading, (e) conduct classroom discussion, (f) observe student behavior, (g) give individual attention to students, (h) possess knowledge of subjects, and (i) use teaching material.
Product Evaluation	Student's achievement or progress indicators; Teacher's self-assessment; Parents' role.

The issues mentioned under the four types of evaluations, in table 2. 2 are based on a review of the literature on the CIPP model of evaluation. They provide this study with some broad outlines for the collection of data. These issues will be utilized during the process of framing the survey instrument in the next chapter.

Summary

As a result of the comparative analysis of the four evaluation models, each of them developed by renowned experts in the field of educational program evaluation, the CIPP model, introduced by Stufflebeam (1971), was found the most pertinent for this study. The CIPP model not only covers formative and summative aspects of evaluation but its overall domain of evaluation is comparatively broader, dealing as it does with the evaluation of an educational program from its larger contexts at the planning stage through its end results or products.

The CIPP model is thus being used for this study though it is limited to teacher competency evaluation. Therefore, during the review of the literature on the four types of evaluations recommended under the CIPP model, many teaching-specific issues were raised.

The context evaluation basically serves planning decisions in order to determine objectives. Viewing teaching from the context evaluation perspective, the following issues are highlighted: the teaching system in the context of the overall political, social and educational environment; educational and teaching standards; teacher accountability; job objectives for teachers; and the teachers' overall status in the society.

The stage of input evaluation provides information about the needs and requirements of a teaching program. For example, if during context evaluation it was decided that the objective of teaching was to train students in the use of computers, then at the input evaluation stage the

evaluator would assess the input matters such as number of computers required, training the instructors, setting up computer labs in the schools, etc.

The issues raised as result of a review of the literature on input evaluation of teaching include: professional problems faced by teachers, feedback to individual teachers about their strengths and weaknesses, professional training for teachers, and plans for the supply of the latest teaching material.

The evaluation of the teaching process is crucial given that it is this stage at which actual teaching activities are involved. The review of the literature gives a long list of classroom or teaching activities which are open to evaluation. However, for this study, only those teaching activities about which the majority of researchers agree are considered. These teaching activities are based on a teacher's ability to: communicate knowledge; interact with students; promote reading, encourage questioning and discussion in the classroom; observe student behaviour; use teaching material; and effectively convey his or her knowledge of the subjects taught. A review of the literature also indicates that all these teaching activities could be evaluated through a classroom observation process.

The final stage of the product evaluation is concerned with the output of the teaching process, investigating the extent to which teaching objectives have been attained. Traditionally, student achievements or progress indicators are considered the product of teaching, but some researchers argue against this criterion. Similarly, others recommend the inclusion of parents in the teacher evaluation process because, as they see it, "parents can better judge what product teachers are producing in school." A number of writers support the concept of self-assessment as part of overall teaching evaluation.

The initial reaction of some associations and leaders of Ontario teaching community was presented in the first chapter. It was noted that in this general reaction, in the form of media coverage, the teachers' associations and their leaders claimed to represent the sentiments, on this issue, of the entire teaching community of Ontario, but that there was no research or study to substantiate such a claim. The intention of this study is to learn the opinions of Ontario teachers through research into a portion of the province's teaching population, as opposed to through statements made, generally through the media, by leaders of teaching associations. In order to select a theoretical basis for the study, evaluation models developed by four prominent experts are compared and the CIPP model is found to be the most appropriate for this study. After viewing various aspects of the CIPP evaluation model from the perspective of teaching competency evaluation, practical strategy for collection and analysis of data is devised.

CHAPTER 3

Methodology

This chapter describes how the study will be conducted, dealing successively with the population and the sample retained to represent it, the research instruments to be used, and the research procedure.

As mentioned earlier, this survey research has been designed to obtain the opinions of teachers of Eastern Ontario about the provincial government's scheme for teacher competency testing. A quantitative methodology is used for this study.

Population and Sample

The teachers of Eastern Ontario constitute the target population for this study. It was initially planned that a total number of about 125 persons would be surveyed. The quota sample method for the selection of the sample group, out of around 600 teachers studying at the summer courses of University of Ottawa, is used for this study. The quota sample is defined by the Cambridge Dictionary of Statistics as, "A sample in which the units are not selected at random, but in terms of a certain number of units in each of a number of categories." The reasons for the use of the quota sample for the study were:

1. The Faculty record shows that each year more than 500 teachers are enrolled in various summer courses.
2. Past records also indicate that though the majority of teachers come from the Ottawa Carleton District School Board, there is fair representation of some other Eastern Ontario school boards, including some private schools.

3. It was also expected that the target sample would be a heterogenous group of teachers with divergent service experiences, educational and teaching qualifications, levels of teaching, age groups, etc.
4. Easy accessability was another reason for selecting this sample group. Rather than approach different school boards and seek approval from their respective ethics committees, necessitating the process of mailing the questionnaires to the schools, it was comparatively easy to seek approval from the Ethics Committee of the University and visit various classes to have the survey completed.
5. The schools were closed for summer vacation and teachers were not supposed to attend the school before September 2001.

While studying at the University, the teachers were outside the normally stressful atmosphere of their workplaces. It was expected that as university students they would express their feelings much more openly, enabling the researcher to get the required data for this study.

Survey Instrument

For the purposes of the collection of data, the survey instrument, a questionnaire, was prepared. Two basic principles adopted in this process were: (a) the questionnaire should permit the computational scores and/or histograms for single questions as well as subgroups of questions, and (b) the questionnaire should allow the comparison of opinions of respondents with their different personal and professional profiles. In order to seek maximum cooperation from respondents, to ensure anonymity and thus to gain their confidence in providing authentic data, it was decided that respondents should not be required to identify themselves on the questionnaire.

The following section is divided into two subsections; the first one presents the structure of the questionnaire and the second discusses various tests conducted to check the validity and reliability of the questionnaire.

The Structure of Questionnaire

The questionnaire has six parts. The first part deals with the personal and professional characteristics of the respondents, the next four parts are based on the four components of the CIPP model, and the sixth part comprises an open question.

Personal and Professional Characteristics of Sample

In first eight questions, the educators were asked to supply information about their: (a) age group, (b) gender, (c) positions held, (d) teaching certifications, (e) teaching qualifications, (f) academic qualifications, (g) lengths of service, and (h) school board affiliations. Except for the one question about their respective school boards, all others were closed-ended questions.

Statements on Teacher Competency Testing

The subsequent 35 closed-ended questions sought respondents' agreement with respect to statements about teacher competency testing on a five-point Likert scale ranging from "strongly agree" to "strongly disagree." The statements were prompted by the review of the literature in Chapter 2. Table 2.2 in Chapter 2 (page 26) presents an overview of various issues highlighted in light of the CIPP model. Details of issues raised in the statements under each of four types of evaluations recommended by the CIPP model are as follows.

Context Evaluation

The statements on context evaluation covered the following issues related to teacher competency evaluation:

1. Teachers' overall status in society.
2. Identification of deficiencies in the educational system.
3. Detailed job description of teachers.
4. Clearly defined teaching standards.
5. Observable and measurable job objectives for teachers.
6. Assisting teachers in achievement of their job objectives.
7. Regular competency testing practices in other self-regulated professions.
8. Teacher competency testing practices in the USA.
9. Responsibility of the government in raising the standard of education.
10. Present system of teacher evaluation in Ontario province.

Twelve statements based on the above issues were prepared and included in the questionnaire.

Input Evaluation

The following issues were discussed in the statements on the input evaluation of teaching.

1. Problems limiting teachers' performance.
2. Providing means to correct teachers' weaknesses.
3. Providing feedback on teachers' strengths and weaknesses.
4. Professional training for teachers.
5. Providing the latest technical and professional support to teachers.
6. Day to day problems faced by teachers.

7. Quality of available teaching material.

In light of these issues, seven questions were prepared.

Process Evaluation

In the statements on teaching process evaluation, a number of classroom activities on part of teachers were discussed. The statements suggested evaluation of a teacher's:

1. Method of questioning;
2. Method of promoting reading;
3. Conduct of classroom discussion;
4. Observation of student behavior;
5. Individual attention given to students;
6. Knowledge of subjects taught;
7. Use of teaching material;
8. Communication skills to convey knowledge; and
9. Interaction with students.

In addition to the above teaching processes, the statements also covered issues like method of direct observation in the classroom and the consideration of students' opinions about a teacher as part of the overall evaluation of teacher competency.

Eleven statements on the evaluation of teaching process were included in the questionnaire.

Product Evaluation

Five statements on product evaluation covered the following issues:

1. Students' achievements or performance indicators;
2. Teachers' self-assessment;
3. Parents' involvement in the evaluation process; and
4. Teachers' evaluation by administrators, bureaucrats, or professionals.

Open Question

The final question was open in order to provide the respondents with an opportunity to express their feelings about competency testing more openly and precisely. Furthermore, the open question allowed respondents to clarify their responses to the closed-ended questions and to introduce new points of concern about the issue under consideration. The space of about three quarters of a page was provided for writing in the open section.

An overview of all these parts of the questionnaire is given in table 3.1 below.

Table 3.1

Overview of Contents of the Questionnaire

Component	**Question No.**	**Total number of items**
Questions on personal and professional characteristics of the sample	1 - 8	8
Statements on Teachers Evaluation (CIPP Model)		
Context	9, 10, 14, 15, 20, 21, 35, 36, 37, 40, 42, 43	12
Input	11, 12, 13, 16, 17, 18, 19	7
Process	22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32	11
Product	33, 34, 38, 39, 41	5
Open question	44	1

As the above table indicates, 44 questions in the survey questionnaire covered a wide range of different aspects of personal and professional factors and included the competency evaluation process as applied to teachers. However, in order to further ensure its usefulness for the survey, the questionnaire was tested for reliability and validity.

Reliability and Validity of Survey Instrument

Reliability

The reliability of a survey instrument means consistency of questions it contains. A reliable instrument leads to measurement units which are fairly smaller from time to time (Downie & Heath, 1965). The following two statistical methods were used to test the reliability of questionnaire for this study.

Alpha Coefficient

With the help of SPSS software, an item-wise analysis of 35 questions was conducted to determine the way in which they contributed to the overall scores. As a result of this analysis, five items with a low correlation to the total score were removed from the questionnaire. The questions removed from the original questionnaire were numbers 36, 38, 39, 40, and 43. The final instrument had only 38 questions (Appendix A).

Finally, in order to test the reliability of the survey instrument, the value of the alpha coefficient (or Cronbach Alpha) was calculated with the result that $\alpha = 0.9112$.

Split Half Procedure

Under the Split Half Procedure of reliability, all questions in the survey instrument are regrouped to halves and the value of the correlation coefficient is calculated between the two sets of questions. The value of this coefficient was calculated to be 0.8710.

Table 3.2 below summarizes the results of both the tests conducted for the calculation of the reliability coefficients.

Table 3.2

Reliability Coefficients for the Survey Instrument

Reliability Test	Value of α for 30 Questions
Cronbach Alpha	0.9112
Split Halves	0.871

As shown in the above table in both cases the value of alpha conforms with Ebel's (1972) criterion of reliability according to whom, "Expertly constructed educational achievement tests often yield reliability coefficients of 0.90 or higher."

Validity

The validity of a survey instrument is measured by the appropriateness, meaningfulness and usefulness of different questions contained in the questionnaire. The questionnaire for this study required content-related validity. According to Fraenkel & Wollen (2000), content-related validity should answer the following important questions related to survey instrument, "How appropriate is the content? How comprehensive? Does it logically get at the intended variable? How adequately does the sample of items or questions represent the content to the assessed? Is the format appropriate?"

For the purposes of content-related validity, the questionnaire was submitted to the following experts in the field of teachers education for their considered opinions: a professional development programs coordinator at the Faculty of Education, University of Ottawa, and a professor who has worked in the domain at the same faculty. Minor changes in various questions were incorporated on the recommendation of these experts.

In summary, this section presented details about the survey instrument. The six sections of the survey instrument were judged to be valid by two experts in the field. The statistical analysis gave further evidence of its validity and reliability, thereby supporting its fitness for the purpose for which it was designed. The following section gives details both of ways in which the instrument was used and of plans for the analysis of the data gathered.

Research Process

This section describes matters relating to collection of data, including the formalities of the cover letter for the sample, contact with various figures involved, and distribution and collection of the questionnaires.

Cover Letter

In order to provide some information about the survey to the respondents, a cover letter was prepared on the letterhead of the University of Ottawa (appendix B). The cover letter included information such as a brief background of the issue under study and the purpose of the study. The cover letter guaranteed respondents' anonymity, the confidentiality of information supplied and the respondents' right to answer or not any or all questions. The procedure for the completion of the questionnaire was explained, and the names and addresses of (a) the researcher, (b) the thesis supervisor, and (c) the Protocol Officer for Ethics in Research of University of Ottawa were mentioned in the cover letter.

Data Collection

During last week of June 2001, details about various summer courses for teachers were obtained from the administration of the Faculty of Education. Meanwhile, the researcher met with Ms. Nicole Besner, Administrator of Professional Development Program and New

Initiatives in the Faculty of Education, to explain the project and to secure her permission to contact instructors or professors of various summer courses about distribution of the questionnaires to the students.

Approval by the administration having been granted, during the first week of July 2001 a letter (Appendix C) was sent to the instructor/professor of each of the courses, briefly explaining the purpose and the main points of the survey. The researcher also met with the instructors/professors to finalize the times and dates for the distribution and collection of the survey questionnaires. Most were very cooperative and offered great support. In addition to this, an announcement, requesting that teachers and educators join the survey, was posted on all prominent notice boards of the University (Appendix D).

During the period of July 6 to 19, 2001, the researcher visited various classes in the Faculty of Education, gave a brief presentation about the study, and distributed questionnaires and covering letters to the students/educators. The completed questionnaires were collected the following day. Some instructors were kind enough to allow the class to complete the questionnaires during the session. In such cases, the completed forms were collected after 15-20 minutes.

It may be added here that a few days prior to the beginning of the data collection, the national media published statements by the Ontario Minister of Education reiterating the government's resolve to implement a teacher testing program. This publicity of the teacher testing issue in fact facilitated the researcher's work, and teachers were more than willing to express their views on the topic. Certain of them felt so strongly about the issue that, after the researcher's introductory presentation, during the process of distribution of questionnaires, they

made open comments about teacher testing. Some of them objected to the non-inclusion of any question about political aspects of the issue whereupon the researcher recommended that they take advantage of the open question portion to express such opinions. During the process of data collection, the researcher did not encounter a single instance of a teacher refusing to complete the questionnaire.

About 450 survey questionnaires were distributed among students/educators attending summer courses. One hundred and thirty-seven (137) completed questionnaires were returned by the respondents, showing a return rate of about 30%. It may be recalled that the original target of the study was 125 respondents.

Plan for Data Analysis

The plan for data analysis is divided into three sub-sections: (a) a description of demographic or personal and professional characteristics of the sample, (b) an analysis of statement-responses, and (c) a comparison of personal and professional variables with statement-responses about teacher competency evaluation.

Description of Sample

As stated earlier, first eight questions of the survey instrument were about the personal and professional characteristics of the respondents. These characteristics were intended for use both in the presentation, in diagram form, of numbers or percentages of respondents falling into each category, and in the research into the third question, specifically about the relationships obtaining between the personal and professional characteristics of respondents and their replies to various statements.

Statement-related Data Analysis

In the second part of the data analysis, responses to each of 30 statements would be analyzed. These responses were based on closed-ended questions on a five-point Lickert scale ranging from *strongly disagree* to *strongly agree*. According to the plan, the percentages of each of the five categories of response to each statement would be analyzed. This analysis would provide answers to the first and second research questions of the study.

Data from the Open Question

As stated earlier, the final question in the questionnaire was left open in order to provide an opportunity to respondents to express their concerns and opinions on teacher evaluation or competency testing without the constraints of the Lickert scale format. It was expected that an open question would provide significant data relevant to the first and second research questions. It was planned that a content analysis of data available in the open question section would be conducted.

Comparison of Personal and Professional Variables with Responses

The final part of the data analysis was supposed to provide answers to the third research question. The personal and professional characteristics of respondents would be compared to discover whether age, gender, teaching and academic qualifications, and professional experience are linked to the pattern of responses to various statements. Since the study was dealing with nominal variables, a Chi-square test was planned to test the level of the significance of the relationship between the answers to 30 statements and the personal and professional characteristics of the respondents.

CHAPTER 4

Presentation and Analysis of Data

This chapter presents and analyses the opinions of 137 educators of Eastern Ontario with respect to teacher competency testing as introduced by the Provincial Government of Ontario. The chapter is divided into three sections: first, a description of the target population; second, the presentation of overall opinions on each question; and third, a comparison of the opinions with respect to personal and professional variables.

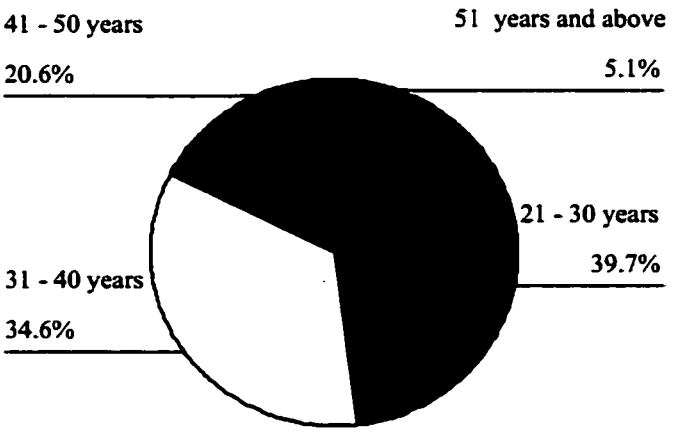
Description of Sample

This section presents the personal and professional characteristics of 137 respondents: their age, gender, position held, level of teaching, type of certification, academic qualifications, school boards and teaching experience. Computer software SPSS is used for the calculations and graphics.

Age Groups

One hundred and thirty six respondents answered the question about their age. Figure 4.1 shows the overall response to this question.

Figure 4.1 Respondents by Age Groups

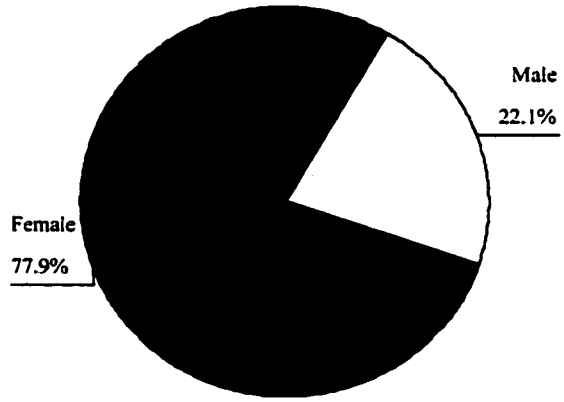


As indicated in Figure 4.1, 39.7% of respondents were between the ages of 21 and 30 years. The second major age group was 31-40 years with 34.6% of respondents. The respondents from the 41-50 years age group represented 20.6% of the total. Only 5.1% of total respondents were from the age group 51 and above. Thus vast majority of the educators who responded were between the ages 21 and 40 years; they represent 74.3% of the sample population.

Gender

The majority of respondents (77.9%) were female, as indicated in Figure 4.2. The male component of the sample was 22.1%. These figures reflect the fact that the field of education in Ontario is dominated by females.

Figure 4.2 Respondents by Gender



Position held by Respondents

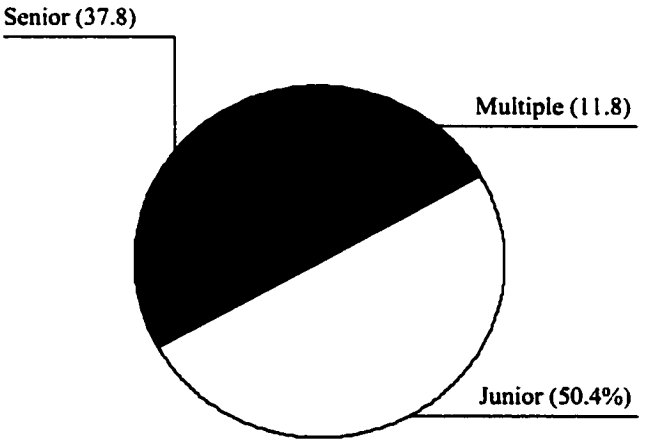
In this study, educators were asked to indicate whether they were schoolteachers, department heads, principals or vice principals. Ninety four point one percent of respondents were employed exclusively as teachers and the remaining 5.9% were employed simultaneously or exclusively in other positions.

Level of Teaching

In Ontario, the schooling cycles are defined as: primary = grades 1, 2 and 3; junior = grades 4, 5 and 6; intermediate = grades 7, 8 and 9; and senior = grades 10, 11 and 12. However, for the purpose of this research, the term ' junior' refers to both primary and junior and 'senior' combines the intermediate and senior levels of the Ontario education system.

Figure 4.3 below shows the distribution of the junior, senior, and multiple levels of the sample.

Figure 4.3 Respondents by Level of Teaching

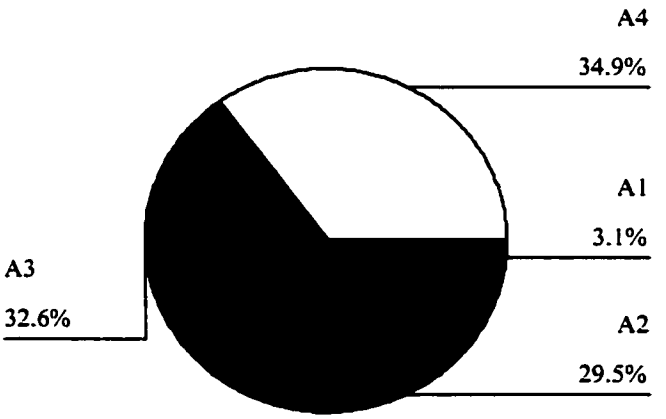


As shown in the figure, there was fair representation of both junior and senior level teachers. Of total respondents 50.4% were teaching at the junior level and 37.8% were teaching at the senior level. An additional, 11.8% of total teachers were teaching at both the junior and senior levels and were categorized as multiple level. Most of these multiple level teachers were employed in elementary schools housing grades 1 to 8. All of the 137 educators responded this question.

Teaching Qualification

For the purposes of this question the Ontario Ministry of Education teacher certification categories A1, A2, A3, and A4 were used. Each of these categories corresponds to roughly one year of university training after admission to the basic teacher certification of A1 level. Figure 4.4 is reflective of responses to this question.

Figure 4.4 Respondents by Teaching Qualifications

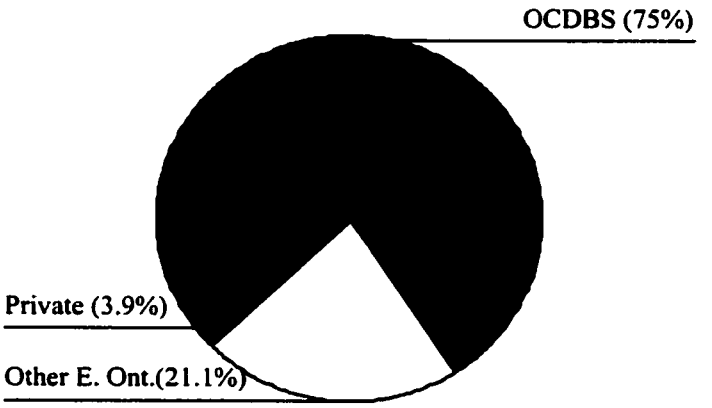


Thirty four point nine percent of the respondents to this question were classified at the A4 level, 32.6% at the A3 level, 29.5% at the A2 level, and only 3.1% at the A1 level. In other words, more than two thirds of the respondents belonged to the top two categories of A3 and A4 (34.9% + 32.6%).

School Board

As mentioned earlier, the sample for this study consisted of educators from Eastern Ontario. Figure 4.5 reflects their affiliation with school boards.

Figure 4.5 Respondents by School Board

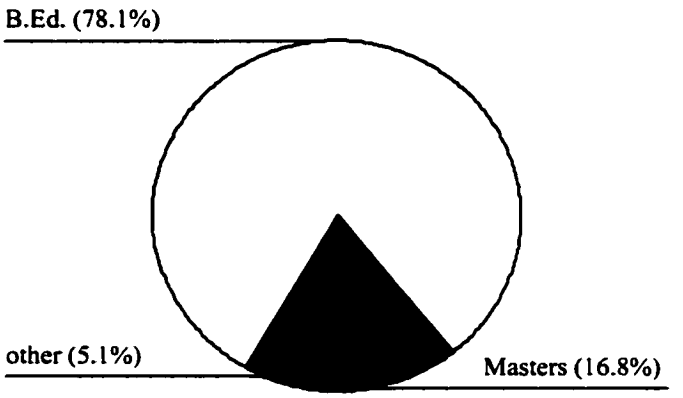


The majority of respondents (75%) were teachers from the Ottawa Carleton District School Board (OCDSB). The teachers represented by the category of 'Other Eastern Ontario District School Boards' comprised 21.1%. This category included school boards such as: the Upper Canada District School Board, the Renfrew County District School Board, the Ottawa Carleton Catholic School Board, and the Catholic District School Board of Eastern Ontario, among others. Only 3.9% of the teachers were affiliated with independent and private schools of Eastern Ontario.

Academic Qualification

As shown in figure 4.6, 78.1% of the respondents were B.Ed. qualified and 16.8% were holders of graduate degrees (Masters). These figures indicate that the vast majority of respondents consisted of well-qualified educators.

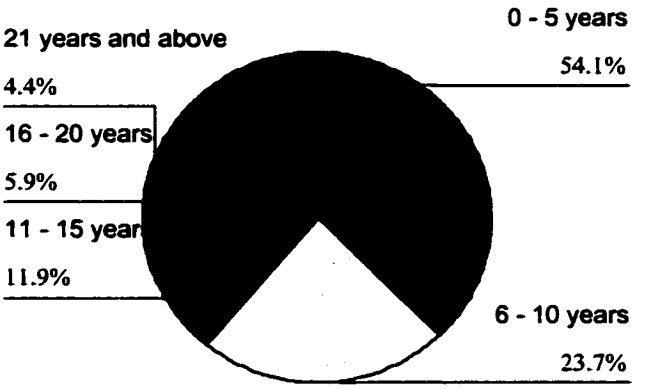
Figure 4.6 Respondents by Academic Qualification



Service Experience

In the question, five brackets of length of service, 0-5, 6-10, 11-15, 16-20, and 21 years and above, were given. Figure 4.7 indicates the responses.

Figure 4.7 Respondents by Service Experience



As shown in figure-4.7, 54.1% of the respondents had '0-5 ' years service experience. Twenty three point seven percent of the teachers had teaching experience of between '6-10' years. The percentages for '11-15' years and '15 and above' were 11.9% and 10.3% respectively.

The above data indicates that the sample for this study, consisting of 137 respondents, is representative of teachers from Eastern Ontario with respect to age, level of teaching, academic and teaching qualification, and service experience. All this data will be utilized in answering the third research question about the relationship between responses to statements and the personal and professional characteristics of the sample.

Educators and Teacher Competency Evaluation

As mentioned earlier, during the study 137 teachers of Eastern Ontario were surveyed and asked to indicate their level of agreement with each of 30 statements on a five-point Likert scale. This section presents a general analysis of the statements dealing with teacher competency testing. The grouping of statements according to four types of evaluations recommended under the CIPP model – context, input, process and product evaluations– is followed during the analysis process.

In addition to the responses to the thirty statements, the data from comments in the open question section is also used here. The data in the open question section is not counted during the quantitative analysis process. Rather a content analysis is conducted for such data. The comments are quoted under the relevant headings. This analysis presents answers to the first and second research questions.

Context Evaluation

As explained earlier, statements on context evaluation are based on general information about the teachers' evaluation such as: teachers' status in society, job description and job objectives, teaching standards, and the existing system of teacher evaluation in Ontario.

As presented in table 4.1, seven of the nine, statements on context evaluation are approved by the respondents. These statements had the support of more than 52% of total respondents.

Table 4.1

Responses to Statements on Context Evaluation

Statement	Agree (%)	Strongly Agree (%)	Mode
Clearly defined teaching standards are prerequisites for any teacher competency.	53.5	29.9	Agree
The administrators of TCTP should set observable and measurable job objectives for teachers.	48.0	32.5	Agree
Detailed job descriptions are prerequisites for an effective and fair TCTP.	37.6	30.4	Agree
The present system of regular evaluation of teachers' performance is satisfactory.	41.2	22.9	Agree
In a TCTP, it is the responsibility of the educational authority to workout plan for achievement of job objectives.	43.7	18.5	Agree
A TCTP should identify deficiencies in the overall education system.	44.4	16.7	Agree
Regular competency testing in some other self-regulated professions, like law, civil aviation and pharmacy, is justified.	46.7	6.6	Agree

More specifically, the two statements with which there exists a very high level of agreement were (in descending order of importance):

1. "Clearly defined teaching standards are a prerequisite for any teacher competency": 83.4% of surveyed educators *agreed* (of which 29.9% *strongly agreed*).

2. "The administrators of TCTP should set observable and measurable job objectives for teachers": 80.5% of respondents *agreed* (of which 32.5% *strongly agreed*).

The respondents also agreed with the statements viewing teacher competency evaluation process as part of overall social and educational systems; for example that it should consider the overall status of teachers in the society, or that it should identify deficiencies in the overall education system. One respondent remarked in the open section, "Socio-economic factors must be examined before we can tackle education. If students are unmotivated to learn, then no amount of teacher training/testing will change the situation."

More than 64% of teachers were supportive of the continuation of the present evaluation system in Ontario. Eighty point nine percent (80.9%) of teachers opposed the introduction of teachers' competency testing in the Province and expressed a desire to see a continuation of the present system with some improvements; 46.6% *strongly agreed* with this statement. However, they approved the concept of regular competency testing in some other self-regulated professions (53.3% *agreed* or *strongly agreed*).

In their separate comments as well, with the exception of one or two, respondents opposed the introduction of competency testing in the Province of Ontario. The one respondent who supported the idea wrote, "Professionals need to demonstrate their competence at regular intervals - so why not teachers?" Another remarked, "Testing would be fine as long as it is specific, subject oriented." Some of them were of the opinion that teacher testing should take place when a person enters teachers' college.

The majority of respondents' comments in the open section were critical of "politics behind the testing issue." One of them wrote, "The real agenda for competency testing is political, and not in the best interest of education. I am for the testing of new teachers based upon education theory and their subjects." Another said, "Government should just stop making so

many changes so fast without proper resources, plans in action. If you do testing, then (you) should do it in ALL other professions (this is discrimination, harassment!)... It is a waste of teachers' time and taxpayers' money." Some others also described the teacher competency testing as "harassment of teachers", or as "teacher bashing by the Provincial Government", or as "bullying of teachers."

A number of educators described the whole exercise as waste of tax payers' money, claiming that, "A paper and pencil test is the easiest to administer yet the most ineffective method of evaluation." Another commented, "I am totally against standardized testing for Ontario teachers. I find it appalling that the government is putting public dollars into this when thousands of children are suffering due to cutbacks."

As stated earlier, a vast majority of respondents (above 80%), while rejecting competency testing, supported the idea of revamping the existing evaluation system. One of them wrote, "Teacher testing is an insult to members of our profession... It should be done after consultation with teachers and (after) a system is implemented to improve evaluation strategies already in place." Another respondent described it as a measure to, "Debase and devalue the professionalism of teaching."

Some of the respondents did not have a clear picture of the Ontario teachers' competency testing program. One of them wrote, "I am curious as to what kind of testing would they use? How are they going to create a standardized test when the teaching field is so varied?" Another said, "I disagree with the idea of teacher testing. I am unsure as to how the government plans to fairly evaluate teachers of different disciplines or to justify their findings."

One respondent raised the pertinent point that, "In a highly competitive hiring market for teachers, the Ontario Government should be concerned about how this initiative will impact on teachers going to Manitoba, Quebec, N. Y. State, or elsewhere." Four respondents who were completely opposed to any kind of competency testing for teachers did not respond, or partially responded, to the questions. One of them wrote, "I have not answered this questionnaire in a way that can help you with your research because the premise is that I should agree with teachers testing - which I don't and therefore cannot respond accordingly." Three respondents after completing the questionnaire clarified that their having completed the questionnaire was not to be taken as indicative of their approval of teacher testing.

In line with their criticism of the Ontario Government's plan to introduce teacher testing, the surveyed teachers did not support the idea that the major responsibility for raising standards in education rests with the government. The statement on this topic was disapproved of by 52% of the respondents. In a way, this response indicates a positive and balanced approach on the part of the teaching community viz-a-viz issues like raising the standard of education in the Province. It also shows that they do not want to absolve other stakeholders of their responsibilities in this regard by merely laying the entire blame on government.

The respondents' replies to various statements, presented in table 4.1, and their open comments, indicate that while in principle the educators are not against a teaching evaluation process, they disapprove of the teachers' competency testing program as a means of evaluating their competency. Rather, they fault the teacher competency program for being politically motivated, a mere test of knowledge rather than a valuable measure of expertise, and essentially no more than further harassment of teachers by the Provincial Government. Some of the respondents were still unclear about the practical procedures of the program. Instead of the implementation of teacher testing they would prefer to see the existing system revamped.

Input Evaluation

The issues covered in the statements/questions in this category include problems limiting a given teacher's performance, correcting individual teachers' weaknesses, providing teachers with the latest technical and professional support, and improving the quality of teaching material.

As table 4.2 indicates, all seven statements on input evaluation received overwhelming support by the respondents.

Table 4.2

Responses to Statements on Input Evaluation

Statement	Agree (%)	Strongly Agree (%)	Mode
The educational authorities conducting teacher competency testing should provide the latest technical and professional support to teachers to update their teaching methods and knowledge.	45.2	46	Strongly Agree
While administering teacher competency testing, educational authorities should also arrange professional training for teachers so that their teaching capacities are enhanced.	47.6	39.5	Agree
A TCTP must take into account the quality of teaching material available.	35.9	50	Strongly Agree
A TCTP should provide feedback on one's strength and weaknesses.	56.3	27	Agree
A TCTP should identify problems limiting teachers' performance.	50.4	21.6	Agree
A TCTP should provide means to correct teachers' weaknesses.	53.2	15.1	Agree
A teacher competency testing program should take into account day-to-day personal problems faced by teachers (like health, financial problems, service matters, etc.).	34.7	29	Agree

The data in table 4.2 also shows that more than 85% of respondents agreed with the statements highlighting the importance of:

1. The latest technical and professional support to teachers to update their teaching methods and knowledge.
2. Professional training for teachers.
3. The quality of available teaching material.

It may be noted that 39.5% of the total respondents *strongly agreed* with the above three principles.

Respondents' overwhelming agreement on "the latest technical and professional support to teachers" and "teachers' professional training" was not limited to their responses to the closed ended questions. Rather, they made use of the open question to write lengthy notes on this issue and to support the idea of refresher courses for teachers to upgrade their knowledge. One of them remarked, "If we do not meet the standard, we should have the opportunity to improve ourselves...We need to continue taking workshops, etc." Another said, "We already choose courses to improve ourselves. More short-term conferences or class management and resources material would be helpful." Nevertheless, the educators clarified that, "The courses should be paid by (the) employer and done during company (working) hours as is the case with every other profession."

Some of the educators proposed a professional development program for teachers. One respondent wrote, "As opposed to teacher testing, a province-wide program for teacher professional development, funded by the province, would be more beneficial to teachers and (a) more expedient way to ensure competence." Another wrote, "The government should give us professional development fund workshops to help us improve." One educator said, "I disagree with the idea of teacher competency testing but agree (both) with evaluating teachers' performance and with teacher professional development." Another respondent suggested that, "Rather than testing knowledge, which would be unfair to test a grade-1 teacher, teach us good teaching skills through professional development." One respondent proposed, "If they want to improve the teaching profession, they should improve the teachers' college programs."

The vast majority of respondents (85.9%) agreed with the statement that "a TCTP must take into account the quality of teaching material available"; 50% of respondents *strongly agreed* with this statement. One of the teachers wrote, in the open section of the questionnaire, "Put the money that (it) would cost to test me, into my classroom. I need science textbooks, dictionaries, atlases, pencils, screens for my windows, novels, and an educational assistant for my ESL students..." This response is perhaps reflective of teachers' growing concern over the lack of the latest teaching material in educational institutions.

These replies and comments by surveyed educators are reflective of their consciousness of the need to keep their knowledge up to date and to improve their professional expertise through courses, training and professional development programs.

Process Evaluation

The questions in this section deal with various aspects of the teaching process. The statements were designed to measure how much priority teachers ascribe to various teaching activities. A number of teaching activities were suggested in the statements, such as the teachers': (a) method of questioning, (b) method of promoting reading, (c) conducting classroom discussion, (d) observation of student behaviour, (e) giving individual attention to students, (f) knowledge of subjects taught, (g) use of teaching material, (h) communication skills to convey knowledge, and (i) interaction with students.

The statements about teaching activities and the percentage of respondents who *agreed* and *strongly agreed* with them, along with a *mode* for each statement, are presented in descending order in table 4.3.

Table 4.3

Responses to Statements on Process Evaluation

Statement	Agree (%)	Strongly Agree (%)	Mode
A TCTP should take into account the teachers' interaction with students in the classroom.	54.8	16.9	Agree
Teachers' communication skills to convey knowledge are of prime importance in a TCTP.	51.6	14.5	Agree
A TCTP should evaluate teachers' use of teaching material and their ability to make this material interesting and relevant.	53.7	5	Agree
A TCTP should have a component of direct observation in the classroom.	37.6	19.2	Agree
A TCTP should evaluate teachers' method of promoting reading in the classroom.	47.1	9.1	Agree
A TCTP should evaluate teachers' knowledge of subjects to be taught in the classroom.	48	8.1	Agree
A TCTP should evaluate how the teacher listens and gives individual attention to students.	46.3	8.1	Agree
A TCTP should evaluate teachers' method of observation of student behavior.	48.8	4.9	Agree
A TCTP should evaluate teachers' method of conducting classroom discussion.	46.7	4.1	Agree
A TCTP should evaluate teachers' methods of questioning in the classroom.	46.4	4	Agree

As the data in table 4.3 reflects, each of the ten statements, which elaborate various teaching processes, received support (*agree + strongly agree*) by more than 50% of total respondents (the minimum is 50.4%).

Some respondents, as per their comments in the open question section, considered classroom observation to be a better evaluation method than competency testing. They argued, "Teaching happens in the classroom - not on exams." One educator commented, "Students need a diversity of teachers (sic) with different strategies... . . classroom observation and student involvement are imperative to effective evaluation." Another said, "Teacher testing should only take place in the form of observation of teaching in the class setting."

The two statements with which more than 65% of respondents *agreed* (or *strongly agreed*) are in descending order of importance:

1. A TCTP should take into account teachers' interaction with students in the classroom. (71.7% of respondents *agreed*).

2. Teachers' communication skills to convey knowledge are of prime importance in a TCTP. (66.1% of respondents *agreed*).

About various other teaching processes, one respondent remarked, "In regards to (sic) questions on a teacher's teaching methods, such as reading in the classroom, each teacher has to work with methods that are comfortable for that teacher and meet the needs of the various students in the class." One teacher wrote, "I do not think any test can test how responsible a teacher is or how well she can communicate."

One respondent was of the view that, "The present program already takes considerable paperwork time for the teacher. I spent 9 hours doing paperwork for my education. More paperwork will not improve classroom performance."

In summary, as their comments in the open question section indicate, the majority of respondents are not supportive of the idea of teacher competency testing. They are not, however, entirely opposed to their performance evaluation. They are willing to be evaluated on the basis of their individual performance in the classroom and thus, in this regard, they prefer the existing method of classroom observation.

Product Evaluation

The two major issues raised in the statements on teaching product evaluation are:

1. Should student achievement or performance indicators be part of teachers' performance evaluation?
2. Who should be responsible for teachers' performance evaluation?

Four statements based on the above issues were presented for educators' opinions. As shown in table 4.4, the majority of respondents rejected three statements.

Table 4.4

Responses to Statements on Product Evaluation

Statement	Disagree (%)	Strongly Disagree (%)	Mode
In a TCTP, students' opinion about teacher's performance should be taken into consideration.	29.6	27.2	Disagree
Students' achievement or performance indicators should also be taken into account in a TCTP.	43.1	34.1	Disagree
Parents should be involved in TCTP.	34.6	42.3	Strongly Disagree

As the above table shows, the surveyed educators responded negatively to the notion that students' achievement or performance indicators should be taken into account in a teacher competency program; 77.2% of respondents did not agree with it (34.1% *strongly disagreed*). One of them separately mentioned, "Teachers should never be evaluated based on the achievement of their students."

Where responsibility for teacher evaluation should fall is one of the most contentious issues. The majority of respondents were critical of teachers' evaluation by non-professionals. One of them remarked, "Testing of this sort should only be done by people with extensive and recent teaching and educational experience." Another said, "I feel that the current system of having administrators (principals or V. P.) come into the classroom and observe to assess teacher is good. If more formal testing (is to be) introduced, I think teachers and administrators should be in charge of deciding the criteria and methods of testing." Another respondent

commented that, "..... testing all of the province's teachers in a fair way and on an individual basis is a monumental and largely impossible task. This task should be the responsibility of individual schools, school boards and the administration of same."

In their comments, at least ten respondents favoured evaluation by the school principals as, according to one of them, "The principal has the best view of the teacher who sees her/him everyday. The principal is the best judge of the teacher's competency." Some of them also favoured evaluation by department heads or school boards.

Surveyed educators responded negatively to the statement about the involvement of students or their parents in the evaluation process. More than 76% of respondents *disagreed* (including 42.3% who *strongly disagreed*) with the statement on parents' roles in teachers' performance evaluation. The reasons for teachers' reluctance to involve parents in their performance evaluation is perhaps best explained by Lortie (1975) who described sociological concerns about parent-teacher relationships that complicate the evaluation process as he put it, "Essentially, parents and teachers have different points of view that cloud the relationship. For example, parents see the child as a prized individual, whereas the teacher must see the child as a member of a class group." However, the statement about teachers' self-assessment as part of their overall evaluation process was supported by almost 78.2% of total respondents.

Teachers' overall opinion (as reflected through table 4.4 and the above comments made by respondents) are in favour of a teaching evaluation process run by school administrators, such as principals, vice-principals, department heads, and their respective school boards and opposed to standardized tests conducted by Provincial authorities. The logic behind this view is that evaluation should be conducted by those with whom teachers work on a daily basis. Similarly, teachers also support making self-assessment a part of their overall evaluation process.

Summary of Educators' Opinions

In summary, analysis of the responses to various statements and respondents' comments demonstrates that a majority of teachers of Eastern Ontario are not in favour of the teacher competency testing program. Nonetheless, they do not reject the concept of accountability in the teaching profession. They are willing to have their performance evaluated by professionals and administrators but unwilling to submit to evaluation by nonprofessionals or through competency testing.

Teachers indicate a strong preference for the continuation of the existing evaluation process albeit with some necessary changes to bring the system up to date. They are very much conscious of their obligations as teachers and want an evaluation system which provides them with some feedback about their strengths and weaknesses. The teachers want to improve their performance by learning the latest teaching methods and, to that end, they are willing to attend courses and workshops.

The teachers of Eastern Ontario consider classroom observation to be a superior method of on-the-job evaluation. As their comments indicate, what they wish to have evaluated are not their competency test skills but their actual teaching methods, which can only be meaningfully judged during their classroom performances.

The teachers object to considering student's achievements as an indicator of their performance. Similarly, the concept of including students' or parents' opinions about a teacher's performance in their evaluation is not acceptable to the teachers. However, the teachers support self-assessment a part of their performance evaluation process.

After the analysis of respondents' personal and professional variables and their opinions on teacher competency testing, the study proceeds to determine the answer to the third and final research question. The following section analyses the relationship between the personal and professional characteristics of the sample and responses to various statements.

Convergences and Divergences

In this section, the personal and professional characteristics of respondents are compared with their replies to statements. The objective of such a comparative analysis is to determine whether respondents' age, gender, official position, education and teaching qualifications, and professional experience have an impact on their responses to various statements. In other words, do their responses show some link with their personal and professional characteristics.

Since these are nominal variables, the Chi-square test is used to test the level of significance of the relationship between the answers to 30 questions dealing with teacher competency testing and the personal and professional characteristics of the respondents. It may be noted that:

1. A Chi-square test assumes that nominal answers to questions are distributed proportionally in each category. If so, the results of such a test are non-significant. If the observed data does not follow this pattern, the results of a Chi-squared test are significant, and from simple observation it is possible to describe the relationship between two variables.
2. The second important factor in the Chi-square test is the level of significance or the alpha (α) value which indicates the chance (or probability) of occurrence (or having the value of Chi-square). For example $\alpha = 0.999$ indicates that out of one

thousand total occurrences, the probability of having a particular value of Chi-square is 999. Thus the lower value of α (like 0.001, 0.002,.. .) indicates a high level of relationship between two, or more, variables.

3. The responses to each statement were compared with personal and professional characteristics of the sample, and values of Chi-square and alpha were calculated with the help of SPSS software. All these values are presented in the form of a table at Appendix E.
4. Due to space limitations, only those replies to statements showing a high relationship with personal and professional variables are being analysed in this section. The significant values of the Chi-square and alpha are given in tables 4.5 to 4.7.
5. At the end of each table (from table No.4.5 to 4.7) reference to the relevant appendix, which contains detailed information about category-related responses, is given (e. g. Appendix F, G, H).
6. At the end of each statement analysis there is reference to the relevant pages of the appendix (e. g. Appendix F/2, G/4)

The analysis of statements is based on the same four titles of the CIPP model of teaching evaluation: (a) context evaluation, (b) input evaluation, (c) process evaluation, and (d) product evaluation.

Context Evaluation

As table 4.5 indicates, the significant personal and professional variables for the responses to this category of statements are: (a) academic qualification, (b) teaching qualification, (c) position, and (d) service experience of respondents.

Table 4.5

Context Evaluation: Chi-square and Alpha Values Showing Significant Relationship Between Responses and Personal and Professional Characteristics

Questions/Statements	Academic Qualification	Teaching Qualification	Position	Experience
A TCTP should consider overall status of teachers in the society.	15.458 ($\alpha = 0.051$)			
Detailed job descriptions are prerequisites for an effective and fair TCTP.	14.139 ($\alpha = 0.078$)			
Clearly defined teaching standards are prerequisites for any teacher competency.	15.594 ($\alpha = 0.049$)	21.811 ($\alpha = 0.040$)		
The administrators of TCTP should set observable and measurable job objectives for teachers.		20.046 ($\alpha = 0.066$)		
In general, the major responsibility for raising standards in education rests with the government.			8.338 (α= 0.080)	23.678 (α=0.097)
The present system of regular evaluation of teachers' performance is satisfactory.			25.507 (α = 0.000)	

Following is the statement-related analysis of the relationship of responses to personal and professional variables. (For detailed responses to these statements, please see appendix F.)

"A TCTP should consider overall status of teachers in the society." The B.Ed. teachers who marked *agree* or *strongly agree* for this statement comprised 30.4%; Masters or other qualification holders represented 64.7% of their respective groups. The results for *disagree* or *strongly disagree* were: 42.4% of B.Ed.s and 17.6% of Masters or other, showing that the statement received approval by comparatively more Masters or other qualification holders than B.Ed.s (Detailed responses at Appendix F/1).

"Detailed job descriptions are the prerequisites for an effective and fair TCTP." The surveyed educators with a B.Ed. qualification who marked either *agree* or *strongly agree* in response to this statement comprised 36.75% of the B.Ed. respondents; those with Masters or other academic qualifications represented 25% of their group. Of those who marked *disagree* or *strongly disagree*, the B.Ed. group represented 6.4% and the Masters or other group 7.5%. These figures show that compared to Masters or other qualification holders, more B.Ed.s approve this statement. (Detailed responses at Appendix F/2.)

"Clearly defined teaching standards are prerequisites for any teacher competency." Most respondents *agreed* with this statement. Of the B.Ed.s 53.1% and of the Masters or other qualification holders 40% *agreed* with this statement, indicating that agreement is higher in case of B.Ed.s. Five percent of the Masters or other, and 2.1% of B.Ed.s marked *disagree*, confirming that a comparatively larger proportion of B.Ed. educators approved the statement.

With regard to teaching qualifications, 63.2% of total educators with A2 qualification, 52.5% with A3 qualification, and 47.5% with A4 qualifications expressed agreement with this statement, indicating a gradual decrease in agreement from A2 to A4 qualification. With respect to disagreement, there is a gradual increase from A2 to A4 qualifications. (Detailed responses at Appendix F/3 & 4.)

"The administrators of the TCTP should set observable and measurable job objectives for teachers." The combined percentage of respondents who *agreed* or *strongly agreed* with this statement were: 72.9% of A2, 84.6% of A3 and 87.2% of A4 teaching qualification holders, reflecting a gradual increase in agreement with an increase in teaching qualification of respondents. (Detailed responses at Appendix F/5.)

"In general, the major responsibility for raising standards in education rests with the government." With respect to respondents' professional positions, quite divided view points emerged. However, the agreement or disagreement of respondents indicate clear patterns. Thirty-eight *disagreed*, all of whom were teachers. Twenty-six teachers (22% of total teachers) and 4 other educators (66.7% of their group) *agreed* with the statement. The *mode* was thus *disagree*. The same trend is evident in the case of *strongly agree* responses: 10 teachers (8.5% of total teachers) and one other educator (16.1% of total non-teachers) *strongly agreed*. In case of *strongly disagree*, the trend was reversed, where the 25 respondents who *strongly disagreed* were all teachers.

The length of service is also shown to be a significant variable in the responses to this statement. The distribution of respondents who *disagreed* with the statement, as per their number of years in service, is as follows: 0-5 years = 31.4%, 6-10 years = 33.3%, 11-15 years = 38.5%, and 16-20 years = 42.9% (of their respective groups).

The figures indicate that though a majority of teachers do *disagree* with this statement, length of service has a significant effect on this disagreement - teachers with a longer history of service disagree more strongly than those with comparatively less experience. (Detailed responses at Appendix F/6 & 7)

"The present system of regular evaluation of teachers' performance is satisfactory." Here, 40.7% of teachers agreed with this statement while 33.3% of the group of other educators expressed agreement with it. A reverse trend is evident in the case of disagreement, where 19.5% of teachers and 50% of other educators *disagreed* with the statement. A similar trend is found in the *strongly agree* responses. On the other hand, the *strongly disagree* responses show a reverse trend, confirming that more teachers than other educators support this statement. (Detailed responses at Appendix F/8.)

A summary of responses to statements on context evaluation is as follows:

1. Such issues as detailed job descriptions for teachers and clearly defined teaching standards as prerequisites for evaluation, enjoy comparatively greater support from B.Ed. qualified teachers than by those holding Masters or other qualifications.
2. The demand for setting observable and measurable job objectives for teachers enjoys more support from comparatively higher teaching qualification holders.
3. A majority of experienced teachers do not consider the raising of educational standards as the government's responsibility.
4. Teachers (compared with other educators) are more comfortable with the present system of evaluation.

Input Evaluation

As table 4.6 shows, respondents' academic and teaching qualifications are significant variables showing clear patterns with their responses to statements on input evaluation.

Table 4.6

Input Evaluation: Chi-square and Alpha Values Showing Significant Relationship Between Responses and Personal and Professional Characteristics

Questions/Statements	Academic Qualification	Teaching Qualification
A TCTP should identify problems limiting teachers' performance.	14.954 ($\alpha = 0.060$)	29.327 ($\alpha = 0.004$)
A TCTP should provide means to correct teachers weaknesses.	21.185 ($\alpha = 0.007$)	
A TCTP should provide feedback on one's strength and weaknesses.	21.888 ($\alpha = 0.005$)	
While administering teacher competency testing, educational authorities should also arrange professional training for teachers so that their teaching capacities are enhanced.	23.700 ($\alpha = 0.003$)	28.977 ($\alpha = 0.004$)
The educational authorities conducting teacher competency testing should provide the latest technical and professional support to teachers to update their teaching methods and knowledge.	29.071 ($\alpha = 0.000$)	30.639 ($\alpha = 0.002$)

The statement-related analysis of the relationships between responses and the personal and professional variables of surveyed educators is as follows: (For detailed responses to these statements, please see Appendix G.)

"A TCTP should identify problems limiting teachers' performance." Those who *agreed* or *strongly agreed* with this statement include 72.7% of B.Ed.s and 68.4% of Masters or other. By contrast, 21% of B.Ed.s, and 21.1% of Masters or other, either *disagreed* or *strongly disagreed* with the statement. These results indicate that the proportion of agreement with the statement is higher in the case of B.Ed.-qualified teachers.

A study of the responses from the perspective of teaching qualifications shows a gradual increase in the *agree* results from the qualification A2 to A4 where A2 gave 44.7% support, A3 and A4 gave 53.8% each from their respective groups. This trend is substantiated by the percentage of responses in the column *disagree*: A2 = 18.4%, A3 = 12.8%, and A4 = 5.1% of their respective totals. (Detailed responses at Appendix G/1 & 2.)

"A TCTP should provide means to correct teachers weaknesses." Eighty percent of Masters or other qualification holders and 65.2% of B.Ed.s either *agreed* or *strongly agreed* with this statement. None of the educators with Masters or other qualifications *disagreed* but 16.8% of B.Ed.s did. Moreover, no Masters or other qualification holder strongly *disagreed* with this statement, but 9.5% of B.Ed.s did, indicating that compared to B.Ed.s, more educators with Masters or other qualifications support this statement. (Detailed responses at Appendix G/3.)

"A TCTP should provide feedback on one's strengths and weaknesses." The B.Ed. teachers who *agreed* or *strongly agreed* with this statement represent 82.1% of their total, compared to 85% of Masters or other level qualified educators. The figures for those who *disagreed* or *strongly disagreed* with the statement are: 14.7% of B.Ed.s and 5% of Masters or other levels. This data shows that compared to their B.Ed. counterparts, more educators with Masters or other qualification agree with this statement. (Detailed responses at Appendix G/4.)

"While administering teacher competency testing, educational authorities should also arrange professional training for teachers so that their teaching capacities are enhanced." Teachers with the B.Ed. qualification who *agreed* or *strongly agreed* with this statement made up 87.2% and those with Masters or other qualification made up 84.2% of their respective groups.

However, of those who marked *disagree* or *strongly disagree,* 10.5% held Masters or other qualifications and 9.6% held B.Ed.s. These figures show that, compared to their colleagues holding Masters or other qualifications, more B.Ed. educators support this statement.

The figures for A2, A3, and A4 teaching qualification holders who *agreed* or *strongly agreed* with the statement are as follows: A2 = 83.7%, A3 = 86.8%, and A4 = 92.3% (of their respective groups). For the combined responses of *disagree* and *strongly disagree*, the trend was reversed comprising 13.5% of A2, 10.5% of A3 and 2.6% of A4 teaching qualifications. This demonstrates that comparatively more holders of higher qualification approve this statement than their junior counterparts. (Detailed responses at Appendix G/5.)

"The educational authorities conducting teacher competency testing should provide the latest technical and professional support to teachers to update their teaching methods and knowledge." Forty three point eight percent (43.8%) of the B.Ed.s and 47.4% of the Masters or other academic qualification holders *agreed* with this statement. The figures for *disagree* are: B.Ed.s = 6.2% of and Masters or other qualification holders = 5.3%. These results show that, compared to B.Ed. teachers, more Masters or other level educators *agree* with this statement.

An analysis of the responses from a teaching qualification perspective indicates that 92.1% of A2, and 92.3% each of A3 and A4 teaching qualification holders either *agreed* or *strongly agreed* with this statement, showing a tendency for higher level teaching qualifications to results in comparatively more support for this statement. (Detailed responses at Appendix G/6 & 7.)

The above statement-related analysis of responses shows that the following issues related to teachers' input evaluation enjoy comparatively more support from B.Ed. qualified teachers than from their Masters or other level counterparts:

1. Identification of problems limiting teachers' performance;
2. Need for professional training of teachers.

The analysis also shows that comparatively higher teaching qualification brings more support to the following issues:

1. Identification of problems limiting teachers' performance;
2. Providing means to correct teachers weaknesses;
3. Need for professional training of teachers;
4. Need for providing the latest technical and professional support to teachers.

These two conclusions also lead to a third conclusion, namely that professionally highly qualified teachers feel that a model evaluation system should support:

1. Professional training of teachers.
2. Identification of problems limiting teachers' performance.

Process Evaluation

As presented in table 4.7 below, the personal and professional aspects of respondents showing some significant relationship to their opinions on process evaluation are: (a) age, (b) position, (c) level of teaching, and (d) academic qualification.

Table 4.7

Process Evaluation: Chi-square and Alpha Values Showing Significant Relationship Between Responses and Personal and Professional Characteristics

Questions/Statements	Age	Position	Level of Teaching	Academic Qualification
A TCTP should evaluate teachers' methods of questioning in the classroom.				20.657 ($\alpha = 0.008$)
A TCTP should evaluate teachers' method of conducting classroom discussion.		10.542 ($\alpha = 0.032$)	21.212 ($\alpha = 0.047$)	
A TCTP should evaluate teachers' method of observation of student behaviour.				13.602 ($\alpha = 0.093$)
A TCTP should evaluate teachers' knowledge of subjects to be taught in the classroom.	21.868 ($\alpha = 0.039$)		26.326 ($\alpha = 0.010$)	17.197 ($\alpha = 0.028$)

The statement-related analysis of the relationship between respondents' personal and professional factors and their opinions is presented below. (For detailed responses to these statements, please see Appendix H.)

"A TCTP should evaluate teachers' methods of questioning in the classroom." Fifty percent (50%) of the B.Ed. and 40% of Masters or other qualifications holders *agreed* with this statement. On the other hand, 19.1% of B.Ed.s and 25% of Masters or other qualifications holders *disagreed*, showing that more B.Ed.s support this statement in comparison with Masters or other levels. (Detailed responses at Appendix H/1.)

"A TCTP should evaluate teachers' method of conducting classroom discussion." Of their respective groups, 47.4% of teachers and 50% of other educators *agreed* with this statement. From their groups, 28.1% of teachers but no other educator, expressed disagreement, indicating that this statement has comparatively more support from other educators than from teachers.

Looking at the data with respect to levels of teaching, the respondents who *agreed* or *strongly agree*d with this statement include 52.4% of junior, 51.1% of senior and 50% of multiple level teachers, indicating a gradual decrease in approval from junior to multiple levels. (Detailed responses at Appendix H/2 & 3.)

"A TCTP should evaluate teachers' method of observation of student behaviour." Forty eight point nine percent (48.9%) of B.Ed.s agree with this statement compared to 40% of those with Masters or other academic qualifications. However, for disagreement the figures are: B.Ed.s = 25%, and Masters or other = 30%. Both these groups of figures indicate that more B.Ed. educators support this statement compared to those with Masters or other qualifications. (Detailed responses at Appendix H/4.)

"A TCTP should evaluate teachers' knowledge of subjects to be taught in the classroom." The majority of respondents to this statement is *agreed*: and 25 respondents from the age group *21-30 years*, 17 from the group *31-40 years*, 14 from the group *41-50 years* and only 3 from the group *51 and above* agreed with this statement. These figures are 20.5%, 13.9%, 11.5% and 2.5% respectively of the total respondents to this question. On the other hand, those who *disagreed* were 16, 9, 3, and 1 respectively from these age groups, showing a gradual decrease. Both these sets of data indicate that the statement enjoys comparatively more support from younger educators.

Looking at levels of teaching as a factor, 57.4% of junior level teachers, 43.5% of senior level teachers, and 28.6% of those teaching at multiple levels *agreed* with this statement. The figures for disagreement are: 23% of junior level, 26.1% of senior level, and 28.6% of multiple levels teachers. So a gradual increase in support of to this statement is evident from multiple to senior levels to the junior levels of teaching.

Forty nine point five percent (49.5%) of B.Ed. teachers and 35% of Masters or other academic qualification holders *agreed* with this statement. However, in disagreement were 24.7% of B.Ed.s and 35% of Masters or other levels qualified educators, confirming that comparatively more B.Ed.s approved this statement. The above data indicates that the level of teaching and teaching qualifications play roles in responses to this statement. (Detailed responses at Appendix H/5, 6, & 7.)

To sum up, the above analysis of responses to statements on process evaluation highlights the following correlations between the personal and professional variables of a respondent and his or her opinion:

1. B.Ed. educators, as compared to Masters or other qualification holders, ascribe greater importance to the evaluation of teachers' methods of both questioning in the classroom and conducting classroom discussion.
2. The evaluation of teacher's knowledge of subjects is supported by (a) comparatively younger age group (b) those who are B.Ed. qualified, and (c) teachers.

Product Evaluation

Out of four statements on product evaluation, only the one stating that *"Students' achievement or performance indicators should also be taken into account in a TCTP"* showed some correlation with respondents' ages. A preponderance of the respondents *disagreed* with this statement. The respondents who *disagreed* with this statement included 49% of the *21-30* age group, 41.5% of the *31-40* group, 37.5% of the *41-50* group, and 16.7% of the group *51 years and above*. The pattern of responses indicates that younger teachers, as compared to their senior colleagues, react more negatively to the idea of considering student achievements as a criterion for the performance evaluation. (Detailed responses at Appendix I.)

As the above analysis indicates, the pattern of educators' responses to some questions is linked to their personal and professional characteristics. Setting aside such variables as gender (here the female component is too high i. e.77.9%) and school board (75% of educators belonged to Ottawa Carleton District School Board), all the personal and professional variables showed some connection to the pattern of responses of at least one statement.

The academic qualifications of respondents is an important factor and was linked to the responses to at least 11 statements. The B.Ed. qualified teachers, as compared to those with Masters or other qualifications, give greater priority to the following issues concerning teacher's performance evaluation:

1. Detailed job descriptions for teachers;
2. Clearly defined teaching standards;
3. Identification of problems limiting teachers' performance;
4. Professional training of teachers;

5. Evaluation of teachers' methods of questioning in the classroom;

6. Evaluation of teachers' methods of conducting classroom discussion.

Another important variable is teaching qualification. The responses indicate that, compared to those with lower level teaching qualifications, educators with higher teaching qualifications, consider the following issues to be closely linked to the teacher competency process:

1. Setting observable and measurable job objectives for teachers;

2. Identification of problems limiting teachers' performance;

3. Providing means to correct teachers' weaknesses;

4. Professional training of teachers;

5. Providing the latest technical and professional support to teachers.

A category-related look at the answers also reveals that service experience influences the respondents' views on issues such as the government's role in raising the standard of education and the evaluation of teachers' knowledge of subjects. Greater length of service resulted in increased opposition to the claim that only the government is responsible for raising the standard of education, and the more experienced teachers ascribed comparatively more importance to the evaluation of a teacher's knowledge of the subject.

The evaluation of a teacher's knowledge of a subject also gained more support from comparatively lower level teachers (A1, A2,). Whereas the overall majority of teachers disagreed with the statement that students' achievements should be part of a teacher's performance evaluation, the proportion of opposition was comparatively higher among the teachers from younger age groups.

CHAPTER 5

DISCUSSION

In this final chapter, the summary of results of the study is presented, answers to the research questions are discussed in light of study of the literature on the subject, and recommendations are made on the basis of the results of the study. The significance and limitations of the study, and recommendations for further research are also discussed here.

Summary of Results

One hundred and thirty-seven teachers from Eastern Ontario were surveyed. Their answers to 30 statements on teacher evaluation and competency testing and their comments on open question section provided valuable data on the research topic. The data was analysed quantitatively in chapter 4. In the chapter, the content analysis was also presented for the respondents' comments given in the open section. The following section summarises the results of the study. These results are based on the data analysis conducted in chapter 4.

Principles of Context Evaluation

From a broader perspective, the teachers of Eastern Ontario believe that a teacher competency evaluation system should be based on the following principles:

1. *Clearly defined teaching standards*. This requirement was supported by 83.4% of total respondents, the majority of whom were the B.Ed. teachers and comparatively higher level teaching certificate holders.

2. *Setting observable and measurable job objectives for teachers*. More than 80% of teachers approved this demand. The approval percentage was comparatively higher among those with higher teaching certification.

3. *Detailed job description for teachers.* This principle had the approval of 68% of respondents, the majority of whom were B.Ed. qualified teachers.

4. *Working out a plan for the achievement of teachers' job objectives.* The statement highlighting this principle was supported by 62.2% of teachers.

5. *Identification of deficiencies in the overall education system.* More than 60% of teachers approved of this requirement.

Input Evaluation

The teachers of Eastern Ontario recommend the following teaching inputs for an effective teacher competency evaluation program.

1. *Providing the latest technical and professional support to teachers.* More than 90% of respondents supported this requirement. The proportion of support gradually increased from A2 (=92.1%) to A4 (=92.3%) levels teaching certificate holders.

2. *Arranging professional training for teachers to enhance their teaching capacities.* More than 87% of the respondents supported this requirement. The majority of supporters consisted of the B.Ed. qualified and higher level teaching certificate holders.

3. *Improving the quality of teaching material.* More than 85% of respondents were in favour of this demand; fifty percent of strongly supported it.

4. *Providing feedback on teachers' strengths and weaknesses.* Of the respondents, 83.3% approved this demand, the majority of them the B.Ed. qualified teachers.

5. *Identifying the problems limiting teachers' performance.* Seventy two percent of respondents (72%) supported this requirement, majority of supporters coming from the group of the B.Ed. qualified respondents and higher level teaching certificate holders.

6. *Providing means to correct teachers' weaknesses.* The respondents who agreed with this demand represented 68.3% of the total.

7. *Taking into account day-to-day problems faced by teachers.* More than 63% of teachers supported this requirement.

Evaluation of Teaching Processes

The results of the data analysis indicate that the teachers of Eastern Ontario consider the following teaching processes significant with respect to teacher competency evaluation:

1. Teachers' interaction with students (supported by 71.7% of respondents).

2. Teachers' communication skills to convey knowledge (supported by 66.1% of respondents).

3. Teachers' use of teaching material and his or her ability to make the material interesting and relevant (supported by 58.7% of respondents).

4. Teachers' method of promoting reading in the classroom (supported by 56.2% of respondents).

5. Teachers' knowledge of the subjects to be taught (supported by 56.1% of respondents, the majority supporters coming from: younger age groups, the junior level, and the B.Ed. qualified teachers).

6. Teachers' individual attention to students (supported by 54.4% of respondents).

7. Teachers' method of observation of students' behaviour (supported by 53.7% of respondents, the majority of supporters being the B.Ed. qualified teachers).

8. Teachers' method of conducting discussion (supported by 50.8% of respondents, the majority of supporters coming from the group of junior level teachers).

9. Teachers' method of questioning (supported by 50.4% of respondents, the majority of supporters being B.Ed. teachers).

In addition to these crucial teaching qualities and capacities, the teachers of Eastern Ontario also support an evaluation system which has a component of direct observation of classroom activities (supported by 56.8% of the respondents).

Teaching Product Evaluation

The teachers of Eastern Ontario do not approve of the idea that students' achievements or performance indicators should be part of a teacher's competency evaluation. A vast majority of 77.2% of respondents opposed the relevant statement in the questionnaire. The share of opposition by teachers belonging to younger age groups was much higher than the older teachers.

Teachers similarly oppose the concept that (a) students' opinion about a teacher's performance should be considered (56.8% of total respondents opposed) and that (b) parents should be involved in a teacher's performance evaluation (76.9% of the respondents opposed).

Teachers' Comments

In addition to their responses to 30 statements about various aspects of teacher evaluation and competency testing, some respondents made use of the open question section to express their views on these issues. The data obtained from the open section also provides valuable information about the general opinion of teachers of Eastern Ontario with respect to issues related to a competency testing program. In that section of the questionnaire some of the respondents provided additional information about their responses to the 30 statements and clarified or emphasized a number of points. Others used this space to express their views from

political, social, or other perspectives. The following opinions emerged from respondents' comments in the open section.

1. The present system of teachers' performance evaluation is good and, with some modifications, should be continued.
2. Teacher testing is essentially a political issue created by politicians for their own political ends.
3. Teacher testing is waste of public money.
4. The government policy on teacher testing is vague.
5. Teacher testing is a threat to Ontario teaching community.

This summary of the issues is based on lengthy comments on each issue written by at least 5 or 6 of the respondents. It may be noted that of the 137 respondents in this study, only two supported the idea of teachers competency testing.

After presenting a summary of the findings of the research, the study proceeds to a discussion of the results in light of the review of the literature and the three research questions.

Discussion

In this section the results of data analysis (presented in chapter 4) are discussed in light of a review of the literature on the subject. The discussion is based on the three research questions of the study.

First Research Question and Data Results

The first research question of the study relates to the opinions of the teachers of Eastern Ontario about various aspects of their performance evaluation. Most of the statements presented in the questionnaire were based on various aspects of teacher competency evaluation. As the statements were framed on the basis of the four aspects of the CIPP model, the discussion is also based on context, input, process and product evaluations. Not only did the respondents' answers to various statements provide quantitative data, but some of their comments in the open section compensated to some extent for the limitations of the closed-ended questions. The respondents took advantage of the open section to: (a) further elaborate their responses, (b) clarify their answers, and (c) add comments on the topic from another perspective, such as a political or social one, which was not covered in the 30 statements of the questionnaire.

Context Evaluation

The statements on context evaluation dealt with issues such as: teachers' status in the society, job description and job objectives for teachers, and teaching standards. Seven of a total of nine statements were approved by the majority (above 52%) of respondents. These statements covered the issues such as: (a)clearly defined teaching standards; (b) measurable job objectives for teachers; (c) detailed job description for teachers; (d) working out a plan for the achievement of teachers' job objectives; (e) identification of deficiencies in the overall education system;

(f) competency testing in some other self-regulated professions; and (g) the present system of evaluation in the Ontario province. The respondents' support for these statements on context evaluation leads to the following principles of the teacher competency evaluation process.

Clearly Defined Teaching Standards

Highlighting the importance of having a standard-guided education system, Ingvarson (1999) writes, "The standards-guided system aims to provide teachers with more powerful incentives for professional development, as teachers. " An overwhelming majority of respondents (83.4%) supported the requirement of clearly defined teaching standards as a prerequisite for a fair and balanced evaluation system.

Detailed Job Description

Job descriptions can be developed specifically the performance criteria expected of staff responsible for facilitating these outcomes. Job descriptions are essential to the contract plan approach, since they describe the behaviors expected of a teacher in a particular position (Iwanicki, 1981)

It is, in fact, a basic principle of any employment contract that the employer defines for the appointed employee what the organization expects from him or her and what tasks he or she is supposed to perform during the employment. The same principle applies to every employment, including education, so that the performance of teachers should be evaluated against already defined functions and responsibilities. Those individuals intending to teach should be informed at the time of their hiring of the duties which their employer or the school board expects them to perform. The statement about this principle was approved by 68% of respondents.

Setting Observable and Measurable Job Objectives for Teachers

More than 80% of the surveyed educators approved the statement demanding this requirement on the part of administrators. Their support of this principle of teaching evaluation reflects of the fact that the teacher's performance cannot be adequately or meaningfully judged against vague and undefined objectives. Their job objectives or targets should be well defined such that they may be held accountable for any failure to achieve an objective. The support for this principle was comparatively higher among the educators with higher teaching certifications.

Input Evaluation

Principles of Input Evaluation

In the broader context, the following major principles of input evaluation of teachers emerged from opinions expressed by the surveyed educators.

Providing Feedback on Teachers' Strengths and Weaknesses

The vast majority of respondents (83.3%) supported this argument. Natriello (1990) considers feedback to teachers to be important aspect of an evaluation system since:

> One purpose of evaluation systems is to lead to the improvement of the performance of individual teachers or the maintenance of already acceptable levels of performance. Presumably, teacher performance can be enhanced if evaluators provide feedback on problems in performance and strategies for remedying these problems.

In fact, an openness in any evaluation system itself provides individuals with an opportunity for knowing their strengths and weaknesses. It is hard to expect such an arrangement from an evaluation system which is administration-oriented.

Providing Means to Correct Teachers' Weaknesses

When the purpose of evaluation becomes the improvement of performance instead of merely the rating of it, results are more productive. Most people want to work more effectively. The stimulation of growth and development is a goal that is more acceptable to teachers and administrators than simply getting a report card indicating an evaluator's judgment of the individual's performance (Redfern, 1980).

The majority of surveyed educators agreed with this principle of teacher evaluation. One of them remarked, "If we do not meet the standard, we should have the opportunity to improve ourselves...We need to continue taking workshops, etc..."

Working out a Plan for Teachers to Achieve Job Objectives

A significant majority of respondents (62.3%) supported this idea. Some of them suggested a professional development program for teachers to enable them to achieve the teaching objectives. In this regard, Sweeny and Manatt (1984) suggest:

> Besides monitoring teacher performance, a specific objective of teacher evaluation should be to set measurable job improvement targets. Once targets are set, the principal and teacher work out a specific plan of action within a given time frame, and then review the teacher's progress in conference. Such clinical supervision promotes a school climate in which continuous improvement becomes an essential part of every teacher's job.

Teacher Training

Refresher courses for teachers as part of their training was highlighted by a number of respondents. But most of them stipulated that such courses should be funded by the educational authorities and not be the responsibility of the individual teacher. One respondent remarked, "The government should give us professional development fund workshops to help us improve. "

There is no dearth of literature highlighting the importance of teachers' continuous training. On this topic Chapman (1990) writes:

> To perform effectively in a new situation, individuals need to know what is expected of them, they must have the skills to perform those expected behaviors, and they must believe they can apply those skills successfully. Training should address all three of these components and should be supplemented with an appropriate program of instructional supervision.

Identification of Problems Limiting Teachers' Performance

In their answers to statements and in their comments, the respondents drew attention to a number of logistic problems faced in teaching. According to them, in the presence of these logistic problems they cannot be expected to achieve good teaching practices and should not be evaluated against higher standards. What they actually want is the identification of problems and the resolution of those issues which limit their performance as effective teachers.

Quality of Available Teaching Material

The statement concerning this aspect of teaching was *strongly agreed* with by almost 50% of respondents. When the percentage of those who merely *agreed* is added to these, the total support for the statement becomes 85.9%, indicating the significance educators accord to the availability of quality teaching material. In their comments as well, the respondents highlighted this requirement for a better teaching process. As mentioned during the analysis of data in chapter 4, one of the respondents wrote, "Put the money that (it) would cost to test me, into my classroom. I need science textbooks, dictionaries, atlases, pencils, screens for my windows, novels and an educational assistant for my ESL students."

These opinions on matters relating to the input evaluation of teaching convey a willingness to cooperate with administration on such issues as teacher training, feedback on teachers' strengths and weaknesses, and assisting teachers in achieving their job objectives.

Process Evaluation

Through their responses to various statements on process evaluation, the majority of surveyed educators showed support for the evaluation of the following teaching processes.

Teachers' Interaction with Students in the Classroom

More than seventy percent of respondents supported the statement about the evaluation of a teacher's interaction with his or her students.

On the importance of teachers' interaction with students during the teaching process, Harris (1986) observes:

> Teacher behavior and students' reactions are the key elements in instructional process. We often use the term 'teaching sharing process'. Certainly, interactions between teacher and student are enormously important process factors – so are questions, answers directions, elaborations, wait time, and time-on-task.

Teachers' Knowledge of Subjects to be Taught in the Classroom

The best case for treating teaching as a profession relies on the expertise of teachers in subject matter (Strike, 1990). More than 56% of the surveyed educators supported the statement that, "A TCTP should evaluate teachers' knowledge of subjects to be taught in the classroom." Comparatively the statement gained more support by: (a) the B.Ed.-qualified, (b) younger age group, and (c) the junior level teachers.

Teacher's Method of Conducting Classroom Discussion

More than 50% of educators supported evaluation of teacher's methods of conducting classroom discussions. Percentage of support among the educators performing non-teaching jobs, was comparatively higher than teachers. However, among teachers more junior and primary level teachers, as compared to their senior level counterparts, agreed with it.

In addition to above teaching processes, the majority of surveyed educators supported the competency evaluation of the following teaching activities:

1. Teachers' communication skills to convey knowledge.
2. Teachers' use of teaching material in the classroom.
3. Teachers' method of questioning in the classroom.
4. Teachers' methods of promoting reading in the classroom.
5. Teachers' individual attention to students.
6. Teachers' observation of student behavior.

Direct Observation

It may be noted that the only effective method for evaluation of majority of above-recommended teaching qualities is the direct observation of actual teaching process. On the significance of classroom direct observation, Evertson and Holley (1981) remark:

> Other methods of measuring teacher competencies and student learning are also important, but classroom observation gives us a view of the climate, rapport, interaction and functioning of the classroom available from no other source.

While criticizing teacher competency tests, a number of respondents, in their separate comments, argued in favor of classroom observation as a better technique for the evaluation of a

teacher's performance. One respondent observed, "Classroom observation and student involvement are imperative to effective evaluation." Another said that teacher testing should only take place in the form of observation of teaching in the class setting.

Product Evaluation

Teaching is not done just for the practitioners or even the students, but also for parents, elected representatives, society, and the profession. There are many stakeholders in quality teaching. Comprehensive teacher evaluation has the purpose of letting interested groups know how well, and in what ways, teachers contribute to their students and to society (Peterson, 1995).

The majority of respondents (56.8%) did not agree that in the teacher evaluation process, students' opinions about a teacher's performance should also be counted. Teachers here seem to agree with Aleamoni's (1981) observation, as mentioned in the review of literature in chapter 2, that, "Students cannot make consistent judgements about the instructor and instruction because of their immaturity, lack of experience, and capriciousness."

Any role for parents in teacher performance evaluation was also opposed by the vast majority of surveyed teachers. More than 76% of respondents rejected such involvement; those who were strongly opposed represented 42.3% of the respondents. About the parent-teacher relationship, Peterson (1995) remarks, "Teachers want some distance from parents; after all, the primary work and responsibility of teachers are with students and not their parents."

More than 77% of teachers rejected the idea of considering students' achievements or performance indicators as part of the teacher's performance evaluation. However, despite teachers' rejection of this evaluation criterion, its significance cannot be underestimated. In the words of Hoenack & Monk (1990), "The use of measured student learning gains can potentially free evaluation from the ambiguous task of inferring productivity from teaching inputs. However, these data can be biased toward what is easily measured."

While opposed to any role for students or parents in the teacher's performance evaluation, the vast majority of respondents (78.2%) supported a teacher's self-assessment as part of an overall performance evaluation. When certain conditions are met, Barber (1990) considers self-assessment an effective method of evaluation:

> To improve teaching through formative evaluation, a teacher must first admit that he or she is doing something less than perfectly and that the teacher's behaviour can be improved by one or a combination of the many techniques of formative evaluation.

Nevertheless, regarding self-evaluation Popham (1988) cautions, "The problem with asking teachers to appraise their own instructional prowess is that most of us are markedly partisan when we judge ourselves."

Second Research Question and Data Results

The second research question of the study deals with the opinions of the teachers of Eastern Ontario about a teacher competency program. The data obtained through respondents' replies to some of the thirty statements and comments made in the open question section relate to this research question.

A description of the respondents' opinions about teachers' performance evaluation through the competency testing program follows.

Teacher Testing as a Political Issue

In their comments, some educators described the whole exercise of teacher testing as a political ploy. One such remark was, "The real agenda for competency testing is political and not in the best interest(s) of education. I am for (the) testing of new teachers based upon education theory and their subjects."

Teacher Testing is a Waste of Public Money

Another criticism made against teacher testing was that "it is just (a) waste of public money for political gains and instead this money could be utilized for education in the province." One respondent observed, "I find it appalling that the government is putting public dollars into this when thousands of children are suffering due to cutbacks."

Vague Government Policy

Some of the respondents complained about their lack of a clear picture about the government's intentions about the teacher competency program. They claimed to have no information about the ways in which the government intends to implement a teacher testing program in the province, nor about the next stage of the process, nor about who would be responsible for arranging tests. One such remark, which was also quoted during analysis of data in chapter 4, asked, "What kind of testing would they use? How are they going to create a standardized test when the teaching field is so varied?"

A Threat to the Teaching Community

Some of the respondents described teacher testing exercises as "harassment of teachers, " "discrimination, " or " teacher-bashing". As mentioned during analysis of data in chapter 4, one of the respondents wrote, "This plan makes me feel harassed again by the government so that they can point the public toward me in general and use us as scapegoats.. . The government needs to show us support for a change, to improve morale, teaching ability and performance."

Support for Teacher Testing

At least two respondents openly or indirectly supported the teacher testing. One of them was of the view that "Professionals need to demonstrate their competence at regular intervals – so why not teachers?" The other educator remarked, "Testing would be fine as long as it is specific, subject oriented." Some respondents held the view that there should be a program of teacher-testing but that it should take place upon entrance to teacher's college.

As their comments demonstrate, some educators have been excessive in their criticism of the government for introducing teacher competency testing in the province. About teachers' tendency to resist new administrative policies, Chrysos (2000) observes:

> By all accounts, teachers, individually and through their associations (unions), resist policies they do not understand. When a new idea is introduced, resistance is the common reaction. Teachers are familiar and comfortable with prior procedures, because they know what to do. The unknown, unfamiliar can be frightening, since it will be analytically investigated and reviewed.

Given this reaction to the teacher competency testing program, questions arise about how teachers want their performance to be evaluated. The answer to this question was also provided by the sample.

Present System of Teacher Evaluation

The majority of educators (more than 80%) supported a continuation of the present teacher evaluation system but recommended that some improvements be made to make it more effective.

Evaluation by Professionals

While in support of teacher evaluation by administrators – principals, vice principals, or school board authorities – the majority of educators were totally opposed to their performance being evaluated by non-professionals. Their main argument was that teachers should be evaluated by those with whom they work on a regular basis. One teacher found the current system, wherein administrators, principals, or vice principals go into classrooms to observe and assess teachers, quite satisfactory, but recommended that, should more formal testing be introduced, teachers and administrators be in charge of deciding the criteria and methods of testing.

However, Kauchak, Peterson, and Driscoll (1985), in a survey study of Utah and Florida teachers, found evaluations based on visits by principals to be "perfunctory, with little or no effect on actual teaching practice." The reason they give for this is that first, the evaluation visits were too brief, and second, the teachers complained that the principal was "not knowledgeable." But in our survey the teachers expressed a willingness to give the task of evaluation to these so-called "not knowledgeable" principals, perhaps considering them to be lesser evil than competency testing.

Viewing this issue from a another perspective, Lockhart(1991) observes:

> Teachers maintain significant levels of professional autonomy in the administration of the classroom but have little control over the administrative or polity environment within which these classroom activities are located. Given this, the question of how teachers subjectively interpret the fundamentally contradictory 'professional' versus 'bureaucratic' systems of controls, that coexist within their career system becomes the key to determining their net level of satisfaction.

The responses and comments by the respondents in this study reflect the opinions of teachers in Eastern Ontario on the teacher competency issue. In Chapter 1, while describing the issue under study, a description was given of the initial reactions of various leaders and teaching associations in Ontario to competency testing. Taken together, these do not suggest much support for the government's plan to implement a teacher testing program in the province.

In spite of this, the educational authorities have repeatedly declared that the government will implement its agenda of improving teaching in the Province of Ontario, because, according to its leaders, it has the people's mandate to do so. Regardless of the utility or futility of a teacher testing program, such a schism between the government and the teaching community is indicative of a serious communication gap and mistrust between the two. It also indicates that despite their claims about having consulted with teachers' unions about this issue, no serious effort has been made on the part of provincial authorities to gain the teachers' cooperation. Due to this atmosphere of mistrust, the situation is becoming increasingly fraught. Notwithstanding the claim of some circles that evaluation is a non-political and merely an administrative matter, House (1983) opines:

> Evaluation is political. It is used to allocate resources, cover up mistakes, build reputations and make money. It is also used to correct mistakes, improve programs, reward merit, and tell parents what is happening to their children.

Third Research Question and Data Results

This study's third and final research question concerns any possible relationship between the responses to the thirty statements put forth in the questionnaire and the personal and professional characteristics of the respondents.

As the analysis in Chapter 4 indicated, certain responses showed a direct correlation with certain variables. The academic qualification of respondents was the most significant such variable. Results indicate that the B.Ed. qualified teachers, as compared to those with Masters or other qualification, consider the following requirements as prerequisites for a good teacher evaluation system:

1. Detailed job descriptions for teachers;
2. Clearly defined teaching standards;
3. Identification of problems limiting teachers' performance;
4. Professional training of teachers.

Similarly, the B.Ed. qualified teachers ascribe much more importance to the evaluation of the following teaching processes:

1. A teacher's method of questioning;
2. A teacher's method of conducting classroom discussion;
3. A teacher's knowledge of subjects to be taught.

The level of teaching qualifications held by the respondents was another variable linked to their responses to some statements. The following aspects of teachers' evaluation received more support from holders of higher teaching qualifications (than from those holding a lower level teaching qualifications):

1. Setting observable and measurable job objectives for teachers;
2. Identification of problems limiting a teacher's performance;
3. Providing means to correct a teacher's weaknesses;
4. Professional training of teachers;
5. Providing the latest technical and professional support to teachers.

The length of the respondent's service was also closely linked to their responses to some of the statements. A majority of experienced teachers, compared to those with less service tenure, did not hold the government responsible for raising the standard of education.

Respondents from the younger age group were comparatively more supportive of evaluation of a teacher's knowledge of his or her subjects. However, compared to older age teachers, this category of respondents was far more opposed to considering students' achievements for a teacher's performance evaluation.

Conclusions

Though the sample for this study was just a segment of the entire population of Ontario educators, the opinions expressed by those surveyed educators did represent the feelings of the teaching population of Eastern Ontario. In order to consider the opinions of the sample group as representative of the views of the entire population, a criterion in quantitative terms must be set. For this, three possible options are: (a) simple majority opinion formula, (b) 51% majority opinion, or (c) a higher than 51% level majority opinion. To avoid the possibility of misinterpreting results, and bearing in mind the limitations of the study, both the simple majority and the 51% majority are set aside and a higher level of majority opinion is set. A two-thirds majority or 66% would seem to be the safest and most reliable criterion for considering the opinions of the educators in the sample group as those of the entire population. In other words, if a statement was approved or opposed by at least 66% of the respondents, that result would be taken as the opinion of teachers of Eastern Ontario. It should be noted that the term "support" denotes the total of the "agree" and "strongly agree" responses and "against" denotes the total of the "disagree" and "strongly disagree" responses. Given this, the following picture of the opinions of the teaching community emerges.

The teachers of Eastern Ontario consider the following basic components to be prerequisites to an effective teacher competency testing program:

1. Identification of problems limiting a teacher's performance;
2. Providing means to correct a teacher's weaknesses;
3. Providing feedback on individual teacher's strengths and weaknesses;
4. Detailed job descriptions for teachers;

5. Clearly defined teaching standards;
6. Professional training for teachers;
7. Providing the latest technical and professional support to teachers to update their knowledge;
8. Availability of the latest teaching material for teachers;
9. Setting observable and measurable job objectives for teachers.

As far as the evaluation of various teaching skills is concerned, the results of the data analysis show that teachers in Eastern Ontario ascribe the greatest importance to the evaluation of a teacher's (a) interaction with students in the classroom and (b) his or her ability to convey knowledge.

While respondents approve of including self-assessment as part of their overall performance evaluation, they are against participation by parents in the evaluation process. Similarly, the use of student achievement or performance indicators in the evaluation of a teacher's performance is also opposed by the teaching community.

On the basis of the data supplied by the respondents in their comments in the open section, the following conclusions are drawn. (The number of comments made is mentioned after each conclusion.)

1. For the improvement of their professional competencies, teachers are willing to attend government-funded training programs, and workshops. (Based on comments by 9 respondents.)
2. Instead of evaluation by non-professionals, teachers would prefer evaluation by persons with whom they work on a daily basis, such as principals, vice principals, or administrators of local school boards. (Based on comments by 10 respondents.)

3. The teaching community is opposed to a teacher competency testing program and has doubts about the real motives of the provincial government in this regard. Educators view the program as part of a political agenda of the government, not as a sincere effort to improve the quality of teaching in the province. (Based on comments by 9 respondents.)

4. Some teachers still have no clear picture of the planned Ontario teacher testing program. (Based on comments by 2 respondents.)

Finally, it should be noted that 80% of respondents supported the statement proposing the continuation – with some improvements – of the existing teacher evaluation system in the province. This indicates that the teachers of Eastern Ontario prefer the existing evaluation system to the newly introduced teacher competency testing program.

Implications for Practice

As was pointed out earlier, teachers' views on this issue are indicative not only of the conflict of opinion between the Government of Ontario and the teaching community, but also of a wide communication gap between the two camps. Such a phenomenon is most certainly detrimental to educational development in the province. There is a serious need to bridge this communication gap.

For their part, teachers should realize that as teachers they have obligations not only to the students but to students' parents, to administrators, to the public (or public representatives) and to society. They should bear in mind that in the USA, where the educational system is considered to be one of the best in the world, teacher competency testing has been practised for many years. Though still controversial, it has become normal practice for the teaching community in that country. Rather than being unduly influenced by their suspicions about the political motivations of the program and rejecting the whole concept outright, teachers should try to make the new system workable by providing some input to the policy planners. Only if the Government fails to accommodate their reasonable requests and suggestions for the improvement of the teacher testing program would teachers be justified in blaming it for adopting an unrealistic and partisan attitude. In addition, teachers should be aware that passing a standardized test would open new avenues for their career planning, as this certification would enable them to search for better job markets.

Nevertheless, as the employer of teachers and as the initiator of this program, the Government of Ontario has enormous responsibility. It appears that all its media and public relations campaigns on this issue have been aimed at the public and the parents and not at the

teachers. Writing letters to educational stakeholders and placing their replies in the files, without considering the views they express is an undemocratic and bureaucratic approach. Instead of considering them as its paid employees, the government should view the teachers as partners in the education system. It should try to win their support and to that end, direct its media campaigns to teachers as well as the general public. Teachers must be made to feel that their opinions will be given careful consideration. The government should initiate a consultation process over the competency testing issue with the teaching community and its leaders and it should not hesitate to accommodate their justified suggestions in this regard.

To prevent teacher testing being conceived of as a threat or as imperiling job retention, the Government should offer incentives for teachers to successfully pass teacher testing requirements. All these positive measures would certainly result in a better mutual understanding between the Government of Ontario and the teaching community and a more congenial educational environment in the province.

Last but not least, the government, in it efforts toward the development of education in Ontario, should not depend solely on the success of the teacher testing program. As Millman (1981) cautions, with reference to the USA, "When state-wide testing programs were used to assess the work of school systems, schools, classes and sometimes teachers, the teachers soon learned ways of manipulating test scores up and down."

Scholarly Contributions of the Study

This study is unique in a number of respects. First and foremost, it deals with a current issue in Ontario. The teacher competency testing program of the Ontario Government is at an early stage of implementation. The national media is constantly reporting developments on this issue, including government steps and comments by different stakeholders. Teacher competency testing is a contentious and extremely relevant topic in educational circles in Ontario. But despite all this media publicity, to the best of the researcher's knowledge, no study has been conducted on this issue from the Canadian perspective.

The available literature on the topic of teacher competency testing mostly concentrates on the US experiments on this issue. The reason for this neglect of the Canadian perspective is obvious – teacher testing is a new concept in Canada as compared, for example, to the USA where the majority of states have had such systems in place for a number of years. This study should thus be credited with being one of the initial contributions to the Canadian literature on this issue.

Another significant aspect of this study is its stress on the opinions of the major subjects of the program - the teaching community. As discussed earlier, the teachers of Eastern Ontario have candidly expressed their views on various aspects of the Ontario teacher testing program. All this data could be utilized as valuable feedback by the educational policy planners of Ontario.

In addition, this study is a contribution by a non-Canadian international student to the Canadian education system. A researcher from an underdeveloped country of Asia, personally bearing all the expenses of his studies, took this Canadian research as a challenge to demonstrate that there is no dearth of talent in the underdeveloped world. In this respect this study could become a motivating factor for the Canadian researchers to further explore the topic and conduct research on this issue from different perspectives.

Limitations of the Study

Despite a number of limitations, this study was a modest effort to research one of the hot topics of educational circles in Ontario. It should be noted that the major reasons for some of the limitations mentioned below were the study's limited scope and the unavailability of previous research material in the province.

One of the major limitations was that, due to their vicinity to the University of Ottawa, almost three quarters (75%) of the total respondents were teachers of the Ottawa Carleton District School Board. Only 25% of the respondents were from other Eastern Ontario school boards. Then, under the quota sample method, only those educators doing their summer courses at the Faculty of Education at the University of Ottawa were included in the sample group because it afforded easy access to a sample group.

Moreover, the study was limited to coverage of teachers of Eastern Ontario only, whereas the teacher competency testing is an issue relevant to the entire province. For a better and more representative picture of the views of Ontario teachers, the study should have covered other regions as well.

The study was also limited to ascertaining opinions of teachers only. It did not investigate the views of other major stakeholders in education in the province, such as educational authorities, parents and public representatives.

Recommendations for Further Research

As this was only an initial study on the topic of the Ontario teacher competency testing program, the scope for further research on the issue is quite broad.

This study was limited to the population of teachers of Eastern Ontario. A future study should research the opinions of teachers from other regions of the province. Either separate surveys for various regional populations of teachers or a comprehensive survey based on representatives of all important regions of the province could be conducted. In any case, such a survey would convey the feelings of teachers from various parts of Ontario on this crucial issue.

Only one stakeholder in Ontario education, the teaching community, was covered in this study. Any future study should also include other important stakeholders – like administrators, parents, educational authorities, and public representatives. In this way, the study would cover various perspectives on this issue.

As the proponents of the teacher testing program in Canada seem to be attracted by the US experiments, a comparative study of the US and Canadian evaluation systems would be both relevant and useful. Such comparative research would provide some input to the teacher competency testing program in Ontario.

There is also a demand for a comprehensive study to determine a suitable teacher evaluation system for the province of Ontario, one which would meet the requirements of all major stakeholders in education – the teachers, parents, students, administrators, and public representatives.

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Competency Testing for Ontario Teachers

An Opinion Survey

1. What is your age?

21 - 30 | 31 - 40 | 41 - 50 | 51 & Above

2. What is your gender?

Male | Female

3. What is your position?

Teacher | Department Head | Supervisor | Vice Principal | Principal | Other

4. What is your level of teaching?

Primary | Intermediate | Junior | Senior | Other

5. What is your teaching qualification?

A - 1 | A - 2 | A - 3 | A - 4

6. Kindly mention the name of your school board:

.....

7. What is your academic qualification?

No Degree | B. Ed. | Masters | Ph.D. | Other

8. For the last how many years you have been teaching?

0 - 5 | 6 - 10 | 11 - 15 | 16 - 20 | 21 & Above

Please indicate with X in the appropriate box the extent to which you agree or disagree with each statement.

What Should Be The Objective Of Teacher Competency Testing?

9. A teachers competency testing program, should consider overall status of teachers in the society .

Strongly Agree | Agree | No Opinion | Disagree | Strongly Disagree

10. A teachers competency testing program should identify deficiencies in the overall education system.

Strongly Agree | Agree | No Opinion | Disagree | Strongly Disagree

11. A teachers competency testing program should identify problems limiting teacher's performance.

Strongly Agree | Agree | No Opinion | Disagree | Strongly Disagree

12. A teacher competency testing program should provide means to correct teachers' weaknesses.

Strongly Agree | Agree | No Opinion | Disagree | Strongly Disagree

13. A teacher competency testing program should provide feedback on one's strength and weaknesses.

Strongly Agree | Agree | No Opinion | Disagree | Strongly Disagree

14. Detailed job descriptions are a pre-requisite for an effective and fair teacher competency testing program.

Strongly Agree | Agree | No Opinion | Disagree | Strongly Disagree

15. Clearly defined teaching standards are a pre-requisite for any teacher competency testing program.

Strongly Agree | Agree | No Opinion | Disagree | Strongly Disagree

16. While administering teacher competency testing, educational authorities should also arrange professional training for teachers so that their teaching capacities are enhanced.

Strongly Agree | Agree | No Opinion | Disagree | Strongly Disagree

17. The educational authorities conducting teacher competency testing should provide the latest technical and professional support to teachers to update their teaching methods and knowledge.

Strongly Agree | Agree | No Opinion | Disagree | Strongly Disagree

18. A teacher competency testing program should take into account day-to-day personal problems faced by teachers (like health, financial problems, service matters, etc.)

Strongly Agree | Agree | No Opinion | Disagree | Strongly Disagree

19. A teacher competency testing program must take into account the quality of teaching material available.

Strongly Agree | Agree | No Opinion | Disagree | Strongly Disagree

20. The administrators of teacher competency testing program should set observable and measurable job objectives for teachers.

Strongly Agree | Agree | No Opinion | Disagree | Strongly Disagree

21. In a teacher competency testing program, it is the responsibility of the educational authority to workout a plan for achievement of job objectives.

Strongly Agree | Agree | No Opinion | Disagree | Strongly Disagree

22. A teacher competency testing program should evaluate teachers' methods of questioning in the classroom.

Strongly Agree | Agree | No Opinion | Disagree | Strongly Disagree

23. A teacher competency testing program should evaluate teachers' method of promoting reading in the classroom.

Strongly Agree | Agree | No Opinion | Disagree | Strongly Disagree

24. A teacher competency testing program should evaluate teachers' method of conducting classroom discussion.

Strongly Agree | Agree | No Opinion | Disagree | Strongly Disagree

25. A teacher competency testing program should evaluate teachers' method of observation of student behavior.

Strongly Agree | Agree | No Opinion | Disagree | Strongly Disagree

26. A teacher competency testing program should evaluate how teacher listens and gives individual attention to students.

Strongly Agree | Agree | No Opinion | Disagree | Strongly Disagree

27. A teacher competency testing program should evaluate teachers' knowledge of subjects to be taught in the classroom.

Strongly Agree | Agree | No Opinion | Disagree | Strongly Disagree

28. A teacher competency testing program should evaluate teachers' use of teaching material and their ability to make this material interesting and relevant.

Strongly Agree | Agree | No Opinion | Disagree | Strongly Disagree

29. Teachers' communication skills to convey knowledge are of prime importance in a teacher competency testing program.

Strongly Agree | Agree | No Opinion | Disagree | Strongly Disagree

30. A teacher competency testing program should have a component of direct observation in the classroom.

Strongly Agree | Agree | No Opinion | Disagree | Strongly Disagree

31. A teacher competency testing program should take into account the teachers' interaction with students in the classroom.

Strongly Agree | Agree | No Opinion | Disagree | Strongly Disagree

32. In a teacher competency testing program, students' opinion about teacher's performance should be taken into consideration.

Strongly Agree | Agree | No Opinion | Disagree | Strongly Disagree

33. Teachers' self-assessment of their performance should be taken into account in a teacher competency testing program.

Strongly Agree | Agree | No Opinion | Disagree | Strongly Disagree

34. Students' achievement or performance indicators should also be taken into account in a teacher competency testing program.

Strongly Agree | Agree | No Opinion | Disagree | Strongly Disagree

Issues related to Competency Testing

35. Regular competency testing in some other self-regulated professions like law, civil aviation and pharmacy, is justified.

Strongly Agree | Agree | No Opinion | Disagree | Strongly Disagree

36. In general, the major responsibility of for raising standards in education rests with the government.

Strongly Agree | Agree | No Opinion | Disagree | Strongly Disagree

Ontario Related Issues

37. Parents should be involved in teacher competency testing program.

Strongly Agree | Agree | No Opinion | Disagree | Strongly Disagree

38. The present system of regular evaluation of teachers' performance is satisfactory.

Strongly Agree | Agree | No Opinion | Disagree | Strongly Disagree

39. If you feel that you have more to say than the above statements, kindly feel free to use the space below to express your view point:

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Université d'Ottawa · University of Ottawa

Faculté d'éducation Faculty of Education

July 6, 2001

Dear Participant,

As you are aware, the government of Ontario is introducing teachers' competency testing in the province. As a student of M.A. (Education) program at the University of Ottawa, I am conducting a survey study on teachers' competency testing. In this survey, I plan to obtain the opinions of Ontario teachers, currently registered at summer courses at the University of Ottawa, about the competency testing program for teachers. The enclosed questionnaire is designed to obtain your views about various aspects of teachers' competency testing.

I would highly appreciate if you could complete the questionnaire and return it to me (at room # LMX 369 between 9:30 a.m. to 12:00 noon) or to the professor concerned of your class as early as possible. I realize that you have a busy schedule and your time is valuable but you may appreciate that as a teacher your opinion on this issue counts a lot. The completion of questionnaire would take approximately 10-15 minutes. I plan to write an article on the basis of findings of the study.

In the questionnaire your name is not required. Let me assure you that your responses would be kept totally confidential. You should feel free to answer or not answer any or all questions. The study has accordingly been approved by the faculty of Education of the University of Ottawa and it is accordingly being supervised by a professor of the University. In any case if you have any question about their rights as research participants, you are advised to contact Ms. Lise Frigault, Protocol Officer for Ethics in Research , University of Ottawa (Phone# (613) 562-5800 extn. 1787 e.mail: lfrigul@uottawa.ca).

The questionnaire consists of four sections , i.e. Socio-Professional, Contents of Teacher Competency Testing, Broader Contents, and Ontario Specific Issues. You are required to answer in the appropriate box after each statement.

I want to thank you in advance for your kind cooperation.

Khalid M. Sarwar

145, rue Jean-Jacques-Lussier C.P. 450, Succ. A
Ottawa (Ontario) K1N 6N5 Canada

145 Jean-Jacques Lussier St., P.O. Box 450, Stn. A
Ottawa, Ontario K1N 6N5 Canada

July 6, 2001

From:

Khalid M. Sarwar,
Candidate M.A. (Education)

To:

Professor.....
Faculty of Education,
University of Ottawa

Subject: **Survey Research on 'Teachers Competency Tests'**

Dear Professor.....,

My name is Khalid M. Sarwar and I am a student of M.A.(Education) program at the Faculty of Education in the University of Ottawa. I am conducting a survey research on recently announced Ontario teachers' competency testing program. The thesis project has been approved by the Faculty of Education as well as the Research Ethics Board of the University of Ottawa.

The teachers from various school boards of Ontario, currently registered at the summer courses of the Faculty of Education, are the samples of my survey. The survey questionnaire consists of 44 questions mostly related to the samples' opinion about teachers' competency testing program. There are some questions about the socio-professional background of samples. However, their names are not required. A covering letter/information sheet explains the process and purpose of survey. A copy of the information sheet is enclosed for your perusal and may provide you some further information about the project.

For the purpose, I need your cooperation as your class consists of teachers from various school boards of Ontario. I would highly appreciate if you could allow me to visit your class to brief the students about survey and distribute the survey instrument, i.e. the information sheet and the questionnaire, among the willing participants. I assure you that I would not take more than 5-7 minutes. Moreove5r, your students are not required to complete the questionnaire during class. I will collect the completed forms during next class or if you may like to collect them I would get them from you after the class.

I have informed Ms. Nicole Besner, Administrator Professional Development Program and New Initiatives about the study and she has very kindly allowed me to contact you and the class. In case you have any further questions about the study, kindly contact me at phone# (613)738-9132 e.mail: ksarwar@hotmail.com. I would appreciate your response please.

With best regards,

Yours faithfully,

(Khalid M. Sarwar)

Attention Ontario Teachers

Teachers' Competency Testing

is a hot topic these days

DO YOU WANT TO EXPRESS YOUR

FEELINGS ON THIS ISSUE?

Participate In A Study

Being Conducted At the Ottawa-U

Complete A Questionnaire

Without Giving Your Name

Contact Khalid Sarwar at

(613) 738-9132

OR E.Mail: ksarwar@hotmail.com

OR Drop By Room # LMX 369

(Between 10:00 a.m. to 12:30 p.m.)

Comparison of Responses to 30 Statements with Personal and Professional Characteristics of Respondents

Characteristics ⇒ / Statements/ ⇓ Question No		Age	Gender	Position	Level of Teaching	Teaching Qualification	School Board	Academic Qualification	Service Experience
9	c.sq.	8.059	0.738	2.229	13.566	11.12	6.168	15.458	13.411
	∝	0.781	0.947	0.694	0.329	0.519	0.628	0.015	0.643
10	c.sq	11.175	1.16	4.585	6.143	16.327	9.166	9.013	21.362
	∝	0.514	0.885	0.333	0.909	0.177	0.328	0.341	0.165
11	c.sq	10.108	7.594	3.135	5.825	29.327	4.898	14.954	12.672
	∝	0.606	0.108	0.535	0.925	0.004	0.768	0.06	0.697
12	c.sq	6.455	6.999	3.535	14.358	32.64	7.079	21.185	13.9
	∝	0.891	0.136	0.473	0.278	0.001	0.528	0.007	0.606
13	c.sq	13.551	2.218	1.291	12.386	19.226	1.476	21.888	14.757
	∝	0.33	0.696	0.863	0.415	0.083	0.993	0.005	0.542
14	c.sq	7.381	4.447	2.324	5.705	14.718	4.583	14.139	15.867
	∝	0.831	0.349	0.676	0.93	0.257	0.801	0.078	0.462
15	c.sq	5.366	3.713	1.356	6.018	21.811	4.913	15.594	11.98
	∝	0.945	0.446	0.852	0.915	0.04	0.767	0.049	0.745
16	c.sq	16.313	5.521	3.049	7.974	28.977	3.497	23.7	22.118
	∝	0.177	0.238	0.55	0.787	0.004	0.899	0.003	0.139
17	c.sq	10.57	2.494	5.718	7.829	30.639	5.133	29.071	6.771
	∝	0.566	0.646	0.22	0.798	0.002	0.743	0.00	0.977
18	c.sq	10.872	7.668	0.424	18.093	11.579	11.584	6.05	21.009
	∝	0.54	0.105	0.98	0.113	0.48	0.171	0.642	0.178
19	c.sq	7.321	2.483	2.517	11.726	2.424	4.386	6.893	13.142
	∝	0.836	0.648	0.642	0.468	0.998	0.821	0.548	0.662

Characteristics ⇒ / Statements/ ⇓ Question No		Age	Gender	Position	Level of Teaching	Teaching Qualification	School Board	Academic Qualification	Service Experience
21	c.sq	10.831	3.115	2.353	8.071	13.119	6.849	8.833	8.937
	∝	0.543	0.539	0.671	0.78	0.36	0.553	0.357	0.916
22	c.sq	7.684	1.448	1.247	10.466	13.839	11.724	20.657	17.67
	∝	0.809	0.829	0.87	0.575	0.311	0.164	0.008	0.344
23	c.sq	5.296	0.322	2.777	3.983	13.187	11.332	8.957	11.988
	∝	0.947	0.988	0.596	0.984	0.356	0.184	0.346	0.745
24	c.sq	7.655	1.379	10.542	21.212	11.222	11.083	10.132	6.741
	∝	0.811	0.848	0.032	0.047	0.51	0.197	0.256	0.978
25	c.sq	11.432	2.969	5.965	17.624	11.156	10.33	13.602	14.271
	∝	0.492	0563	0.202	0.128	0.516	0.243	0.093	0.579
26	c.sq	8.852	6.503	4.034	9.005	0.791	6.783	7.716	14.763
	∝	0.716	.0165	0.401	0.702	7.921	0.56	0.462	0.542
27	c.sq	21.868	2.632	5.745	26.326	11.911	8.859	17.197	20.133
	∝	0.039	0.621	0.219	0.01	0.453	0.354	0.028	0.214
28	c.sq	16.517	2.586	4.79	5.331	14.349	3.687	8.249	14.636
	∝	0.169	0.629	0.31	0.946	0.279	0.884	0.41	0.542
29	c.sq	10.049	1.811	4.742	15.988	13.028	5.685	4.882	11.438
	∝	0.612	0.77	0.315	0.192	0.367	0.682	0.77	0.782
30	c.sq	6.809	1.147	4.994	10.184	11.031	5.652	11.1	13.896
	∝	0.87	0.887	0.288	0.6	0.526	0.686	0.196	0.606
31	c.sq	3.264	2.491	10.818	9.605	12.827	10.366	5.693	9.62
	∝	0.993	0.646	0.029	0.651	0.382	0.24	0.682	0.886
32	c.sq	6.983	2.257	3.548	15.199	12.914	4.79	7.967	15.299
	∝	0.859	0.689	0.471	0.231	0.375	0.78	0.437	0.503

Characteristics ⇒ / Statements/ ⇓ Question No		Age	Gender	Position	Level of Teaching	Teaching Qualification	School Board	Academic Qualification	Service Experience
34	c.sq	22.138	2.657	5.5	14.983	16.13	6.35	2.443	21.013
	∝	0.036	0.617	0.24	0.242	0.185	0.608	0.964	0.178
35	c.sq	18.479	3.754	6.432	7.901	20.449	6.032	4.288	14.693
	∝	0.102	0.44	0.169	0.793	0.059	0.644	0.83	0.547
36	c.sq	17.446	1.304	8.338	10.266	18.4	3.278	11.374	23.678
	∝	0.134	0.861	0.08	0.593	0.104	0.916	0.181	0.097
37	c.sq	9.338	1.81	4.751	6.174	12.241	5.494	6.466	24.355
	∝	0.674	0.771	0.314	0.907	0.427	0.704	0.595	0.082
38	c.sq	11.219	4.152	25.507	16.237	10.932	3.035	6.940	11.098
	∝	0.51	0.386	0.00	0.181	0.535	0.804	0.326	0.803

Appendix F Context Evaluation: Statements with Detailed Responses showing Significant Relationship with Personal and Professional Characteristics.

Statement: A TCTP should consider overall status of teachers in the society
Socio-Professional Variable: Academic Qualification

Academic Qualification Categories		Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree	Total
No Degree	Count	1	No response	No response	No response	No response	1
	% of no degree	100.0%	No response	No response	No response	No response	100.0%
B. Ed.	Count	14	25	25	21	7	92
	% of B.Ed.	15.2%	27.2%	27.2%	22.8%	7.6%	100.0%
Masters and Other	Count	3	No response	3	9	2	17
	% of Masters and Other	17.6%	No response	17.6%	52.9%	11.8%	100.0%
Total	Count	18	25	28	30	9	110
	% Academic Qualification	16.4%	22.7%	25.5%	27.3%	8.2%	100.0%

Statement: Detailed job descriptions are a pre-requisite for an effective and fair TCTP
Socio-Professional Variable: Academic Qualification

Academic Qualification Categories		Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree	Total
No Degree	Count	No response	No response	1	No response	No response	1
	% of no degree	No response	No response	100.0%	No response	No response	100.0%
B. Ed.	Count	6	6	13	40	29	94
	% of B.Ed.	6.4%	6.4%	13.8%	42.6%	30.9%	100.0%
Masters and Other	Count	1	2	7	2	8	20
	% of Masters and Other	5.0%	10.0%	35.0%	10.0%	40.0%	100.0%
Total	Count	7	8	21	42	37	115
	% Academic Qualification	6.1%	7.0%	18.3%	36.5%	32.2%	100.0%

Statement: Clearly defined teaching standards are a prerequisite for any teacher competency
Socio-Professional Variable: Academic Qualification

Academic Qualification Categories		Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree	Total
No Degree	Count	No response	No response	1	No response	No response	1
	% of no degree	No response	No response	100.0%	No response	No response	100.0%
B. Ed.	Count	8	2	5	51	30	96
	% of B.Ed.	8.3%	2.1%	5.2%	53.1%	31.3%	100.0%
Masters and Other	Count	1	1	3	8	7	20
	% of Masters and Other	5.0%	5.0%	15.0%	40.0%	35.0%	100.0%
Total	Count	9	3	9	59	37	117
	% Academic Qualification	7.7%	2.6%	7.7%	50.4%	31.6%	100.0%

Statement: Clearly defined teaching standards are a prerequisite for any teacher competency
Socio-Professional Variable: Teaching qualification

Teaching Qualification Categories		Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree	Total
A1	Count	1	No response	1	No response	No response	2
	% of A1	50.0%	No response	50.0%	No response	No response	100.0%
A2	Count	2	2	4	24	6	38
	% of A2	5.3%	5.3%	10.5%	63.2%	15.8%	100.0%
A3	Count	3	1	1	21	14	40
	% of A3	7.5%	2.5%	2.5%	52.5%	35.0%	100.0%
A4	Count	3	No response	2	19	16	40
	% of A4	7.5	No response	5.0%	47.5%	40.0%	100.0%
Total	Count	9	3	8	64	36	120
	% of teaching qualification	7.5%	2.5%	6.7%	53.3%	30.0%	100.0%

Statement: The administrators of TCTP should set observable and measurable job objectives for teachers
Socio-Professional Variable: Teaching qualification

Teaching Qualification Categories		Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree	Total
A1	Count	No response	No response	1	No response	No response	1
	% of A1	No response	No response	100.0%	No response	No response	100.0%
A2	Count	2	4	4	16	11	37
	% of A2	5.4%	10.8%	10.8%	43.2%	29.7%	100.0%
A3	Count	3	No response	3	22	11	39
	% of A3	7.7%	No response	7.7%	56.4%	28.2%	100.0%
A4	Count	1	3	1	19	15	39
	% of A4	2.6%	7.7%	2.6%	48.7%	38.5%	100.0%
Total	Count	6	7	9	57	37	116
	% of teaching qualification	5.2%	6.0%	7.8%	49.1%	31.9%	100.0%

Statement: In general, the major responsibility for raising standards in education rests with the government
Socio-Professional variable: Position

Position Categories		Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree	Total
Teachers	Count	25	38	19	26	10	118
	% of teachers	21.2%	32.2%	16.1%	22.0%	8.5%	100.0%
Other Educator	Count	No response	No response	1	4	1	6
	% of other educators	No response	No response	16.7%	66.7%	16.7%	100.0%
Total	Count	25	38	20	30	11	124
	% of positions	20.2%	30.6%	16.1%	24.2%	8.9%	100.0%

Statement: In general, the major responsibility for raising standards in education rests with the government
Socio-Professional variable: Experience

Service Experience Categories		Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree	Total
0-5 years	Count	11	22	14	16	7	70
	% of 0-5 years	15.7%	31.4%	20.0%	22.9%	10.0%	100.0%
6-10 years	Count	6	10	5	8	1	30
	% of 6-10 years	20.0%	33.3%	16.7%	26.7%	3.3%	100.0%
11-15 years	Count	4	5	No response	3	1	13
	% of 11-15 years	30.8%	38.5%	No response	23.1%	7.7%	100.0%
16-20 years	Count	No response	3	No response	2	2	7
	% of 16-20 years	No response	42.9%	No response	28.6%	28.6%	100.0%
21 years and above	Count	4	No response	No response	1	No response	5
	% of 21 years and above	80.0%	No response	No response	20.0%	No response	100.0%
Total	Count	25	40	19	30	11	125
	% of service experience	20.0%	32.0%	15.2%	24.0%	8.8%	100.0%

Statement: The present system of regular evaluation of teachers' performance is satisfactory
Socio-Professional variable: Position

Position Categories		Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree	Total
Teachers	Count	No response	24	19	50	30	123
	% of teachers	No response	19.5%	15.4%	40.7%	24.4%	100.0%
Other Educator	Count	1	3	No response	2	No response	6
	% of other educators	16.7%	50.0%	No response	33.3%	No response	100.0%
Total	Count	1	27	19	52	30	129%
	% of positions	0.8%	20.9%	14.7%	40.3%	23.3%	100.0%

Appendix G Input Evaluation: Statements with Detailed Responses showing Significant Relationship with Personal and Professional Characteristics.

Statement: A TCTP should identify problems limiting teachers' performance
Socio-Professional variable: Academic qualification

Academic Qualification Categories		Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree	Total
No Degree	Count	1	No response	No response	No response	No response	1
	% of no degree	100.0%	No response	No response	No response	No response	100.0%
B. Ed.	Count	8	12	6	47	22	95
	% of B.Ed.	8.4%	12.6%	6.3%	49.5%	23.2%	100.0%
Masters and Other	Count	No response	4	2	10	3	19
	% of Masters and Other	No response	21.1%	10.5%	52.6%	15.8%	100.0%
Total	Count	9	16	8	57	25	115
	% Academic Qualification	7.8%	13.9%	7.0%	49.6%	21.7%	100.0%

Statement: A TCTP should identify problems limiting teachers' performance
Socio-Professional variable: Teaching qualification

Teaching Qualification Categories		Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree	Total
A1	Count	2	No response	No response	No response	No response	2
	% of A1	100.0%	No response	No response	No response	No response	100.0%
A2	Count	4	7	3	17	7	38
	% of A2	10.5%	18.4%	7.9%	44.7%	18.4%	100.0%
A3	Count	2	5	1	21	10	39
	% of A3	5.1%	12.8%	2.6%	53.8%	25.6%	100.0%
A4	Count	2	2	5	2	9	39
	% of A4	5.1%	5.1%	12.8%	53.8%	23.1%	100.0%
Total	Count	10	14	9	59	26	118
	% of teaching qualification	8.5%	11.9%	7.6%	50.0%	22.0%	100.0%

Statement: A TCTP should provide means to correct teachers weaknesses
Socio-Professional variable: Academic qualification

Academic Qualification Categories		Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree	Total
No Degree	Count	1	No response	No response	No response	No response	1
	% of no degree	100.0%	No response	No response	No response	No response	100.0%
B. Ed.	Count	9	16	8	50	12	95
	% of B.Ed.	9.5%	16.8%	8.4%	52.6%	12.6%	100.0%
Masters and Other	Count	No response	No response	4	10	6	20
	% of Masters and Other	No response	No response	20.0%	50.0%	30.0%	100.0%
Total	Count	10	16	12	60	18	116
	% Academic Qualification	8.6%	13.8%	10.3%	51.7%	15.5%	100.0%

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Statement: A TCTP should provide feedback on one's strength and weaknesses
Socio-Professional variable: Academic qualification

Academic Qualification Categories		Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree	Total
No Degree	Count	No response	No response	1	No response	No response	1
	% of no degree	No response	No response	100.0%	No response	No response	100.0%
B. Ed.	Count	8	6	3	54	24	95
	% of B.Ed.	8.4%	6.3%	3.2%	56.8%	25.3%	100.0%
Masters and Other	Count	No response	1	2	11	6	20
	% of Masters and Other	No response	5.0%	10.0%	55.0%	30.0%	100.0%
Total	Count	8	7	6	65	30	116
	% Academic Qualification	6.9%	6.0%	5.2%	56.0%	25.9%	100.0%

Statement: While administering teacher competency testing, educational authorities should also arrange professional training for teachers so that their teaching capacities are enhanced

Socio-Professional variable: Teaching qualification

Teaching Qualification Categories		Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree	Total
A1	Count	1	No response	1	No response	No response	2
	% of A1	50.0%	No response	50.0%	No response	No response	100.0%
A2	Count	3	2	1	17	14	37
	% of A2	8.1%	5.4%	2.7%	45.9%	37.8%	100.0%
A3	Count	3	1	1	11	22	38
	% of A3	7.9%	2.6%	2.6%	28.9%	57.9%	100.0%
A4	Count	1	No response	2	24	12	39
	% of A4	2.6%	No response	5.1%	61.5%	30.8%	100.0%
Total	Count	8	3	5	52	48	116
	% of teaching qualification	6.9%	2.6	4.3%	44.8%	41.4%	100.0%

Statement: The educational authorities conducting teacher competency testing should provide the latest technical and professional support to teachers to update their teaching methods and knowledge

Socio-professional variable: Academic qualification

Academic Qualification Categories		Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree	Total
No Degree	Count	No response	No response	1	No response	No response	1
	% of no degree	No response	No response	100.0%	No response	No response	100.0%
B. Ed.	Count	5	1	2	42	46	96
	% of B.Ed.	5.2%	1.0%	2.1%	43.8%	47.9%	100.0%
Masters and Other	Count	1	No response	1	9	8	19
	% of Masters and Other	5.3%	No response	5.3%	47.4%	42.1%	100.0%
Total	Count	6	1	4	51	54	116
	% Academic Qualification	5.2%	0.9%	3.4%	44.0%	46.6%	100.0%

Statement: The educational authorities conducting teacher competency testing should provide the latest technical and professional support to teachers to update their teaching methods and knowledge

Socio-professional variable: Teaching qualification

Teaching Qualification Categories		Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree	Total
A1	Count	1	No response	1	No response	No response	2
	% of A1	50.0%	No response	50.0%	No response	No response	100.0%
A2	Count	2	No response	1	18	17	38
	% of A2	5.3%	No response	2.6%	47.4%	44.7%	100.0%
A3	Count	2	1	No response	13	23	39
	% of A3	5.1%	2.6%	No response	33.3%	59.0%	100.0%
A4	Count	1	No response	2	21	15	39
	% of A4	2.6%	No response	5.1%	53.8%	38.5%	100.0%
Total	Count	6	1	4	52	55	118
	% of teaching qualification	5.1%	0.8%	3.4%	44.1%	46.6%	100.0%

Appendix H Process Evaluation: Statements with Detailed Responses showing Significant Relationship with Personal and Professional Characteristics.

Statement: A TCTP should evaluate teachers' methods of questioning in the classroom
Socio-Professional variable: Academic qualification

Academic Qualification Categories		Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree	Total
No Degree	Count	No response	1	No response	No response	No response	1
	% of no degree	No response	100.0%	No response	No response	No response	100.0%
B. Ed.	Count	12	18	16	47	1	94
	% of B.Ed.	12.8%	19.1%	17.0%	50.0%	1.1%	100.0%
Masters and Other	Count	No response	5	3	8	4	20
	% of Masters and Other	No response	25.0%	15.0%	40.0%	20.0%	100.0%
Total	Count	12	24	19	55	5	115
	% Academic Qualification	10.4%	20.9%	16.5%	47.8%	4.3%	100.0%

Statement: A TCTP should evaluate teachers' method of conducting classroom discussion
Socio-Professional variable: Position

Position Categories		Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree	Total
Teachers	Count	12	32	11	54	5	114
	% of teachers	10.5%	28.1%	9.6%	47.4%	4.4%	100.0%
Other Educator	Count	No response	No response	3	3	No response	6
	% of other educators	No response	No response	50.0%	50.0%	No response	100.0%
Total	Count	12	32	14	57	5	120
	% of positions	10.0%	26.7%	11.7%	47.5%	4.2%	100.0%

Statement: A TCTP should evaluate teachers' method of conducting classroom discussion
Socio-Professional variable: Level of teaching

Level of Teaching Categories		Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree	Total
Junior	Count	6	18	5	31	1	61
	% of junior	9.8%	29.5%	8.2%	50.8%	1.6%	100.0%
Senior	Count	4	12	6	19	4	45
	% of Senior	8.9%	26.7%	13.3%	42.2%	8.9%	100.0%
Other	Count	No response	2	2	No response	No response	2
	% of other	No response	100.0%	100.0%	No response	No response	100.0%
Multiple	Count	2	1	1	7	No response	14
	% of Multiple	14.3%	7.1%	7.1%	50.0%	No response	100.0%
Total	Count	12	14	14	57	5	122
	% of level of teaching	9.8%	11.5%	11.5%	46.7%	4.1%	100.0%

Statement: A TCTP should evaluate teachers' method of observation of student behaviour
Socio-Professional variable: Academic qualification

Academic Qualification Categories		Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree	Total
No Degree	Count	No response	No response	1	No response	No response	1
	% of no degree	No response	No response	100.0%	No response	No response	100.0%
B. Ed.	Count	10	23	11	45	3	92
	% of B.Ed.	10.9%	25.0%	12.0%	48.9%	3.3%	100.0%
Masters and Other	Count	No response	6	3	8	3	20
	% of Masters and Other	No response	30.0%	15.0%	40.0%	15.0%	100.0%
Total	Count	10	29	15	53	6	113
	% Academic Qualification	8.8%	25.7%	13.3%	46.9%	5.3%	100.0%

Statement: A TCTP should evaluate teachers' knowledge of subjects to be taught in the classroom
Socio-Professional variable: Age

Age Categories		Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree	Total
21-30 years	Count	3	16	3	25	2	49
	% of total respondents	2.5%	13.1%	2.5%	20.5%	1.6%	40.2%
31-40 years	Count	4	9	8	17	4	42
	% of total respondents	3.3%	7.4%	6.6%	13.9%	3.3%	34.4%
41-50 years	Count	3	3	3	14	1	24
	% of total respondents	2.5%	2.5%	2.5%	11.5%	0.8%	19.7%
51 and above	Count	No response	1	No response	3	3	7
	% of total respondents	No response	0.8%	No response	2.5%	2.5%	5.7%
Total	Count	10	29	14	59	10	122
	% of total respondents	8.2%	23.8%	11.5%	48.4	8.2%	100.0%

Statement: A TCTP should evaluate teachers' knowledge of subjects to be taught in the classroom
Socio-Professional variable: Level of teaching

Level of Teaching Categories		Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree	Total
Junior	Count	5	14	6	35	1	61
	% of junior	8.2%	23.0%	9.8%	57.4%	1.6%	100.0%
Senior	Count	4	12	4	20	6	46
	% of Senior	8.7%	26.1%	8.7%	43.5%	13.0%	100.0%
Other	Count	No Response	No Response	2	No Response	No Response	2
	% of other	No Response	No Response	100.0%	No Response	No Response	100.0%
Multiple	Count	1	4	2	4	3	14
	% of Multiple	7.1%	28.6%	14.3%	28.6%	21.4%	100.0%
Total	Count	10	30	14	59	10	123
	% of level of teaching	8.1%	24.4%	11.4%	48.0%	21.4%	100.0%

Statement: A TCTP should evaluate teachers' knowledge of subjects to be taught in the classroom
Socio-Professional variable: Academic qualification

Academic Qualification Categories		Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree	Total
No Degree	Count	No Response	No Response	1	No Response	No Response	1
	% of no degree	No Response	No Response	100.0%	No Response	No Response	100.0%
B. Ed.	Count	10	23	10	46	4	93
	% of B.Ed.	10.8%	24.7%	10.8%	49.5%	4.3%	100.0%
Masters and Other	Count	No Response	7	2	7	4	20
	% of Masters and Other	No Response	35.0%	10.0%	35.0%	20.0%	100.0%
Total	Count	10	30	13	53	8	114
	% Academic Qualification	8.8%	26.3%	11.4%	46.5%	7.0%	100.0%

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Appendix I Product Evaluation: Statement with Detailed Responses showing Significant Relationship with Personal and Professional Characteristics.

Statement: Students' achievement or performance indicators should also be taken into account in a TCTP
Socio-Professional variable: Age

Age Categories		Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree	Total
21-30 years	Count	19	25	3	3	1	51
	% of 21-30 years	37.3%	49.0%	5.9%	5.9%	2.0%	100.0%
31-40 years	Count	16	17	5	2	1	41
	% of 31-40 years	39.0%	41.5%	12.2%	4.9%	2.4%	100.0%
41-50 years	Count	6	9	3	5	1	24
	% of 41-50 years	25.0%	37.5%	12.5%	20.8%	4.2%	100.0%
51 and above	Count	1	1	No response	3	1	6
	% of 51 and above	16.7%	16.7%	No response	50.0%	16.7%	100.0%
Total	Count	42	52	11	13	4	122
	% of age	34.4%	42.6%	9.0%	10.7%	3.3%	100.0%