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Attitudes of students and parents about vocational education in Yogyakarta, Indonesia

PH, Slamet, Ph.D.
The Ohio State University, 1987

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ATTITUDES OF STUDENTS AND PARENTS ABOUT
VOCATIONAL EDUCATION IN YOGYAKARTA
INDONESIA

DISSERTATION

Presented in Partial Fulfillment of the Requirement for
the Degree of Doctor of Philosophy in the Graduate
School of the Ohio State University

By
Slamet PH

* * * * *

The Ohio State University
1987

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CHAPTER I
INTRODUCTION

Background and Need

The shift of political power from President Sukarno to President Suharto (in 1965) has brought a lot of change in economic policy. Under Sukarno the nation in the late 1950s and early 1960s increasingly reduced the role of foreign investment in Indonesia, charging that European and American imperialists were largely responsible for exploiting Indonesia in the past, so Indonesia would develop its own economy. Under Suharto, from 1965 to present, the policy of foreign investment has been reversed; that was, heavy foreign investments have been adopted (Postlethwaite and Thomas, 1980).

Joint ventures with foreign industries had been created and loans from various sources such as World Bank (International Bank for Reconstruction and Development/IBRD), International Development Association (IDA), Asean Development Bank (ADB), and Australian Aids Scheme had been adopted. Included in those loans was technical assistance from various discipline experts, either for short or long term. This adoption had been based on
a series of national five year development plans (first five year development plan: 1969-1974; second: 1974-1979; third: 1979-1984; and fourth: 1984-1989) emphasizing improvement of the nation's major industry, agriculture, and exploitation of natural resources such as petroleum, mineral deposits, and extensive forests (Postlethwaite and Thomas, 1980). Since education was an integral part of national development, such improvement urgently needed potential manpower graduating from various colleges, universities, and schools.

When the government launched the first five year development plan, economic planners found that qualified tradesmen, technicians, and higher technicians were badly needed to fulfill the shortage of middle level workers. At the same time, it was also found that vocational education was not in a position to support industrial development. The Indonesian government, therefore, placed great stress on the development of vocational education to support the national commitment to enhance economic development (Hadiwaratama, 1980). Various delivery systems of vocational education such as vocational training centers, vocational schools, and polytechnics were among the most visible targets of innovation. In sum, vocational education was expanded greatly throughout the country.

Before 1976, it was suggested that one of the problems was that the objectives of vocational schools were ambiguous
and dualistic. According to Tri Iswoyo (1980):

"The objectives of the schools were not clearly defined and indeed seemed to be dualistic; that was, prepare the students for work at the same time as preparing them to continue their studies in higher education. This confusing approach led to courses with a small number of periods for practice (four to six) and also limited academic programs. The limited time for practice along with poor facilities produced poor results. The students faced difficulties in the world of work, and as they did not have enough academic education, they had difficulties in continuing their studies to higher education."

As a result, vocational education did not match manpower needs at the national and local levels. Starting in 1976, however, vocational education was integrated into the overall system of the national five year plan and consequently the objective of vocational education was adjusted towards a job orientation. This new objective forced the schools to improve their facilities, their equipment, and their teachers.

It seemed that there was a continuing trend towards giving higher priority to vocational education at the secondary level. This trend was well favored because, according to the fourth five-year development plan (1984-1989), manpower at the middle level was needed badly to industrialize the country. Graduates from vocational schools were expected to become craftmen or technicians and to be prepared to enter the world of work.

Indeed the Indonesian Minister of Education and Culture, Nugroho Notosusanto (Kompas, 1983) stressed that vocational schools would be further developed throughout the
country. His statement was based on the fourth five-year development plan (1984-1989); that skilled workers were needed urgently in order to industrialize the country. Also, Nugroho Notosusanto strongly supported vocational education as the first priority in the fourth five-year development plan (Kompas, 1984). With aid from World Bank (IBRD), Asian Development Bank, International Development Association, and Australian Aids Scheme, better facilities and equipment, establishment of training centers, improvement in school buildings, and improvement of teachers were achieved.

Despite government efforts to improve vocational education in order to fulfill the need for a large number of well-trained workers at the intermediate level of skill, there seemed to be a reluctance among the Indonesians to enroll in vocational education. First, there has been a tradition of higher status for academic studies than vocational studies. Academic education has been considered as an elite education (priyayi, in Indonesian terminology) and vocational education has been considered as poor status (blue-collar job). As argued by Soedijarto et al. (in Postlethwaite and Thomas, 1980), vocational education has continued to lack the prestige of academic studies, so that schools with an academic emphasis not only attracted more candidates but also tended to attract students of greater ability.
Secondly, as Jakub Isman (1986) argued: "Questions have been raised as to whether too much adjustment to manpower needs will deprive individual students from taking programs they really like. He also argued that manpower planning cannot be consistently accurate because needs can suddenly change, and therefore vocational education can easily become obsolete. Furthermore, rapid advancement in science and technology may require a broad-based program which can be adjusted when the needs arise. Such questions may partly explain why the academic or general secondary schools still attracted many more students than did the vocational secondary school. This trend has caused a lot of concern among the Ministry of Education and Culture officials because a significant number of the general secondary school graduates did not continue their education to the tertiary level, and on the other hand, they did not have the needed skills for the job market. The government has given serious attention to the students' lack of interest in going to secondary vocational schools. Apparently, many students are reluctant to apply to these schools because, in addition to previous reasons, they either have a negative attitude towards work or are afraid of losing a chance to go to higher education." Therefore, it was very important to improve the attitude of the youngsters and the whole nation towards manual work in general and, on the other hand, to open the door of higher education institutions to graduates.
from the vocational secondary schools.

Thirdly, many employers seemed unwilling to hire graduates from vocational schools. They believed that graduates from vocational schools were not as smart as graduates from academic track. As a result, many employers preferred to hire graduates from the academic track.

Fourthly, many parents still had aspirations that their children would enter higher education. This was especially true for the relatively rich well-educated parents. If this situation continued to exist, it would hinder the development of vocational education in Indonesia (Berkovitch, 1986).

Due to the above reasons, there seemed to be a general tendency towards continued decreasing enrollment in vocational education (Depdikbud, 1984). To stop the decrease in enrollment and to promote or to attract the public to vocational education, an effort by the government in terms of a campaign was done in 1984 to promote vocational education. However, the result was still invisible. Research on public attitudes towards vocational education has not yet been done.

In conclusion, there seemed to be a contradiction between government efforts to improve vocational education and public acceptance of vocational education. Research on public attitudes towards vocational education was needed to provide more information about the above issue. For this
reason, this study was prepared. Also, this study was
chosen simply because there has not been any Indonesian
scholar who attempted to do this kind of endeavor.

The Problem

The Indonesian government was facing a dilemma in
innovating vocational education. On one hand, there was an
urgent need for about 10.5 million skilled workers at the
middle level. This shortage of skilled workers should be
fulfilled by the end of 1989 (Kompas, 1982) in order to
support national economic development. During the fourth
five-year development plan (1984-1989), vocational education
has been given the first priority in the education budget
because economic development needed skilled workers urgently
who were graduating from vocational education (Kompas,
1984). Also, in his 6 June 1983 speech in front of the
working conference in the Ministry of Education and Culture,
the Indonesian President (Suharto) stressed that there was
an increasing need of skilled workers at the middle level.
Therefore, vocational education should be given primary
attention (Depdikbud, 1984).

On the other hand, there was apparently a reluctance
among the Indonesians to accept vocational education as
their first preference. Vocational education seemed to be
the second choice after student failed to pass the entrance
examination for the academic track. Recently, Berkovitch
(1986) noted that the relatively rich well-educated people shun vocational education for their young. They preferred that their children go to general high schools and enroll in the academic track.

Purposes and Objectives of the Study

Based upon the above problem, it was therefore important to ascertain how well vocational education was received by students and their parents before further expansion was done. This exploratory study was conducted because of the need to know the attitudes of students and their parents towards vocational education. Planners must take into account the interests of students when planning programs. Parents, whether overtly expressing their feeling or not, were vitally concerned and interested in the education of their children. The first major purpose of this study was therefore to ascertain the attitudes of students and their parents towards vocational education. The second major purpose of this study was to ascertain whether there was a relationship between student and family background characteristics and attitudes towards vocational education.

Objectives of the Study

The specific objectives of this study have been written in the form of questions to be answered. Attitudes of
students and their parents towards vocational education and relationships between student background characteristics and attitudes towards vocational education were sought about the following questions:

1. What were the attitudes of the senior secondary school students (academic and vocational) and their parents towards vocational education?

2. Were there any differences in attitude towards vocational education between students and their parents?

3. Were there any differences in attitudes towards vocational education between vocational school students and their parents and academic school students and their parents?

4. Were there any differences in attitudes towards vocational education between the academic school students and the vocational school students?

5. Were there any differences in attitudes towards vocational education between the parents of the academic school students and the parents of the vocational school students?

6. Were there any differences in attitudes towards vocational education between academic school students and their parents?

7. Were there any differences in attitudes towards vocational education between vocational school student and their parents?
8. What was the relationship between income level and attitudes towards vocational education?
9. What was the relationship between educational level of parents and attitudes towards vocational education?
10. What was the relationship between age and attitudes towards vocational education?
11. What was the relationship between parents who have/have not been exposed to vocational education and attitudes towards vocational education?
12. What was the relationship between parents' occupational level and attitudes towards vocational education?
13. What was the relationship between students' geographical areas (rural/urban) and attitudes towards vocational education?
14. What was the relationship between student sex and attitudes towards vocational education?
15. What was the relationship between family size and attitudes towards vocational education?

Research Hypotheses

As mentioned before, the objectives of the study were stated in the form of questions to be answered. The following were tentative answers (hypotheses) to be tested:
1. Respondents as a whole had positive attitudes towards vocational education.
2. Both academic and vocational students had more positive attitudes towards vocational education than their parents.

3. Vocational school students and their parents had more positive attitudes towards vocational education than academic school students and their parents.

4. Vocational school students had more positive attitudes towards vocational education than academic school students.

5. Parents of vocational school students had more positive attitudes towards vocational education than parents of academic school students.

6. Academic school students had more positive attitudes towards vocational education than their parents.

7. Vocational school students had more positive attitudes towards vocational education than their parents.

8. Income level was indirectly associated with attitudes towards vocational education.

9. Parents with a higher educational level had less favorable attitudes towards vocational education than parents with a lower educational level.

10. Older parents had less favorable attitudes towards vocational education than younger parents.

11. Parents who had been exposed to vocational education had more positive attitudes towards vocational education than parents who had not been exposed to vocational education.
12. Parents' occupational level was indirectly associated with attitudes towards vocational education.

13. Rural students had more positive attitudes towards vocational education than urban students.

14. Male students tended to have more favorable attitudes towards vocational education than female students.

15. Individuals from larger family units had more positive attitudes towards vocational education than those from smaller family units.

Delimitations of the Study

The population studied consisted of tenth, eleventh, twelfth, and thirteenth grade students and their parents in academic and vocational tracks, in Yogyakarta province public school system. Yogyakarta is one of the twenty-seven provinces in Indonesia. Yogyakarta covers an area of 3,193 square kilometers consisting of one municipality and four regencies, seventy three sub-districts and 556 villages. Population in 1984 was 2,750,813 with a density of 868 persons per square kilometer (Indonesia, 1984). The annual population growth was about 1.19 percent. The greater part of the population lived in rural areas (83.6%) and the remaining 16.4% in urban centers. Of the total working population, 56% work in agriculture, 22% in industry, 12% in trades and services, 1.4% in
transportation, and 8.6% in mining, co-operatives, utilities and construction (UNESCO, 1980).

The Province of Yogyakarta was chosen simply because the author was familiar with the situation and thus it was easier to make arrangements to collect data. Secondly, the Province of Yogyakarta was a center of study. Numerous schools, colleges, and universities were located there. Although the size of the province was smaller than the others, the number of the students was much larger than the other provinces.

The survey respondents were senior secondary level students enrolled in public education institutions at the tenth, eleventh, twelveth, and thirteenth grade levels, and their parents in the Province of Yogyakarta. Results of this study might not be generalized beyond the population surveyed in the Province of Yogyakarta.

Limitation of the Study

Because of the nature of the method used in this study, students and their parents might not have been completely familiar with survey instruments because some students came from remote areas with a lack of information.
CHAPTER II
REVIEW OF RELATED LITERATURE

This section covers definition of an attitude, theories of attitude, development of vocational education in Indonesia, public's attitudes towards vocational education, and factors that influence students in choosing academic and vocational programs.

Definition of Attitude

Attitude was defined in many ways but its meaning was still the same. Sherif, et.al. (1965) for example, defined attitudes as the stands the individual upholds and cherishes about objects, issues, persons, groups, or institutions. The referents of a person's attitudes might be a way of life; economic, political, or religious institutions; and family, school, or government. Fishbein (1967) defined an attitude as a mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it was related. An earlier definition of attitude was even shorter in that an attitude was a tendency to act towards or against some
environmental factor which became thereby a positive or negative value (Bogardus, 1931). Likewise, Thurstone (1932) defined an attitude as the effect for or against a psychological object.

About one and a half decades ago, Kiesler, Collins, and Miller (1969) described an attitude as a learned predisposition to respond in a consistently favorable or unfavorable manner with respect to a given object. From this definition, two basic features were clear: the notion that attitude was learned, and that such actions were consistently favorable or unfavorable towards an object. This definition is still applied. Fishbein and Ajzen (1975) agreed that an attitude could be described as a learned predisposition to respond in a consistently favorable or unfavorable manner with respect to a given object. In a somewhat different sentence, Rokeach (1972) defined an attitude as an organization of interrelated beliefs around a common object, with certain aspects of the object being at the focus of attention for some persons, and other aspects for other persons. Suffice it to say, an attitude characteristically provoked behavior that was acquisitive or avertive, favorable or unfavorable, affirmative or negative towards the object or class of objects with which it was related.
Theories of Attitude

Fishbein and Ajzen (1975) argued that most contemporary attitude theories had their origins in four major school of thought. The four theories of attitude were as follows: learning theories, expectancy-value theories, consistency theories, and attribution theories.

Learning Theories of Attitude. In one of the first applications of learning theory to the attitude area, Leonard Doob (1947) defined attitude as a learned, implicit anticipatory response. He viewed attitude as an unobservable response to an object that occurred prior to, or in the absence of, any overt response. Doob emphasized that a person first learned an implicit mediating response (i.e. attitude) to a given stimulus, and he must then also learn to make a specific overt response to the attitude. The first process could be accounted for by classical conditioning, the second by instrumental learning.

Primary and higher-order classical conditioning were the basic paradigms in the approach taken by Staats (1968) and Staats and Staats (1958). In addition to classical conditioning, Lott and Lott (1968) emphasized instrumental conditioning as a basis for attitude formation. That was, a person who experienced reinforcement or reward for some behavior will react to the reward, i.e. would perform observable or covert goal response.

In short, most learning theories of attitude were
concerned with the ways in which attitudes were acquired, i.e., how implicit (evaluative) responses became associated with a given stimulus object.

**Expectancy-value Theories.** One of the expectancy-value theories was presented by Tolman (1932). According to Tolman, people learned expectations, i.e. beliefs that a given response would be followed by some events. Because these events could be either positive or negative reinforcers (i.e. could have positive or negative valence), his argument, essentially, was that people would learn to perform (or increase their probability of performing) behavior that they expected to lead to positively valented events.

Another best known expectancy-value theory was the subjective expected utility (SEU) model of behavioral decision theory (Edwards, 1954). According to this theory, when people had to make a behavioral choice, they would select that alternative which had the highest subjective expected utility, i.e., the alternative which was likely to lead to the most favorable outcomes.

Finally, another expectancy-value theory called "Instrumentality-Value Model", was created by Rosenberg (1956). Rosenberg was perhaps the first to introduce an explicit expectancy-value model in the attitude area. He defined attitude as "relatively stable affective response to an object" and argued that this attitude was accompanied by
a cognitive structure made up of beliefs about the potentialities of that object for attaining or blocking the realization of values (Rosenberg, 1956). According to him, the more a given object (i.e., an action or policy) was instrumental to obtaining positively valued goals (or consequences) and to blocking (or preventing) negatively valued goals, the more favorable the person's attitude towards the object.

Consistency Theories. There were three consistency theories: balance theory (Heider), congruity theory (Osgood and Tannenbaum), and dissonance theory (Festinger). Balance Theory (Heider, 1946) mainly explained factors that influenced causal attribution of an event to a person. Heider concluded that "if the attitudes towards a person and event were similar, the event was easily ascribed to the person." He further argued that "a balanced configuration existed if the attitudes towards the parts of a causal unit were similar" (Heider, 1946). That was, a balanced state existed when the two entities composing a unit have the same "dynamic character", in other words, when the person's attitudes or sentiments vis-a-vis the two entities were both positive or both negative. Heider further argued that balance also existed if the person held different attitudes towards the two elements and perceived that one element was not caused by the other.

In short, a basic dynamic principle underlied balance
theory, namely, that liking and unit relation tended toward a balanced state. A balanced state meant a situation in which the relations among the entities fit together harmoniously; there was no stress toward change. Further, if a balanced state did not exist, then forces toward such a state would arise. If a change was not possible, the state of imbalance would produce tension (Heider, 1958).

Congruity Theory (Osgood and Tannenbaum, 1955). Osgood and Tannenbaum's (1955) congruity principle had its starting point on assertion that links two objects of judgment. The simplest assertion was merely a descriptive statement, such as cigarettes contain nicotine, communists liked strong labor unions, the President favored medicare (Osgood and Tannenbaum, 1955). These assertions, or "coupling actions", might be either associative (favored, were) or dissociative (opposed, were not).

According to the congruity principle, if the focal person encountered an assertion such as "the President favored medicare", then the President and medicare were positively related. In contrast, according to the balance model, even if such an assertion was made, a positive relation between the President and medicare would be obtained only if the focal person believed the assertion. If the focal person disbelieved the assertion, i.e. if he believed the President to oppose medicare, a negative relation between the President and medicare would be entered
in the balance model. Thus, whereas balance theory was concerned with perceived relations between another person and an object or event, the congruity principle dealt with objective or stated relations, i.e. assertions (Fishbein and Ajzen, 1975).

**Cognitive Dissonance Theory (Festinger, 1957).** A theory of cognitive dissonance was introduced by Festinger in 1957. He began with a consideration of the relations between two cognitive elements. "These elements referred to the things a person knew about himself, about his behavior, and about his surrounding" (Festinger, 1957). Festinger's basic hypothesis of dissonance theory was stated as follow:

"The existence of dissonance, being psychologically uncomfortable, would motivate the person to try to reduce the dissonance and achieve consonance. The strength of the pressure to reduce the dissonance was a function of the magnitude of the dissonance (Festinger, 1957).

Further, Festinger argued that there were four basic situations that gave rise to cognitive dissonance: decision making, forced compliance, voluntary and involuntary exposure to dissonant information, and disagreement with other persons.

**Theory of Attribution.** The theory of attribution was developed by Heider in 1946. His theory was concerned with the degree to which a given action or event would be attributed to some person or object (Heider, 1946). For Heider, there were five levels of causal attribution in reference to the attribution of responsibility for the
outcomes of an action: association, commission, foreseeability, intentionality, and intentionality with justification. At the first level, the actor was held responsible for any effect that was in some way associated with him. At the second level, he was held responsible only when the effect was seen as a direct result of his behavior. Attribution of responsibility at the third level required that the effect was foreseeable, even if not intended. Intentionality was the prerequisite for attribution of responsibility at the next level; that was, here the actor was held responsible only for effects that he foresaw and intended. Finally, if his action was perceived as justified, i.e. caused by factors beyond his control, he would be held less responsible, even though he might have intended to produce the observed effects (Fishbein and Ajzen, 1975).

But Heider went beyond the formation of causal units and considered attribution of stable disposition to an actor (Fishbein and Ajzen, 1975). "Dispositional properties were the invariances that make possible a more or less stable, predictable, and controlable world. They referred to the relatively unchanging structures and processes that characterized or underlied phenomena (Heider, 1958)."

In short, attribution theory was concerned with inferences about stable dispositions of people based on information about or direct observation of their actions.
Specifically, attribution theory dealt with specifying the conditions under which attributions to a person would or would not be made.

**Development of Vocational Education in Indonesia**

Indonesia gained its independence in 1945, but its education system has not changed dramatically. The Indonesian education system still followed Western-style secular schools (Dutch). Education was divided into four levels: primary, junior secondary, senior secondary schools, and university. At the secondary levels (junior and senior), the schools were divided into two stream lines, general-academic (prepared to go to higher education) and vocational (prepared to enter the world of work). The general-academic track traditionally had higher status than vocational track (Thomas, 1980).

Prior to 1969, efforts to improve education in general and vocational education in particular was not supported by resources to enhance quality and quantity of graduates. Starting in 1969, however, there were abundant resources, e.g. oil revenue, and loans from The World Bank, to improve education. Also in 1969, the government started creating a national development plan, called the five-year national development plan. The plan terminated and restarted every five years. The first five-year development plan was 1969-1974; the second: 1974-1979; the third: 1979-1984; and the
fourth: 1984-1989. As mentioned earlier the old objectives of vocational education in Indonesia were both to prepare young people to work and to continue their study to higher education. Unlike the old objectives, the new one was to produce highly qualified skilled workers at the middle level. Consequently, a number of projects and activities were initiated in order to be able to implement the new objective. The projects and activities included the Technical Teacher Upgrading Center (TTUC), Vocational Teacher Upgrading Center (VTUC), Art Teacher Upgrading Center (ATUC), Technical Training Centers (TTCs), Vocational School Improvement, Vocational Education Development Center (VEDC), Polytechnics, Text-books, Upgraded Technical Teacher Training Colleges (UTTTCs) in Padang and Yogyakarta, Traditional Technical Teacher Training Colleges (TTTTTCs), and others not mentioned here.

**Technical Teacher Upgrading Centers (TTUCs).** TTUCs were originally intended to provide in-service training for technical teachers only, but then they ran dual roles, providing in-service and running preservice programs for technical teachers. There were three TTUCs in Indonesia and they were located at Bandung, Malang, and Medan. It was necessary to note that the term technical here was actually the same as trade and industry. Therefore, TTUCs were intended to upgrade and train trade and industrial teachers only. TTUCs were run by the Directorate of Vocational and
Technical Education (DVTE). DVTE was one of the Directorates within the Directorate General of Primary and Secondary Education (DGPSE), and Directorate General of Primary and Secondary Education was under the Ministry of Education and Culture.

Vocational Teacher Upgrading Center (VTUC). To upgrade vocational teachers other than trade and industrial teachers, VTUC was built in Jakarta. This national VTUC provided skill training for all vocational teachers throughout the country (except trade and industrial teachers) such as Business, Commercial Practices, Tourism Industries, Home Economic, and Social Welfare.

Art Teacher Upgrading Center (ATUC). A Special project for art teachers was established in Yogyakarta. The purpose of this project was to upgrade and train art teachers throughout the country. Yogyakarta has been selected as the national ATUC because of its richness in a variety of arts.

Technical Training Centers (TTCs). Nine TTCs were established throughout the country. They were situated at Jakarta, Bandung, Surabaya, Medan, Ujung Pandang, Padang, Palembang, Yogyakarta, and Semarang. The purpose of these nine centralized workshops was to strengthen the practical training offered to students of two to five Senior Technical High Schools (THSs) in the area. The respective THSs were called THSs-feeder. In the THSs, the students only learn related subjects and general subjects such as language and
religion, while skill training was given in the centers (TTCs).

**Vocational School Improvement.** Some selected vocational-technical schools throughout the country were improved in their buildings, laboratories, workshops, equipment, tools, facilities, etc. Many old items of equipment and facilities were replaced by new ones. The improvement of each school varied depending on how bad was the condition of each.

**Vocational Education Development Center (VEDC).** The VEDC was established to provide some kind of overall planning and development of various activities which were the responsibility of the Directorate of Vocational-Technical Education. This VEDC would serve to identify problems, evaluate existing programs and activities, design and develop new programs and most important suggest a coordinated development plan and policy to be implemented by the Directorate of Vocational-Technical Education (Hadiwaratama, 1980).

**Polytechnics.** Under the Ministry of Education and Culture and its Directorate General of Higher Education, Indonesia had established six polytechnics and was in the process of establishing another nine polytechnics. These polytechnics, offering a three year diploma course after Senior High School, were intended to fulfill the gap between the skilled craftsmen and the university engineers. Based
on the new policy in vocational-technical education, Indonesia urgently required highly qualified technicians, specialized for plant installations, production, quality control, teachers for maintenance and repairs, technical design, supervision and technical training (Hadiwaratama, 1980).

Textbooks. In addition to the above projects, there was a text-book program. About five million textbooks, consisting of 193 titles, had been printed, and other educational materials were also developed (Tri Iswoyo, 1980).

Upgraded Technical Teacher Training Colleges (UTTTCs) in Padang and Yogyakarta. UTTTCs were administered by the Directorate General of Higher Education (DGHE) and DGHE was under the Ministry of Education and Culture. These projects (UTTTCs) were intended to produce five hundred technical teachers annually. The projects were started in 1979. Before 1979, the programs were not well directed towards the provision of technical teachers. They resembled university programs in the sense that their students were prepared to become engineers. Furthermore, Hadiwaratama (1980) stated that the graduates tended to show unwillingness to do blue collar jobs and the fact that to be a technical teacher tended to be the last resort after failing to get a job in business or industry. Since 1979, the two pioneering upgraded technical teacher colleges, Padang and Yogyakarta,
had altered their preservice goals/objectives, program, resources and facilities, and college organization, to mention just a few.

More specifically, the programs of those two colleges have stressed a practice-orientation, with more emphasis on technical skills and theory subjects supporting the practical courses. The courses were divided into two phases, the first three years at the institution and the remaining one year at schools and industries for on-the-job training (UNESCO Report, 1982).

Each UTTTC had five departments, for Automotive, Building Construction, Electronic, Electrical, and Mechanical Technologies. Basically, all programs consisted of general studies, pedagogical subjects, technical subjects, and on-the-job training (UNESCO Report, 1982).

Traditional Technical Teacher Training Colleges (TTTTCs). TTTTCs were also administered by the Directorate General of Higher Education. The difference between TTTTC and UTTTC was that TTTTC's programs were theory-oriented, with more emphasis on technical theory. The graduates from TTTTCs were expected to teach technical theory, while UTTTC's graduates were supposed to teach practical skills. The TTTTCs were located at Ujung Pandang, Surabaya, Malang, Surakarta, Bandung, Palembang Jakarta, and Semarang.

In short, efforts to improve vocational education was significant. The number of Vocational Schools in Indonesia
had been increased to 148. However, questions had been raised as to whether vocational education was well-received by the public. As Isman (1986) mentioned, many students were reluctant to apply to vocational schools.

Public's Attitudes Towards Vocational Education

There had been numerous studies about public attitudes towards vocational education in the United States of America, but almost none in Indonesia. Studies on public attitudes towards vocational education usually included data from administrators, teachers, students, parents, and employers as independent variables. Such studies were useful in designing and conducting this study.

Wenrich and Van Dyke (1963) studied attitudes of 120 local administrators regarding financing of vocational education in Michigan. They found that those administrators felt that few programs would be eliminated and that most programs would continue unaltered or with limited modification should salary reimbursement from state or federal funds be eliminated.

In 1964, Wenrich and Crowley conducted a study entitled "Vocational Education as Perceived by Different Segments of the Population." They reported that the generally favorable attitudes of parents towards education included vocational education. Parents wanted to see effective programs available for youth who were interested in and who could
benefit from such programs. School teachers favored programs in general but were not satisfied with the scholastic records of students in vocational education. It was also found that, because of their income level, educational level, and occupational status, individuals whose support for an improved vocational program was necessary had little knowledge of the program. This lack of information could negatively influence their attitudes towards the program.

Other findings of this study included:

- There was no sharp division between men and women in their attitudes towards vocational education at the secondary level.
- Older persons tended to have less favorable attitudes than younger persons.
- Individuals classified as administrators and professional had less favorable attitudes than individuals in other categories.
- Workers and administrators who had not had personal experience with vocational education had more favorable attitudes towards it than workers and administrators who had been personally involved.
- Respondents with advanced degrees tended to have unfavorable attitudes towards vocational education in high school.
- Individuals who were acquainted with students in
vocational education had more favorable attitudes than those who were not.

In 1968, Darrell L. Parks conducted research on the attitudes of public school administrators, vocational education supervisory personnel, and teacher educators in Ohio. He found that the attitudes of Ohio's public school superintendents and vocational education state supervisory and teacher education personnel were generally favorable towards vocational education. The mean attitude score of all respondents was 3.84 on a five point scale. Further he found that the attitudes of vocational education supervisory and teacher education personnel towards vocational education were more favorable than were public school superintendents. Vocational education supervisors were slightly more favorable towards vocational education than were teacher educators with home economics teacher educators having the lowest attitude score of all vocational education personnel.

Gilliland (1967) conducted research in Missouri on the attitudes of slum dwellers and suburbanites towards blue collar occupations and vocational education. The sample included respondents from three socio-economic levels: upper, lower, and cross-sectional. He found that educators had the most favorable attitude towards vocational education. Parents had a slightly less favorable attitude. The mean attitude scale scores of students were considered favorable, although less so than those of educators and
parents. Most of the students responded that they had little experience in vocational education and did not desire to be involved in such educational programs. Gilliland concluded that prestige factors seemed to influence in the attitudes of some respondents.

In the same year, Kaufman (1967) et.al. conducted research entitled "The Role of the Secondary Schools in the Preparation of Youth for Employment." They concluded that vocational education was still considered by many to be in some way inferior and that the term dumping ground was often applied to it. They found negative attitudes among teachers towards vocational education. Teachers from exclusively vocational high schools had the most favorable attitudes towards vocational education. Academic teachers from comprehensive high schools ranked lowest in attitude towards vocational education and tended to reject any suggestions to expand vocational education programs. Obviously such teachers held the view that vocational students had inferior ability.

In the same study, Kaufman, et.al. conducted personal interviews with 658 employers in nine cities using a structured schedule. They found that employers were less than enthusiastic about vocational education. Most of the employers believed that they could give better on-the-job training than that received by students in vocational programs.
In 1970, James Spengler conducted research on the attitudes towards occupational education held by school board members in 770 school districts in New York State. He found more positive attitudes held by board members of urban districts and cooperative educational services than board members of suburban or rural districts. Board members with a number of years of service tended to have more positive attitudes than members with little board experience.

In 1971, The Ohio State Department of Education administered an instrument to 29,864 students and 15,463 parents to determine parents' and students' feeling about vocational education. It was found that both adult and youth had positive feelings concerning vocational education. In addition to that, it was also found that slightly more than half the parents indicated that they were satisfied with educational programs in their schools. Students expressed less satisfaction with available programs.

Spooner (1971) conducted research of attitudes of school superintendents towards vocational education, comparing attitudes in districts that contract their vocational training out to other vocational school districts with those that did not. He found no significant difference in attitude between administrators in the two types of districts.

Seckendorf and Tate (1983) conducted research entitled "A Study of the Perceptions of Selected Population Groups..."
towards Vocational Education in the Secondary Schools of Nevada." The study tried to find out what people (individuals) thought about vocational programs at that time. Those individuals who were directly associated with vocational education were defined as students, parents, educators, and representatives of business and industry. The study results demonstrated that there was strong support for vocational education in Nevada. Not only was it considered important for schools to provide vocational programs, but it was viewed by a majority of the respondents as a necessary component of public secondary education.

In 1983, Sewel wrote an article in Fortune entitled: "Vocational Education That Works." Contrary to the title, Sewel indicated that Secondary Vocational Education:

- lacked common and focused goals
- lacked up-to-date equipment
- was inappropriately tailored to students' level of development
- lacked rigorous standards
- did not teach basic skills in mathematics, language and science
- was out of date in content
- was unrealistic in its objectives
- lacked linkage to employers
- lacked qualified teachers and resources to hire them.

Due to the above defects, it was not surprising that
vocational education lacked support.

A report entitled "High School" (Boyer, 1983) presented the facts that job prospects for graduates of vocational programs were not much better, overall, than they are for students in the nonspecialized curriculum. Further, he reported that, increasingly, it appeared, high school vocational programs would be either irrelevant or inadequate. At one end would be low-paying, dead end jobs for which formal education would not be required and to which precious school time should not be given. More frequently, however, he found low academic standards and a stigma attached to teaching non-academic students, many of whom were in vocational education.

Arrington (1986) conducted research to determine student attitudes about their experiences in vocational agriculture one year after completing the program. He found that overall, program completers had very positive attitudes about their experiences in vocational agriculture. In fact, attitudes had changed to be even more positive than those expressed prior to graduation.

A recent report entitled "The Unfinished Agenda" (1985) recommended that all students whether college bound or not, needed a mix of both academic and vocational courses and enough elective options to match their interests and learning styles. This recommendation was based on the fact that approximately 80 percent of the jobs in America did not
require a college degree, and most students would not obtain one (Unfinished Agenda, 1985). Further, "The Unfinished Agenda" reported:

"According to the most recent (1984) Gallup Poll of the Public's Attitude towards the Public Schools, the majority of people believed that vocational education courses should be required for students not planning to go to college. Eighty-three percent of those polled felt vocational courses should be required, a dramatic increase from the sixty-four percent response in 1981. Further, thirty-seven percent of the Gallup Poll respondents (up from 33% in 1981) felt that vocational education should be required for students planning to attend college."

From the above statement, it was clear that there was a positive growing public sentiment for the importance of vocational experiences, especially for those not planning to attend college. However, the report also cited the recurring perception of vocational education.

"The perception was that vocational education typically prepared youth, especially males, for blue-collar hand occupations. Because most middle-class parents devalued any high school program that was not a prerequisite for admission to 4-year colleges or universities, they devalued vocational education. Consequently, school officials often viewed and used some vocational programs as a dumping ground for less able students.

This negative statement was rooted in the ancient concept of mind-body dualism that head occupations generally required a 4-year college or professional degree. While hand occupations were frequently blue-collar, did not require college or professional degree, and had low status (Unfinished Agenda, 1985).

In his study of student attitudes towards vocational
education, Black (1976) reported that there were no substantial systematic differences in the attitudes of the students towards the three programs (job preparatory program, college preparatory, and general programs). In fact, their image of vocational education appeared to be positive.

Sawyers (1977) conducted a study of "The Public's Perception of Secondary Vocational Education in Indiana. Compared with previous studies, it was perhaps the most comprehensive one. Several conclusions were drawn from this study:

- Vocational education in Indiana was perceived more favorably than unfavorably.
- Program areas within the total vocational education program in Indiana were not all viewed in the same manner by the population.
- Perceptions and opinions related to vocational education were influenced to a greater degree by personal and physical exposure to vocational education programs than by more indirect or passive means.
- School personnel, including teachers, guidance counselors, and administrators, had the rather negative perception that vocational education was low status.
- Aspects of vocational education in Indiana about
which respondents indicated indecision included:
(1) at what time in the total school sequence vocational education should be offered, (2) how up-to-date vocational education programs were, (3) the facilities and equipment needed for vocational education programs, (4) the qualification of teachers of occupational programs, and (5) whether it was more important for most students to have an academic or a vocational orientation.
- Respondents were not decisive regarding the appropriate levels at which career education should be included in the educational program.

Sawyers further concluded that parents indicated it was more important to provide many students with vocational education than to use the time for basic skills. Unlike their parents, most senior high school students indicated interest in free occupational education after high school.

Recently, Zakaria (1986) conducted a study of the attitudes of students and their parents towards vocational education in Serdang, Malaysia. A sample of 120 students (60 from three vocational schools and 60 from two academic schools) and 120 of their respective parents were interviewed to learn their attitudes towards vocational education. It was found that both the students and their parents had positive attitudes towards vocational education. The students from vocational schools had slightly more
favorable attitudes towards vocational education than did the students from academic schools. Likewise, the parents of vocational students had slightly more favorable attitudes towards vocational education than did the parents of academic students.

McCracken (1986) also conducted a study of attitudes of employers about the role of schools in preparing youth for productive work in the Ulu Langat District of Selangor, Malaysia. He found that:

"Employers believed the role of schools should include the preparation of youth for work, and that vocational education should be used by the school. In general, employers were dissatisfied with the way youth were currently being prepared for work because of non-relevant education, lack of work experience being given to students, and the poor attitudes held by youth" (McCracken, 1986).

The McCracken study was worthwhile to be replicated in Indonesia. Many employers raised questions about the role of vocational schools in preparing youth for productive work. Employers still preferred hiring students graduating from academic school rather than students from vocational school. In 1983, for example, about 52 percent of vocational school graduates became unemployed (Kompas, 1983).

Factors that Influence Students in Choosing Academic and Vocational Programs.

In choosing careers, students were influenced by many social pressures and interactions with others (Evans, 1979); Lehmann, 1977; McLaughlin, Hunt and Montgomery, 1976; Penn
and Gabriel, 1976). These influential forces included parents, student characteristics, peers, teachers, counselors, administrative school personnel, and mass media. Only parents and students' characteristics would be described because they were directly related to this study.

Parents' Influences. Parents had been cited by many researchers as powerful forces in choosing their child's school. Kendall and Miller (1983) conducted research titled "Attitudes towards school preparation of nontraditional and traditional vocational education completers." They found the majority of the respondents indicated that their parents supported their vocational choice. However, a larger percentage of traditional completers than of nontraditional completers reported support from parents, friends, and counselors.

Dillard and Campbell (1981) confirmed that some theories of vocational psychology had suggested their parents had an influence on their children's career choice (Ginzberg, Ginsburg, Azelrod, and Herma, 1951; Super, Crites, Hummel, Moser, Overstreet, and Warnath, 1957). Such theoretical formulations suggested that parents affected their children's career choice by means of instructions and indirectly by means of parent identification with them. Other studies also found that parents were the principal influence (among other influences) on adolescent's expected occupations (Pallone, Rickard, and Hurley, 1970; Pallone,

In fact as argued by Ross (1982), the influence of parents extended into junior high and high school. Many students still followed in the footsteps of their parents when it came to choosing a career. Further, Ross stated that vocational counselors had a hard time changing the mind set of a parent who insisted that his child was college bound in spite of poor academic performance, lack of interest, or technical ability.

According to Splete and Freeman-George (1985), there were significant parent influence factors that affected one's career decision making and career development. Some of them were: geographic location, family background, socio-economic status, and family composition. These factors influence child's career choice and education.

The geographic location of a parent influenced career development which in turn influenced school choice. Rural, urban, and suburban communities tended to have unique characteristics, differing work situations, and differing availability of occupations.

Family background affected career choice. Characteristics such as nationality, ethnicity, religious affiliation, various traditions, political persuasions, and cultural interests were influenced by parent of origin.
Through these family influences, specific attitudes, beliefs, values, and expectations were formed that influenced individual career decision or school choice.

**Socioeconomic status** strongly influenced school choice. Gottfredson (1981) reported that social class significantly influenced the development of occupational aspirations. Another study, Shapiro and Crowley (1982) found that individuals from better educated, higher income families expected to attain significantly more education and aspired to higher status occupations.

The family composition/family pattern included two natural parents, single parent, and blended families. Blau and Duncan (1967) reported that the size of family and one's position in the family could influence career choice. Persons from smaller families had more supportive family resources and they attained more in a career sense than from larger family.

**Characteristics of Students**

Kapes (1971) studied a variety of characteristics of ninth-grade boys, and related these to their choice of a vocational or academic program in tenth grade. He found that occupational aspiration, interest and satisfaction, and perceived prestige were attitudes that were related to program choice. Dole (1964) found that satisfaction, advancement, and practicality predicted the choice among several unspecified programs in a general sample of sixth
and ninth graders of both sexes. Bowles and Slocum (1968), in a study of high school juniors and seniors, found that interest in school work and satisfaction with school differentiated between those students who planned to take a post-secondary vocational education program, those who planned to attend college, and those who planned to terminate their education after high school graduation. However, a recent study by Sjoberg (1984) found that interest in school subjects just correlated at a moderate level with some of the vocational preferences. Kapes (1971), in his review of the literature on the determinants of vocational choice, emphasizes that at least one form of attitude - values - was one of the important determiners.

From the above review of literature, clearly little was known about the attitudes of students and their parents towards vocational education in Indonesia. If such information were available, it should be possible to improve vocational programs and services for Indonesians.
CHAPTER III
PROCEDURES

For this study, the procedures covered population and sample, research design, instruments, data collection, and data analysis.

Population and Sample

Population. A population is the group to which a researcher would like the results of a study to be generalizable (Gay, 1981). The target population of this study was all academic and vocational students and their respective parents throughout the Province of Yogyakarta. A list of all academic and vocational schools were found from the Office of Education in the Province of Yogyakarta. Likewise, a list of students' names and their parents were found from each school in the Province of Yogyakarta. According to 1986 public school statistics, there were about 20821 vocational students and 18834 academic students. This population was appropriate for this study because this study tried to find out the attitudes of academic and vocational students and their parents towards vocational education.

Sample. The sampling technique used for this study was
a stratified random sampling. Stratified sampling was a process of selecting a sample in such a way that identified subgroups in the population were represented in the sample in the same proportion they existed in the population (Gay, 1981). In most cases, one might use either proportional or equal stratified random sampling. The later was chosen for this study.

The sample size of this study was determined by using Cochran's formula (1977):

\[ n = \frac{t^2 s^2}{d^2} \]

where: 
- \( n \) = sample size
- \( d \) = acceptable margin of error for the mean being estimated (degree of precision)
- \( t \) = risk willing to take that actual margin of error might exceeded acceptable margin of error (from t table)
- \( s^2 \) = estimate of variance in the population
  
  \( (s = \text{standard deviation}) \)

For this study, take \( d = \pm 0.1 \); \( t = 1.96 \) (.05 margin of error); \( s = 0.5 \)

\[ n = \frac{t^2 s^2}{d^2} \]
\[
\frac{2}{(1.96) (.5)}^2
\]
\[
\frac{n}{2}
\]
\[
\frac{3.84 \times .25}{.01}
\]
\[
= 96
\]

To insure a sufficient sample size for this study, 150 people were drawn from each of four population groups:

1. academic students
2. vocational students
3. parents of academic students
4. parents of vocational students.

**Design**

The type of research in this study might be classified as descriptive-correlational study. It was descriptive because this study was going to find out the overall attitude of students and their parents towards vocational education. It was going to find out the differences in attitudes towards vocational education between (academic and vocational students) and (their parents), between (vocational students and their parents) and (academic students and their parents), between academic and vocational students, between parents of vocational and parents of academic students, between parents of academic and academic
students, and between parents of vocational students and vocational students. In a simple picture, the 2x2 factorial design of this descriptive study might be seen in figure 1 as follows:

<table>
<thead>
<tr>
<th>Type of Respondent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curriculum</td>
</tr>
<tr>
<td>Academic</td>
</tr>
<tr>
<td>Vocational</td>
</tr>
</tbody>
</table>

Figure 1. Design of Analysis of Variance

In this case, the independent variables were type of respondent (students and parents), and curriculum (academic and vocational). The dependent variable of this study was attitude towards vocational education.

The type of this study was also called correlational research. Relationships between income level, parents' educational level, parents' age, parents' exposure to vocational education, parents' occupational level, students' geographical areas, student sex, and family size were correlated with attitudes towards vocational education. The design for this correlational study may be seen as follows in Figure 2.
<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Dependent Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Income level</td>
<td></td>
</tr>
<tr>
<td>2. Parents' educational level</td>
<td></td>
</tr>
<tr>
<td>3. Parents' age</td>
<td></td>
</tr>
<tr>
<td>4. Parents' exposure to vocational education</td>
<td>Attitudes towards vocational education</td>
</tr>
<tr>
<td>5. Parents' occupational level</td>
<td></td>
</tr>
<tr>
<td>6. Students' geographical areas</td>
<td></td>
</tr>
<tr>
<td>7. Student sex</td>
<td></td>
</tr>
<tr>
<td>8. Family size</td>
<td></td>
</tr>
</tbody>
</table>

**Figure 2. Design for Correlation**

**Instrument**

The instrument used in this study consisted of statements/items used to obtain answers from respondents concerning their attitudes towards vocational education. Obviously, all items should describe aspects directly related to the objectives of the study. Most statements/items were statements/items taken directly from studies (Sawyers, 1977; Zakaria, 1986; McCracken, 1986; Parks, 1968; Spooner, 1971; Black, 1976; and Ohio Pride, 1971), and some were developed by the researcher. There were also some items which were taken from studies but modified in order to
be applicable to the Indonesian situation.

The instrument was prepared with the selected statements, and four possible responses: strongly agree, agree, disagree, and strongly disagree. Field testing of the instrument was done with a sample of 40 (10 from each group) that was not used in the sample for the study. Field testing was conducted to students in four schools including their parents (see appendix A). As a result of field testing, revision of the instrument was done to insure clarity and understandability to the responding groups.

Data were then collected by administering questionnaires to students (academic and vocational) and by mail for their parents. In this case, the mailmen were the students themselves. For those parents who could not read and write, the researcher came directly with the assistance of student teachers to help them.

The reliability of the instrument was evaluated by using the Cronbach's alpha internal consistency statistic. With 48 items, it was found that $\alpha = .8669$. In order to improve reliability, eight items (# 6,21,27,37,38,43,44,46) were deleted and it was found that $\alpha = .8865$ (Appendix B). Appendix B also indicated mean ($X$) of the 48 items for each subject. Only forty items were then used for data analysis. Statistics for each item might be seen in Appendix C.

To determine the validity of the instrument, several
teacher educators/experts from vocational-technical education, guidance and counseling, and some other teacher educators were asked to judge the instrument as to whether it measured what it purported to measure. Basically, the experts were asked to sort the statements into two groups: those that tended to reflect favorably on vocational education and those that tended to reflect unfavorably on it.

Finally, the instrument were translated into the Indonesian language because it was the main language of the respondents.

Data Collection

There were two steps in this section: selecting and training of assistants and administering the questionnaires. Several student teachers from the Technical Teacher Training College in Yogyakarta were hired to administer the questionnaires. Training for them was then provided concerning the administration of questionnaires. A certain amount of stipend was given to them for transportation, food, accommodation, and pocket money.

Before the conduct of supervision, assistants had to get permission from the principals first, and then they distributed the questionnaires to academic/vocational students, and supervised them until they were done. Assistants should keep secret the respondent names from the answer sheet, in other words, they were not supposed to
write down the respondent names on the answer sheet. When all students/parents were done with the questionnaires, the results were provided to the researcher.

Data Analysis

After data were collected, coding and recording were done. The SPSSx system at the Ohio State University was used to analyze the data.

To find out the overall attitudes of academic and vocational students and their respective parents towards vocational education (objective of the study #1), an arithmetic mean and standard deviation was calculated. Likewise, to find out the differences in attitudes towards vocational education (objectives of the study #2, 3, 4, 5, 6, and 7) a two-way analysis of variance and t-test were used to determine the differences.

Differences in Attitudes towards vocational education

between:

- Academic & vocational students and their parents

- Academic students & their parents and vocational students & their parents

- Academic students and vocational students

- Parents of academic students and parents of vocational students

Types of Analysis

Two-way analysis of variance

Two-way analysis of variance

t-test

t-test
Vocational students and their parents  
Academic students and their parents

Differences were said significant if F/t values > .05 level.

To find out the relationships between each independent variable and dependent variable (objectives of the study # 8 to 15, different types of correlation were used:

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>Dependent variable</th>
<th>Type of correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parents' income level</td>
<td>Attitudes towards vocational education</td>
<td>Spearman</td>
</tr>
<tr>
<td>Parents' educational level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parents' age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parents' exposure to vocational education</td>
<td></td>
<td>Point Biserial</td>
</tr>
<tr>
<td>Parents' occupational level</td>
<td></td>
<td>Spearman</td>
</tr>
<tr>
<td>Students' geographical areas</td>
<td></td>
<td>Point Biserial</td>
</tr>
<tr>
<td>Student sex</td>
<td></td>
<td>Point Biserial</td>
</tr>
<tr>
<td>Family size</td>
<td></td>
<td>Spearman</td>
</tr>
</tbody>
</table>

Correlations were said to be significant if the probability of the coefficients being zero in the population was less than .05.
CHAPTER IV
FINDINGS

This chapter has been organized into four sections. The four sections contain findings to meet the objectives of the study. Section one contains a description of the respondents. Section two reports respondent attitudes towards vocational education. Section three includes differences among respondents in attitudes towards vocational education. Section four covers relationships among variables.

Description of Respondents

This sub-section reports the number of respondents in the study. In addition, respondents are described on each demographic variable, e.g. parents' income level, parents' educational level, parents' age, parents' exposure to vocational education, parents' occupational level, students' geographical areas, student sex, and family size.

Number of Respondents

The population of the study was all academic and vocational school students and their parents throughout the Province of Yogyakarta. It was determined that the sample size needed was 600 (150 academic students, 150 vocational
students, 150 parents of academic students, and 150 parents of vocational students). In a sample of 600 students and their respective parents, 570 or 95 percent completed the questionnaires. The sample was drawn randomly from twelve schools (6 academic schools and 6 vocational schools including their respective parents) in the Province of Yogyakarta. The twelve schools were previously drawn randomly from academic and vocational schools in the Province of Yogyakarta. The total number of respondents for each of the 12 schools who completed the questionnaires was listed in Table 1.

Table 1: The Total Number of Respondents Who Completed the Questionnaires

<table>
<thead>
<tr>
<th>Names of Schools</th>
<th>Desired Respondents (n)</th>
<th>Respondents (n)</th>
<th>Non-Respondents (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. SMA 8 Yogyakarta</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students</td>
<td>25</td>
<td>25</td>
<td>0</td>
</tr>
<tr>
<td>Parents</td>
<td>25</td>
<td>25</td>
<td>0</td>
</tr>
<tr>
<td>2. SMA 2 Babarsari</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students</td>
<td>25</td>
<td>24</td>
<td>1</td>
</tr>
<tr>
<td>Parents</td>
<td>25</td>
<td>24</td>
<td>1</td>
</tr>
<tr>
<td>3. SMA Wonosari</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students</td>
<td>25</td>
<td>25</td>
<td>0</td>
</tr>
<tr>
<td>Parents</td>
<td>25</td>
<td>25</td>
<td>0</td>
</tr>
<tr>
<td>4. SMA 1 Tirtonirmolo</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students</td>
<td>25</td>
<td>25</td>
<td>0</td>
</tr>
<tr>
<td>Parents</td>
<td>25</td>
<td>25</td>
<td>0</td>
</tr>
<tr>
<td>5. SMA 1 Wates</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students</td>
<td>25</td>
<td>22</td>
<td>3</td>
</tr>
<tr>
<td>Parents</td>
<td>25</td>
<td>22</td>
<td>3</td>
</tr>
</tbody>
</table>
(Table 1 continued)

<table>
<thead>
<tr>
<th>Institution</th>
<th>Students</th>
<th>Parents</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>6. SMA 3 Yogyakarta</td>
<td>25</td>
<td>25</td>
<td>0</td>
</tr>
<tr>
<td>7. STM 2 Yogyakarta</td>
<td>25</td>
<td>22</td>
<td>3</td>
</tr>
<tr>
<td>8. SMIK Yogyakarta</td>
<td>25</td>
<td>24</td>
<td>1</td>
</tr>
<tr>
<td>9. SMTK Yogyakarta</td>
<td>25</td>
<td>22</td>
<td>3</td>
</tr>
<tr>
<td>10. STM Pertanian Bantul</td>
<td>25</td>
<td>25</td>
<td>0</td>
</tr>
<tr>
<td>11. STM Pembangunan Yogyakarta</td>
<td>25</td>
<td>21</td>
<td>4</td>
</tr>
<tr>
<td>12. SMEA 1 Yogyakarta</td>
<td>25</td>
<td>25</td>
<td>0</td>
</tr>
</tbody>
</table>

| Total                      | 600      | 570     | 30         |
| Total (percentage)         | 100      | 95      | 5          |

The number of respondents in Table 1 was then simplified into Table 2 which was type of respondent by curriculum.
Table 2: Type of Respondent by Curriculum

<table>
<thead>
<tr>
<th>Curriculum</th>
<th>Students</th>
<th>Parents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic</td>
<td>146</td>
<td>146</td>
</tr>
<tr>
<td>Vocational</td>
<td>139</td>
<td>139</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>285</strong></td>
<td><strong>285</strong></td>
</tr>
</tbody>
</table>

Parents' Income Level

Monthly income of parents which was less than Rp 60,000 (US $40) may be classified as lower, more than Rp 61,000 (US $40.67) to Rp 120,000 (US $80) as middle, and more than Rp 121,000 (US $80.67) as upper income level.

Of the 146 parents of academic students, 25 or 17.1 percent were in the lower income level, 56 or 38.4 percent in the middle income level, and 65 or 44.5 percent in the upper income level. Of the 139 parents of vocational students, 88 or 63.3 percent were in the lower income level, 36 or 25.9 percent in the middle income level, and 15 or 10.8 percent in the upper income level.

It seemed that the number of parents of academic students who had upper income level was higher than parents of vocational students. These data are presented in Table 3.
Table 3: Frequency and Percentage of Parents' Income Level

<table>
<thead>
<tr>
<th>Parents of</th>
<th>Income Level</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lower</td>
<td>Middle</td>
</tr>
<tr>
<td>Academic Students</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(n)</td>
<td>25</td>
<td>56</td>
</tr>
<tr>
<td>(%)</td>
<td>17.1</td>
<td>38.4</td>
</tr>
<tr>
<td>Vocational Students</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(n)</td>
<td>88</td>
<td>36</td>
</tr>
<tr>
<td>(%)</td>
<td>63.3</td>
<td>25.9</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(n)</td>
<td>113</td>
<td>92</td>
</tr>
<tr>
<td>(%)</td>
<td>39.6</td>
<td>32.3</td>
</tr>
</tbody>
</table>

Parents' Educational Level

Of the 146 parents of academic students, less than 3 or 2.1 percent reported their educational level as none, 9 or 6 percent as elementary school, 32 or 22 percent as junior high school, 53 or 36.3 percent as senior high school, 11 or 7.6 percent as post secondary school (1 or 2 year college), and 38 or 26 percent as university education.

Of the 139 parents of vocational students, 20 or 14.4 percent reported their educational level as none, 59 or 42.4 percent as elementary school, 26 or 18.7 percent as junior high school, 29 or 21 percent as senior high school, 1 or .7 percent as post secondary school, and 4 or 2.8 percent as university education.

It appears that parents of academic students had a higher educational level than parents of vocational
students. These data are presented in Table 4.

Table 4: Frequency and Percentage of Parents' Educational Level

<table>
<thead>
<tr>
<th>Parents of:</th>
<th>Educational Level</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Academic Students</td>
<td>(n)</td>
<td>(%)</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>Academic Students</td>
<td>(%)</td>
<td></td>
</tr>
<tr>
<td>Vocational Students</td>
<td>(n)</td>
<td>(%)</td>
</tr>
<tr>
<td></td>
<td>20</td>
<td>59</td>
</tr>
<tr>
<td>Vocational Students</td>
<td>(%)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>(n)</td>
<td>(%)</td>
</tr>
<tr>
<td></td>
<td>23</td>
<td>68</td>
</tr>
<tr>
<td></td>
<td>(%)</td>
<td></td>
</tr>
</tbody>
</table>

Note: 0 = No School
1 = Elementary School
2 = Junior High School
3 = Senior High School
4 = Post Secondary School
5 = University

Parents' Age

The age distribution of the respondents (parents) were reported in Table 5. Of the 146 parents of academic students, about 30 or 20.5 percent were less than 40 years of age, 93 or 63.7 percent were between 41 to 55 years of age, and 23 or 15.8 percent were more than 56 years of age.

Of the 139 parents of vocational students, 24 or 17.3 percent were less than 40 years of age, 84 or 60.4 percent were between 41 to 55 years of age, and 31 or 22.3 percent were more than 56 years of age.
Table 5: Frequency and Percentage of Parents' Age

<table>
<thead>
<tr>
<th>Parents of:</th>
<th>Age (years)</th>
<th>Total</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt;40</td>
<td>41-55</td>
<td>&gt;56</td>
</tr>
<tr>
<td>Academic Students</td>
<td>30</td>
<td>93</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>20.5</td>
<td>63.7</td>
<td>15.8</td>
</tr>
<tr>
<td>Vocational Students</td>
<td>24</td>
<td>84</td>
<td>31</td>
</tr>
<tr>
<td></td>
<td>17.3</td>
<td>60.4</td>
<td>22.3</td>
</tr>
<tr>
<td>Total</td>
<td>54</td>
<td>177</td>
<td>54</td>
</tr>
<tr>
<td></td>
<td>18.9</td>
<td>62.1</td>
<td>18.9</td>
</tr>
</tbody>
</table>

Parents' Exposure to Vocational Education

The number of parents who had/had not been exposed to vocational education is shown in Table 6. Of the 146 parents of academic students, 85 or 58.2 percent had not been exposed to vocational education, while 61 or 41.8 percent had. Of the 139 parents of vocational students, 102 or 73.4 percent had not been exposed to vocational education, and 37 or 26.6 percent had.

It appears that parents of academic students had been exposed to vocational education more than parents of vocational students.
Table 6: Frequency and Percentage of Parents' Exposure to Vocational Education

<table>
<thead>
<tr>
<th>Parents of:</th>
<th>Exposure</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Academic Students</td>
<td>85</td>
<td>61</td>
</tr>
<tr>
<td>(n)</td>
<td>58.2</td>
<td>41.8</td>
</tr>
<tr>
<td>Vocational Students</td>
<td>102</td>
<td>37</td>
</tr>
<tr>
<td>(n)</td>
<td>73.4</td>
<td>26.6</td>
</tr>
<tr>
<td>Total</td>
<td>187</td>
<td>98</td>
</tr>
<tr>
<td>(n)</td>
<td>65.6</td>
<td>34.4</td>
</tr>
</tbody>
</table>

Parents' Occupational Level

The data in Table 7 reported parents' occupational level. Value 8 (score interval 90-96) indicated the highest status and value 1 (score interval 10-14) showed the lowest status.

Of the 146 parents of academic students, 15 or 10.3 percent were in the lowest level, 41 or 28.1 percent were in the second level, 46 or 31.5 percent were in the third level, 9 or 6.1 percent were in the fourth level, 13 or 8.9 percent were in the fifth level, 16 or 11 percent were in the sixth level, 4 or 2.7 percent were in the seventh level, and 2 or 1.4 percent were in the eighth level (the highest status).

Of the 139 parents of vocational students, 63 or 45.4 percent were in the lowest level, 9 or 6.5 percent were in
the second level, 29 or 20.9 percent were in the third level, 12 or 8.6 percent were in the fourth level, 12 or 8.6 percent were in the fifth level, 7 or 5 percent were in the sixth level, 7 or 5 percent were in the seventh level, and 0 or 0 percent were in the eighth level (the highest status).

Table 7: Frequency and Percentage of Parents' Occupational Level

<table>
<thead>
<tr>
<th>Occupational Level</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parents of:</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Academic (n)</td>
<td>15</td>
</tr>
<tr>
<td>Students (%)</td>
<td>10.3</td>
</tr>
<tr>
<td>Vocational (n)</td>
<td>63</td>
</tr>
<tr>
<td>Students (%)</td>
<td>45.4</td>
</tr>
<tr>
<td>Total (n)</td>
<td>78</td>
</tr>
<tr>
<td>(%)</td>
<td>24.4</td>
</tr>
</tbody>
</table>

Students' Geographical Areas

Table 8 reported the number of students according to whether they came from a rural or an urban area. Of the 146 academic students, 89 or 61 percent were from rural areas, and 57 or 39 percent were from urban areas. Of the 139 vocational students, 114 or 82 percent were from rural areas, while 25 or 18 percent were from urban areas. It appears that most vocational students were from rural areas.
Table 8: Frequency and Percentage of Students' Geographical Areas

<table>
<thead>
<tr>
<th>Students:</th>
<th>Geographical Areas</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rural</td>
<td>Urban</td>
</tr>
<tr>
<td>Academic</td>
<td>(n) 89</td>
<td>57</td>
</tr>
<tr>
<td></td>
<td>(%) 61</td>
<td>39</td>
</tr>
<tr>
<td>Vocational</td>
<td>(n) 114</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>(%) 82</td>
<td>18</td>
</tr>
<tr>
<td>Total</td>
<td>(n) 203</td>
<td>82</td>
</tr>
<tr>
<td></td>
<td>(%) 71.2</td>
<td>28.8</td>
</tr>
</tbody>
</table>

**Student Sex**

The data in Table 9 reported the student sex. Of the 146 academic students, 85 or 58.2 percent were male and 61 or 41.8 percent were female. Of the 139 vocational students, 88 or 63.3 percent were male, and 51 or 36.7 percent were female. Male students had bigger percentage in both academic and vocational schools.
Table 9: Frequency and Percentage of Student Sex

<table>
<thead>
<tr>
<th>Students:</th>
<th>Sex</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>Academic</td>
<td>(n) 85</td>
<td>61</td>
</tr>
<tr>
<td></td>
<td>(%) 52.8</td>
<td>41.8</td>
</tr>
<tr>
<td>Vocational</td>
<td>(n) 88</td>
<td>51</td>
</tr>
<tr>
<td></td>
<td>(%) 63.3</td>
<td>36.7</td>
</tr>
<tr>
<td>Total</td>
<td>(n) 173</td>
<td>112</td>
</tr>
<tr>
<td></td>
<td>(%) 60.7</td>
<td>39.3</td>
</tr>
</tbody>
</table>

Family Size

Family size included students themselves, their brothers and sisters, their parents, and their grandparents. In Indonesian tradition, students live together with their brothers and sisters, with their parents, and with their grandparents. Table 10 reported the size of the family, and the frequency of each size of the family.

Of the 146 students, 0 or 0 percent were from family size 3, 9 or 6.2 percent were from family size 4, 32 or 22 percent were from family size 5, 20 or 13.7 were from family size 6, 36 or 24.7 percent were from family size 7, 22 or 15 percent were from family size 8, 10 or 6.8 percent were from family size 9, 6 or 4.1 percent were from family size 10, 6 or 4.1 percent were from family size 11, 4 or 2.8 percent were from family size 12, 1 or .6 percent were from family
size 13, 0 or 0 percent were from family size 16, and 0 or 0 percent were from family size 17.

Of the 139 vocational students, 3 or 2.2 percent were from family size 3, 12 or 8.6 percent were from family size 4, 37 or 26.7 percent were from family size 5, 17 or 12.3 percent were from family size 6, 20 or 14.4 percent were from family size 7, 24 or 17.2 percent were from family size 8, 10 or 7.2 percent were from family size 9, 11 or 8 percent were from family size 10, 3 or 2.2 were from family size 11, 0 or 0 percent were from family size 12, 0 or 0 percent were from family size 13, 1 or .6 percent were from family size 16, and 1 or .6 percent were from family size 17.
Table 10: Frequency and Percentage of Each Family Size

<table>
<thead>
<tr>
<th>Family Size</th>
<th>Students</th>
<th>Academic (n) (%)</th>
<th>Vocational (n) (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>0</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>9</td>
<td>6.2</td>
<td>12</td>
</tr>
<tr>
<td>5</td>
<td>32</td>
<td>22</td>
<td>37</td>
</tr>
<tr>
<td>6</td>
<td>20</td>
<td>13.7</td>
<td>17</td>
</tr>
<tr>
<td>7</td>
<td>36</td>
<td>24.7</td>
<td>20</td>
</tr>
<tr>
<td>8</td>
<td>22</td>
<td>15</td>
<td>24</td>
</tr>
<tr>
<td>9</td>
<td>10</td>
<td>6.8</td>
<td>10</td>
</tr>
<tr>
<td>10</td>
<td>6</td>
<td>4.1</td>
<td>11</td>
</tr>
<tr>
<td>11</td>
<td>6</td>
<td>4.1</td>
<td>3</td>
</tr>
<tr>
<td>12</td>
<td>4</td>
<td>2.8</td>
<td>0</td>
</tr>
<tr>
<td>13</td>
<td>1</td>
<td>.6</td>
<td>0</td>
</tr>
<tr>
<td>14</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>15</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>16</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>17</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

Total: 146 100 139 100

Respondent Attitudes Towards Vocational Education

This section is a direct answer to the objective #1: What were the attitudes of students (academic and vocational) and their respective parents towards vocational education? Forty attitude statements were used to find out the attitudes of the respondents towards vocational education. All respondents were asked to state their agreement or disagreement with each statement on a 4-point
scale: strongly agree (4), agree (3), disagree (2), and strongly disagree (1). If respondents answered "4", then they indicated positive attitudes towards vocational education; "3" was moderately positive; "2" was moderately negative; and "1" was negative. It was found that respondents as a whole indicated moderately positive attitudes towards vocational education (mean = 3.06, Table 11). Thus, hypothesis 1 stating that respondents as a whole had positive attitudes towards vocational education was accepted.

Table 11: Mean and Standard Deviation for Each of the Four Sub-groups and for the Total Sample

<table>
<thead>
<tr>
<th>Curriculum:</th>
<th>Type of Respondent</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Students</td>
<td>Parents</td>
</tr>
<tr>
<td>Academic</td>
<td>x = 2.99</td>
<td>x = 2.95</td>
</tr>
<tr>
<td></td>
<td>sd = .29</td>
<td>sd = .31</td>
</tr>
<tr>
<td></td>
<td>n = 146</td>
<td>n = 292</td>
</tr>
<tr>
<td>Vocational</td>
<td>x = 3.23</td>
<td>x = 3.17</td>
</tr>
<tr>
<td></td>
<td>sd = .24</td>
<td>sd = .25</td>
</tr>
<tr>
<td></td>
<td>n = 139</td>
<td>n = 278</td>
</tr>
<tr>
<td>Total</td>
<td>x = 3.11</td>
<td>x = 3.06</td>
</tr>
<tr>
<td></td>
<td>sd = .29</td>
<td>sd = .31</td>
</tr>
<tr>
<td></td>
<td>n = 285</td>
<td>n = 570</td>
</tr>
</tbody>
</table>
Differences Among Respondents in Attitudes Towards Vocational Education

This section reports findings about attitude differences among respondents towards vocational education. The findings are organized on the basis of sequences of objectives of the study which were written in the form of questions to be answered. The objectives 2 and 3 may be answered by using a two-way analysis of variance.

Table 12 gives the analysis of variance for answering objectives 2 and 3. The mean for each of sub-group may be seen from Table 11.

Table 12: A Two-way Analysis of Variance (Type of Respondent by Curriculum)
Type of Respondent: Students and Parents
Curriculum: Academic and Vocational

<table>
<thead>
<tr>
<th>Source of Variance</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of Respondent</td>
<td>1.290</td>
<td>1</td>
<td>1.290</td>
<td>15.847*</td>
<td>0.000</td>
</tr>
<tr>
<td>Curriculum</td>
<td>7.202</td>
<td>1</td>
<td>7.202</td>
<td>88.493*</td>
<td>0.000</td>
</tr>
<tr>
<td>Interaction</td>
<td>0.015</td>
<td>1</td>
<td>0.015</td>
<td>0.183</td>
<td>0.669</td>
</tr>
<tr>
<td>Within Cell</td>
<td>46.064</td>
<td>566</td>
<td>0.081</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>54.565</strong></td>
<td><strong>569</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: * significance at .05 level
There were 570 subjects (respondents)
It can be seen from Table 12 that the type of respondent and curriculum have affected the attitudes towards vocational education. Students and parents did have different attitudes towards vocational education (F = 15.847). This is the answer to objective 2. Likewise, (academic students & their parents) and (vocational students & their parents) also had different attitudes towards vocational education (F = 88.497). This was the answer to objective 3. However, there was no interaction between subject and curriculum (F = .183). In summary, hypothesis 2 was accepted, that was both academic and vocational students had more positive attitudes towards vocational education than their parents. Likewise, hypothesis 3 was also accepted, that vocational students and their parents had more positive attitudes towards vocational education than academic students and their parents. There was no interaction between subject and curriculum.

To answer objectives 4, 5, 6, and 7, t-tests were used to perform the analysis. Table 13 presents findings of the differences in attitudes towards vocational education among groups (t-test). Mean, standard deviation, and the number of respondent for each of the four sub-groups and for the total sample may be seen from Table 11.
Table 13: t-test

<table>
<thead>
<tr>
<th>Type of Respondent</th>
<th>t Value</th>
<th>df</th>
<th>2-Tail Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Students and Vocational Students</td>
<td>7.31*</td>
<td>283</td>
<td>0.000</td>
</tr>
<tr>
<td>Parents of Academic Students and</td>
<td>6.07*</td>
<td>283</td>
<td>0.000</td>
</tr>
<tr>
<td>Parents of Vocational Students</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Academic Students and Parents of Academic</td>
<td>2.39*</td>
<td>145</td>
<td>0.018</td>
</tr>
<tr>
<td>Students</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vocational Students and Parents of Vocatio</td>
<td>4.26*</td>
<td>138</td>
<td>0.000</td>
</tr>
<tr>
<td>nal Students</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: * Significance at .05 level

Looking at Table 13, it can be said that vocational students had significantly more positive attitudes towards vocational education than academic students (t = 7.31). This was the answer to objective 4 and obviously hypothesis 4 was accepted.

From the same Table 13, answer to objective 5 may be found in there. Parents of vocational students had more positive attitudes towards vocational education than parents of academic students (t = 6.07, and significance at .05 level). Again hypothesis 5 was accepted.

Objective 6 may be answered by looking at the t-value in
Table 13 too. It was found that $t = 2.39$, and this was again significant at .05 level. Therefore, it may be argued that academic students had more positive attitudes towards vocational education than their parents. Obviously, hypothesis 6 was accepted.

Finally, Table 13 also presents findings the differences in attitudes towards vocational education between vocational students and their parents. It was found that vocational students had significantly more positive attitude towards vocational education than their parents ($t = 4.26$, significance at .05 level). This was the answer to objective 7. In short, hypothesis 7 was accepted.

Relationships Among Variables

The last eight objectives of the study tried to examine relationships between each independent variable and dependent variable. The independent variables were characteristics of respondents which included parents' income level, parents' educational level, parents' age, parents' exposure to vocational education, parents' occupational level, students' geographical areas, student sex, and family size. The dependent variable was attitude towards vocational education. The examination of relationships among independent variables and the dependent variable led to the question of whether characteristics of respondents were related to their attitudes about vocational
education. Table 14 contains relationships among variables.

Table 14: Relationships Among Characteristics of Respondents and Attitudes Towards Vocational education

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Statistics</th>
<th>Correlation</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parents' income</td>
<td>rs</td>
<td>-.2831 *</td>
<td>.000</td>
</tr>
<tr>
<td>Parents' education</td>
<td>rs</td>
<td>-.2974 *</td>
<td>.000</td>
</tr>
<tr>
<td>Parents' age</td>
<td>rs</td>
<td>.085</td>
<td>.152</td>
</tr>
<tr>
<td>Parents' exposure to vocational education</td>
<td>rpb</td>
<td>-.0564</td>
<td>.342</td>
</tr>
<tr>
<td>Parents' occupation</td>
<td>rs</td>
<td>-.2973 *</td>
<td>.000</td>
</tr>
<tr>
<td>Students' locations</td>
<td>rpb</td>
<td>-.2058 *</td>
<td>.000</td>
</tr>
<tr>
<td>Student sex</td>
<td>rpb</td>
<td>.0181</td>
<td>.761</td>
</tr>
<tr>
<td>Family size</td>
<td>rs</td>
<td>.0361</td>
<td>.543</td>
</tr>
</tbody>
</table>

* Significance at .05 level; rs = Spearman Correlation; rpb = Point Biserial Correlation

Parents' Income Level

Table 3 reported the frequency of parents' income level. The average of parents' attitude score towards vocational education was reported in Table 11 (mean = 3.01). It was found that income level of parents was correlated with attitudes towards vocational education (rs = .2831, Table 14). This correlation value indicated that the higher the parents' income level, the less positive attitudes towards vocational education the parents had. In summary, hypothesis 8 was accepted.

Parents' Educational Level

Frequency of parents' educational level was shown in Table 4. The average attitude mean of parents towards
vocational education was reported in Table 11 (mean = 3.01). Educational level of parents was correlated with parents' attitude towards vocational education ($rs = -.2974$, Table 14). This correlation value revealed that the higher the educational level of parents, the less positive attitudes towards vocational education the parents had. In short, hypothesis 9 was retained.

Parents' Age

Table 5 indicated frequency of parents' age level. Table 11 reported parents' attitudes towards vocational education (mean = 3.01). There was very little indication that older parents were less favorable towards vocational education than younger parents ($rs = .085$, Table 14). Hypothesis 10 was not accepted.

Parents' Exposure to Vocational Education

The number of parents who had or had not been exposed to vocational education was shown in Table 6. Parents' attitude mean score was indicated in Table 11 (mean = 3.01). It was found that the relationship between parents who had or had not been exposed to vocational education and attitudes towards vocational education was very weak ($rpb = .0564$, Table 14). In summary, hypothesis 11 was not accepted.
Parents' Occupational Level

The distribution of occupational level of parents was tabulated in Table 7, and the values of occupational status/level were shown in Appendix D. Attitude mean score for parents towards vocational education was reported in Table 11 (mean = 3.01). Using Spearman correlation, it was found that $rs = -.2973$ (Table 14). This value suggested that the higher the occupational level of parents, the less favorable attitudes towards vocational education the parents had. Hypothesis 12 was retained.

Students' Geographical Areas/Locations

Table 8 reported the number of students who came from rural and urban areas. Based on Table 14, it was shown that urban students were less favorable towards vocational education than were rural students ($rpb = -.2058$). In short, hypothesis 13 was accepted.

Student Sex

The data in Table 9 reported student sex. The correlation coefficient between sex and attitudes towards vocational education was almost none ($rpb = .0181$, Table 14). This value indicated that male students did not differ from female students in their attitudes towards vocational education. In summary, hypothesis 14 was not accepted.
Family Size

Frequency of family size may be seen from Table 10. The findings revealed that the relationship between family size and attitude towards vocational education was almost none ($r_s = .0361$, Table 14). This value indicated that students from larger family units did not have more positive attitudes towards vocational education than those who from smaller family units. Hypothesis 15 was not accepted.
CHAPTER V

SUMMARY, CONCLUSIONS, DISCUSSION, AND RECOMMENDATIONS

Summary

This section is a review of the problem statement, purposes and objectives of the study, research hypotheses, population and sample, design, instrument, data collection, data analysis, and major research findings of the study in a short form.

The Problem

The Indonesian government was facing a dilemma in innovating vocational education. On one hand, there was an urgent need for skilled workers at the middle level. These skilled workers should graduate from vocational education. Therefore, the government strongly supported vocational education as the first priority. On the other hand, there was apparently a reluctance among the Indonesians to accept vocational education as their first preference. Vocational education seemed to be the second choice after students failed to pass the entrance examination for the academic track. Most parents preferred that their children to go to general high schools and enroll in the academic track.
Purposes and Objectives of the Study

The first major purpose of this study was to ascertain the attitudes of students and their parents towards vocational education. The second major purpose of this study was to ascertain whether there was a relationship between student and parent characteristics and attitudes towards vocational education. Based upon the above purposes, the objectives of this study were therefore as follows:

1. What were the attitudes of the senior secondary school students (academic and vocational) and their parents towards vocational education?
2. Were there any differences in attitude towards vocational education between students and their parents?
3. Were there any differences in attitudes towards vocational education between vocational school students and their parents and academic school students and their parents?
4. Were there any differences in attitudes towards vocational education between academic school students and vocational school students?
5. Were there any differences in attitudes towards vocational education between parents of academic school students and parents of vocational school students?
6. Were there any differences in attitudes towards vocational education between academic school students and their parents?

7. Were there any differences in attitudes towards vocational education between vocational school students and their parents?

8. What was the relationship between income level and attitudes towards vocational education?

9. What was the relationship between educational level of parents and attitudes towards vocational education?

10. What was the relationship between age and attitudes towards vocational education?

11. What was the relationship between parents who had/had not been exposed to vocational education and attitudes towards vocational education?

12. What was the relationship between parents' occupational level and attitudes towards vocational education?

13. What was the relationship between students' geographical areas (rural/urban) and attitudes towards vocational education?

14. What was the relationship between student sex and attitudes towards vocational education?

15. What was the relationship between family size and attitudes towards vocational education?
Research Hypotheses

The objectives of the study were stated in the form of questions to be answered. The followings were tentative answers (hypotheses) to be tested:

1. Respondents as a whole had positive attitudes towards vocational education.
2. Both academic and vocational students had more positive attitudes towards vocational education than their parents.
3. Vocational school students and their parents had more positive attitudes towards vocational education than academic school students and their parents.
4. Vocational school students had more positive attitudes towards vocational education than academic school students.
5. Parents of vocational school students had more positive attitudes towards vocational education than parents of academic school students.
6. Academic school students had more positive attitudes towards vocational education than their parents.
7. Vocational school students had more positive attitudes towards vocational education than their parents.
8. Income level was indirectly associated with attitudes towards vocational education.
9. Parents with a higher educational level had less favorable attitudes towards vocational education than
parents with a lower educational level.

10. Older parents had less favorable attitudes towards vocational education than younger parents.

11. Parents who had been exposed to vocational education had more positive attitudes towards vocational education than parents who had not been exposed to vocational education.

12. Parents' occupational level was indirectly associated with attitudes towards vocational education.

13. Rural students had more positive attitudes towards vocational education than urban students.

14. Male students tended to have more favorable attitudes towards vocational education than female students.

15. Individuals from larger family units had more positive attitudes towards vocational education than those from smaller family units.

Population and Sample

The population of this study was all academic and vocational students and their respective parents throughout the Province of Yogyakarta. According to 1986 Public School Statistic for the Province of Yogyakarta, there were about 20821 vocational students and 18834 academic students. This population was appropriate for this study because this study tried to find out the attitudes of academic and vocational students and their parents towards vocational education.

The sample size for this study was determined by using
Cochran's formula (1977). It was determined that 150 people were drawn from each of four population groups:

1. academic students
2. vocational students
3. parents of academic students
4. parents of vocational students.

The sampling technique used for this study was stratified random sampling. Specifically, equal stratified random sampling was used.

Design

The type of research in this study might be classified as descriptive-correlational study. It was descriptive because this study was going to find out the overall attitudes of students and their parents towards vocational education. It was also going to find out the differences in attitudes towards vocational education between academic and vocational students and their parents, between vocational students and their parents and academic students and their parents, between academic and vocational students, between parents of vocational and parents of academic students, between parents of academic and academic students, between parents of vocational students and vocational students.

A 2x2 factorial design (type of respondent and curriculum) and t-test were used to find out differences in attitudes towards vocational education.

The type of this study was also called correlational
research. Relationships between parents' income level, parents' educational level, parents' age, parents' exposure to vocational education, parents' occupational level, students' geographical areas, student sex, and family size were correlated with attitudes towards vocational education.

**Instrument**

The instrument used in this study consisted of items used to obtain answers from respondents concerning their attitudes towards vocational education. All items described aspects directly related to the objectives of the study. Most items were taken directly from studies (Sawyers, 1977; Zakaria, 1986; McCracken, 1986; Parks, 1968; Spooner, 1971; Black, 1976; and Ohio Pride, 1971) and some were developed by the researcher. There were also some items which were taken from studies but modified in order to be applicable to the Indonesian situation.

The instrument was prepared with the selected statements, and four possible responses: strongly agree, agree, disagree, and strongly disagree. Field testing of the instrument was done with a sample of 40 (10 from each group) that was not used in the sample for the study. As a result of field testing, revision of the instrument was made to insure clarity and understandability to the responding groups.

The reliability of the instrument was evaluated by using the Cronbach's alpha internal consistency statistic. With
48 items, it was found that $\alpha = .8669$. In order to improve reliability, 8 items (#6, 21, 27, 37, 38, 43, 44, 46) were deleted and it was found that $\alpha = .8865$.

To determine the validity of the instrument, several teacher educators/experts from vocational-technical education, guidance and counseling, and some other teacher educators were asked to judge the instrument whether it measured what it purported to measure.

Finally, the instrument was translated into the Indonesian language because it was the main language of the respondents.

Data Collection

To collect data from students, several assistants were hired to administer the questionnaires to students. The students were asked to gather in one room and were asked to answer all items. To get data from parents, students were asked to take questionnaires to their parents. The completed questionnaires were brought back to research assistants.

Data Analysis

After data was collected, coding and recording were done. The SPSSx System at The Ohio State University was used to analyze the data.

To find out the overall attitudes of academic and vocational students and their respective parents towards
vocational education, an arithmetic mean and standard deviation were calculated.

To find out the differences in attitudes towards vocational education, a two-way analysis of variance and t-test were used to determine the differences.

To find out the relationships between each independent variable and the dependent variable, different types of correlation such as Point Biserial and Spearman were used.

Major Findings

This section reports description of respondents, respondent attitudes towards vocational education, differences among respondents in attitudes towards vocational education, and relationships among variables.

Description of Respondents. In a sample of 600 respondents, 570 or 95 percent completed the questionnaires. Parents of academic students had higher income level than parents of vocational students. Parents of academic students had higher educational level than parents of vocational students. The age of parents of academic and vocational students did not differ much. Parents of vocational students were less exposed to vocational education than parents of academic students. The occupational level of both parents of academic and vocational students differed. Most vocational students came from rural areas. The number of male and female students who attended academic and vocational schools were almost the
same. Family size of both academic and vocational students were also almost the same.

**Respondent Attitudes Towards Vocational Education.** It was found that respondents as a whole indicated moderately positive attitudes towards vocational education (mean = 3.06).

**Differences Among Respondents in Attitudes Towards Vocational Education.** It was found that different types of respondents and curriculum were related with attitudes towards vocational education. Likewise, vocational students had more positive attitudes towards vocational education than academic students. Parents of vocational students had more positive attitudes towards vocational education than parents of academic students. Academic students had more positive attitudes towards vocational education than their parents. Vocational students had more positive attitudes towards vocational education than their parents.

**Relationships Among Variables.** Relationships among characteristics of respondents and attitudes towards vocational education are reported as follows:

- Parents' income level ($rs = -0.2831$)*
- Parents' educational level ($rs = -0.2974$)*
- Parents' age ($rs = 0.085$)
- Parents' exposure to vocational education ($rpb = 0.0564$)
- Parents' occupational level ($rs = -0.2973$)*
- Students' geographical areas ($rpb = 0.2058$)*
Student sex (rpb = .0181)

Family size (rs = .0361).

Note: * Significance at .05 level.

Conclusions

Based on the findings of this study, several conclusions were drawn:

1. Respondents as a whole viewed vocational education more positively than negatively.

2. Both academic and vocational students had more positive attitudes towards vocational education than their respective parents.

3. Vocational students and their parents had more positive attitudes towards vocational education than academic students and their parents.

4. Vocational students had more favorable attitudes towards vocational education than academic students.

5. Parents of vocational students had more positive attitudes towards vocational education than parents of academic students.

6. Academic students had more positive attitudes towards vocational education than their parents.

7. Vocational students had more positive attitudes towards vocational education than their parents.

8. The higher the income level of parents, the less
positive attitudes towards vocational education the parents had.

9. The higher the educational level of parents, the less positive attitudes towards vocational education the parents had.

10. Older parents did not differ from younger parents in their attitudes towards vocational education.

11. Parents who had been exposed to vocational education did not differ from parents who had not been exposed to vocational education in their attitudes towards vocational education.

12. The higher the occupational level of parents, the less favorable attitudes towards vocational education the parents had.

13. Urban students were less favorable towards vocational education than were rural students.

14. Male students did not differ from female students in their attitudes towards vocational education.

15. Students from larger family units did not differ from students from smaller family units in their attitudes towards vocational education.

Discussion

Vocational education in the Province of Yogyakarta, Indonesia was perceived positively by respondents. These findings supported previous studies conducted by Wenrich and Crowley (1964), Parks (1968), The Ohio State Department Of
Education (1971), Seckendorf and Tate (1983), Sawyer (1977), and Zakaria (1986). However, these findings were just the opposite of the publicly held opinions that students and parents had negative attitudes towards vocational education. The reason was partly because, in the past, vocational education in Indonesia did not provide a clear path to career advancement. The objectives were dualistic and ambiguous (Tri Iswoyo, 1980).

However, the situation has slightly changed recently. All public vocational schools have been improved, and relations between vocational schools and industries (world of work) have been improved. Graduates from good vocational schools were hired prior to graduation. An example may be seen from STM Pembangunan Yogyakarta where students who still practiced in industries were offered positions in those industries by the employers. Secondly, the Indonesian government has strongly supported vocational education since 1969. The government has popularized and conducted campaigns for promoting vocational education. Perhaps, this was also one of the reasons parents and students viewed vocational education positively.

In general, students perceived vocational education more positively than their parents. Perhaps, students of today are more realistic than their parents. Today, schools provide career education programs as well as guidance and counseling services. Students learn career education in
conjunction with their appropriate ability level as well as the world of work. Unlike the students in this study, their parents got none because such programs just started few years ago. So, parents typically have a high expectation for their children to go to higher education. This may be one of the reasons why a difference in attitudes existed.

Vocational students perceived vocational education more favorably than academic students. This finding was relevant with Holloran's theory that after vocational students were exposed to vocational education, they should have much higher or lower attitude scores towards vocational education as compared to those of academic students (Zakaria, 1986). The question is "Can attitude be changed?" Finch (1976) argued that if attitude could be changed, more academically gifted students would select vocational programs.

Parents of academic students were less favorable towards vocational education than parents of vocational students. This finding was partly supported by the fact that most parents of academic students had higher income, educational, and occupational levels than parents of vocational students. Correlation between income, educational, occupational levels and attitudes towards vocational education was statistically negative. It seemed clear that those parents with high income, high education, and high occupational levels were less supportive of the existence of vocational education. This finding supported studies conducted by Gottfredson
Only those of parents with high income can afford to finance their children to go to higher education. The current system seems to provide more access to go to higher education for students with higher income parents than students with lower income parents. As long as the current system is maintained, vocational education will be deprived of status. Vocational education will only serve those students with lower income parents as well as lower educational and occupational levels.

From the findings, it appeared that urban students were less favorable towards vocational education than rural students. This finding leads to a further question such as "What factors hindered their attitudes towards vocational education?" To answer this question, it is necessary to conduct a study on characteristics of each community (rural/urban) such as differing work situations, differing availability of occupations, and other factors that may hinder students from choosing vocational education.

Another finding said that male students attitudes towards vocational education were not more favorable than female students. It looks like women in the Province of Yogyakarta are moving towards a more positive work attitude. In the past, students enrolled in vocational education were mostly male. Almost 37 percent of vocational students are female. This means that women are more likely to enter the
world of work in areas previously assumed to be for men.

Finally, the size of family did not influence the attitudes towards vocational education. The hypothesis which expected that individuals from larger family units had more positive attitudes towards vocational education than those from smaller family units was not proved. The expectation was, the larger the family size, the less the parents could afford to finance their children to further their education. Therefore, vocational education was appropriate for their children because it was terminal education. However, this was not the case in the study. Studies are needed to explore some other variables which might influence their attitudes towards vocational education.

Recommendations

Based upon the findings in this study, the following recommendations are offered:

1. Convince the government and society of the need for high rewards for vocational school graduates.

2. In order to increase positive attitudes towards vocational education, promote vocational education to the public, including its purposes, program quality, benefits, working improvement, and its good pay.

3. Conduct a similar study nationally in order to further validate the findings.

4. Explore further the differences in attitudes towards
vocational education between students and their parents.

5. Explore other factors such as wages, and work situations which might influence attitudes towards vocational education.

6. Conduct a study to explain reasons for having positive/negative attitudes towards vocational education.

7. Conduct a study to explore the effect of career education on attitudes towards vocational education.

8. Conduct research on attitudes towards vocational education for other segments of society such as business and industry.

9. Conduct research on influences of teachers, administrators, guidance counselors on student and parent attitudes towards vocational education.

10. Conduct experimental research designed to effect attitudinal change because students make decisions which are mostly influenced by the prevailing societal attitudes about vocational education and the manner in which this education is presented in the secondary schools (Finch, 1970).

11. Conduct research for those who are not even in high school (those students who have dropped out). In 1980, for example, there were about 70 percent of the public school students dropping out before entering secondary school (Pennant-Rea, 1983). Those students who have
dropped out obviously need skills so that they are able to make a living.
APPENDIX A:

Four Participating Schools for Field Testing
<table>
<thead>
<tr>
<th>School Names</th>
<th>Students</th>
<th>Parents</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMA 2 Babarsari</td>
<td>5</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>SMA 8 Yogyakarta</td>
<td>5</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>SMIK Yogyakarta</td>
<td>5</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>STM 2 Yogyakarta</td>
<td>5</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>20</strong></td>
<td><strong>20</strong></td>
<td><strong>40</strong></td>
</tr>
</tbody>
</table>
APPENDIX B:

Items that were used for Attitude Scale and Mean

(X) of the 48 Items for each Subject
<table>
<thead>
<tr>
<th>Items</th>
<th>Mean (X) for Academic Students</th>
<th>Mean (X) for Academic Parents</th>
<th>Mean (X) for Vocational Students</th>
<th>Mean (X) for Vocational Parents</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2.747</td>
<td>2.911</td>
<td>2.971</td>
<td>3.007</td>
</tr>
<tr>
<td>2</td>
<td>2.712</td>
<td>2.568</td>
<td>3.151</td>
<td>2.993</td>
</tr>
<tr>
<td>3</td>
<td>3.005</td>
<td>2.753</td>
<td>2.986</td>
<td>2.957</td>
</tr>
<tr>
<td>4</td>
<td>2.664</td>
<td>2.527</td>
<td>3.050</td>
<td>2.906</td>
</tr>
<tr>
<td>5</td>
<td>3.212</td>
<td>3.055</td>
<td>3.453</td>
<td>3.360</td>
</tr>
<tr>
<td>6*</td>
<td>3.171</td>
<td>3.000</td>
<td>2.935</td>
<td>2.921</td>
</tr>
<tr>
<td>7</td>
<td>3.062</td>
<td>3.041</td>
<td>3.209</td>
<td>3.043</td>
</tr>
<tr>
<td>8</td>
<td>3.171</td>
<td>2.808</td>
<td>3.504</td>
<td>3.194</td>
</tr>
<tr>
<td>9</td>
<td>2.699</td>
<td>2.610</td>
<td>3.173</td>
<td>2.978</td>
</tr>
<tr>
<td>10</td>
<td>3.267</td>
<td>3.212</td>
<td>3.432</td>
<td>3.309</td>
</tr>
<tr>
<td>11</td>
<td>2.726</td>
<td>2.774</td>
<td>2.871</td>
<td>2.784</td>
</tr>
<tr>
<td>12</td>
<td>2.993</td>
<td>2.952</td>
<td>3.237</td>
<td>3.065</td>
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<tr>
<td>13</td>
<td>3.075</td>
<td>2.877</td>
<td>3.453</td>
<td>3.237</td>
</tr>
<tr>
<td>14</td>
<td>3.329</td>
<td>3.021</td>
<td>3.432</td>
<td>3.360</td>
</tr>
<tr>
<td>15</td>
<td>2.795</td>
<td>2.685</td>
<td>2.849</td>
<td>2.806</td>
</tr>
<tr>
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* These items were removed to improve the reliability of the overall scale.
APPENDIX: C

Reliability Coefficients for each Item of 40 Items

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APPENDIX: D

Occupations Illustrating Various Scores on the Index of Occupational Status
<p>| Title of Occupation (Frequency per 10,000 males in 1960 Experienced Civilian Labor Force in Parentheses) |
|---|---|
| <em>90-96</em> | Architects (7); dentists (18); chemical engineers (9); lawyers and judges (45); physicians and surgeons (47) |
| <em>85-89</em> | Aeronautical engineers (11); industrial engineers (21); salaried managers, banking and finance (30); self-employed proprietors, banking and finance (5) |
| <em>80-84</em> | College presidents, professors and instructors (31); editors and reporters (14); electrical engineers (40); pharmacists (19); officials, federal public administration and postal service (13); salaried managers, business services (11) |
| <em>75-79</em> | Accountants and auditors (87); chemists (17); veterinarians (3); salaried managers, manufacturing (133); self-employed proprietors, insurance and real estate (9) |
| <em>70-74</em> | Designers (12); teachers (105); store buyers and department heads (40); credit men (8); salaried managers, wholesale trade (41); self-employed proprietors, motor vehicles and accessories retailing (12); stock and bond salesmen (6) |
| <em>65-69</em> | Artists and art teachers (15); draftsmen (45); salaried managers, motor vehicles and accessories retailing (18); self-employed proprietors, apparel accessories retail stores (8); agents, n.e.c. (29); advertising agents and salesmen (7); salesmen, manufacturing (93); foremen, transportation equipment manufacturing (18) |
| <em>60-64</em> | Librarians (3); sports instructors and officials (12); postmasters (5); salaried managers, construction (31); self-employed proprietors, manufacturing (35); stenographers, typists, and secretaries (18); ticket, station, and express agents (12); real estate agents and brokers (33); salesmen, wholesale trade (106); foremen, machinery manufacturing (28); photoengravers and lithographers (5) |
| <em>55-59</em> | Funeral directors and embalmers (8); railroad conductors (10); self-employed proprietors, wholesale (28); electotypers and stereotypers (2); foremen, communications, utilities, and sanitary services (12); locomotive engineers (13) |</p>
<table>
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<th>Score Interval</th>
<th>Title of Occupation (Frequency per 10,000 Males in 1960 Experienced Civilian Labor Force in Parentheses)</th>
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<td>50-54</td>
<td>Clergymen (43); mucisians and music teachers (19); officials and administrators, local public administration (15); salaried managers, food and dairy product stores (21); self-employed proprietors, construction (50); bookkeepers (33); mail carriers (43); foremen, metal industries (28); toolmakers, and die-makers and setters (41)</td>
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<td>45-49</td>
<td>Surveyors (10); salaried managers, automobile repair services and garages (4); office machine operators (18); linemen and servicemen, telephone, telegraph and power (60); locomotive firemen (9); airplane mechanics and repairmen (26); stationary engineers (60)</td>
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<td>Self-proprietors, transportation (8); self-employed proprietors, personal services (19); cashiers (23); clerical and kindred workers, n.e.c. (269); electricians (77); construction foremen (22); motion picture projectionists (4); photographic process workers (5); railroad switchmen (13); policemen and detectives, government (51)</td>
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<td>35-39</td>
<td>Salaried and self-employed managers and proprietors, eating and drinking places (43); salesmen and sales clerks, retail trade (274); bookbinders (3); radio and television repairmen (23); firemen, fire protection (30); policemen and detectives, private (3)</td>
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<td>30-34</td>
<td>Building managers and superintendents (7); self-employed proprietors, gasoline service stations (32); boilermakers (6); machinists (111); millwrights (15); plumbers and pipe fitters (72); structural metal workers (14); tinsmiths, coppersmiths, and sheet metal workers (31); deliverymen and routemen (93); operatives, printing, publishing and allied industries (13); sheriffs and bailiffs (5)</td>
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<td>Messengers and office boys (11); newsboys (41); brickmasons, stonemasons, and tile setters (45); mechanics and repairmen, n.e.c. (266); plasterers (12); operatives, drugs and medicine manufacturing (2); ushers, recreation and amusement (12); laborers, petroleum refining (3)</td>
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<td>Telegraph messengers (1); shipping and receiving clerks (59); bakers (21); cabinetmakers (15); excavating, grading, and road machine operators (49); railroad and car shop mechanics and repairmen (9); tailors (7); upholsterers (12); bus drivers (36); filers, grinders, polishers, metal (33); welders and flame-cutters (81)</td>
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<td>15-19</td>
<td>Blacksmiths (5); carpenters (202); automobile mechanics and repairmen (153); painters (118); attendants, auto service and parking (81); laundry dry cleaning operatives (25); truck and tractor drivers (362); stationary firemen (20); operatives, metal industries (103); operatives, wholesale and retail trade (35); barbers (38); bartenders (36); cooks, except private household (47)</td>
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<td>Farmers (owners and tenants) (521); shoemakers and repairers, except factory (8); dyers (4); taxicab drivers and chauffeurs (36); attendants, hospital and other institutions (24); elevator operators (11); fishermen and oystermen (9); gardeners, except stevedores (13); laborers, machinery manufacturing (10)</td>
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<td>Hucksters and peddlers (5); sawyers (20); weavers, textile (8); operatives, footwear, except rubber, manufacturing (16); janitors and sextons (118); farm laborers, wage workers (241); laborers, blast furnaces, steel workers, and rolling mills (26); construction laborers (163)</td>
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<td>Coal mine operatives and laborers (31); operatives, yarn, thread and fabric mills (30); porters (33); laborers, saw mills, planning mills, millwork (21).</td>
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*n.e.c. means "not elsewhere classified"

APPENDIX: E

Research Instrument for Students and Parents

"Attitudes of Students and Parents About Vocational Education in Yogyakarta, Indonesia"
Directions

The purpose of this survey is to identify your feelings concerning vocational education in the Senior Secondary Vocational Schools. Please answer each item as honestly you can. There are no right or wrong answers. To answer each item, please circle the response which corresponds the closest to your feeling about each item.

SA = Strongly Agree
A = Agree
D = Disagree
SD = Strongly Disagree

Example: Vocational schools should allow students to go to higher education. SA A D SD
The circle around D indicates that the respondents does not agree that vocational schools should allow students to go to higher education.

Begin here Circle one

1. Vocational education should be encouraged for more high school students. SA A D SD
2. Vocational education, as it has been provided in the senior secondary vocational schools, is relatively ineffective in achieving the occupational results it exists to produce. SA A D SD
3. Vocational education is too costly in proportion to its worth to the community. SA A D SD
4. Most students who study at the senior secondary vocational school lack many other scholastic skills. SA A D SD
5. A senior secondary vocational school graduate benefits from his education significantly. SA A D SD
6. Vocational education should be a part of the total education of all senior secondary school students who are interested. SA A D SD
7. It is more important to provide many students with a sound basic education of reading, writing, and arithmetic than to use the time for vocational education. SA A D SD
8. Most vocational education programs offered currently in senior secondary vocational school is hopelessly out-of-date. SA A D SD
9. Vocational education in senior secondary vocational school does not make enough students useful members of society to justify its costs. SA A D SD
10. Vocational education is needed to ensure an adequate and efficient supply of labor. SA A D SD
11. Vocational schools contribute to the general citizenship training equally as much as other academic senior secondary schools.

12. Students enrolled in a senior secondary vocational schools take a lower social prestige perspective than do academically oriented students in the eyes of their peers.

13. Vocational education hinders students from further education after senior secondary vocational school.

14. Vocational education cannot possibly prepare senior secondary vocational students for the range of job opportunities available to them.

15. Students enrolled in an academic senior secondary schools take on a higher social prestige perspective than do vocationally oriented students in the eyes of their peers.

16. The student who should take vocational education is the one who lacks scholastic skills.

17. Vocational education programs are too costly for senior secondary vocational schools to offer.

18. Junior high schools should encourage bright students who are interested to enroll in vocational education programs.

19. The value of vocational education should be known to more parents than is now the case.

20. Students with average academic talent would benefit from increased emphasis on basic academic education more than they would benefit from vocational education.

21. Vocational education as offered in the senior secondary vocational school prepares students for employment in up-to-date occupations.

22. The skills acquired by the vocational schools are not enough for them to become self-employed.

23. I would object if a member of my family wished to enroll in a vocational school.

24. Studying in a vocational school is useful, for example, a person can repair his/her household appliances or assemble newly bought implements.

25. Vocational schools provide basic skills about jobs.
26. Vocational schools provide information about jobs.

27. A lot of time is being spent doing practical work in the vocational schools such that the students have little time for games and other cocurricular activities.

28. Besides providing skills, vocational schools also prepare students to become responsible citizens.

29. The Indonesian society has high regards towards jobs such as carpenter, tailors, mechanics, or electronics.

30. A student who graduates from senior secondary vocational school should be allowed to enroll at any state university.

31. Vocational school students have sufficient skills to enable them to work in industries.

32. The result realized from vocational education programs are beneficial to the communities involved.

33. Students enrolled in a vocational school are thought to be in a less desirable school than general or academically oriented students.

34. The occupational education program in senior secondary vocational school should be geared mainly for youth of limited academic talent.

35. Vocational education is not needed to insure and adequate and efficient supply of labor.

36. Both boys and girls should be encouraged to enter any of the vocational schools.

37. There should be more money set aside in the school budget for vocational school than academic school.

38. Graduates of vocational school work with their hands rather than their minds.

39. Graduates of vocational school are skilled workers.

40. Graduates of vocational schools have little or no chance for advancement.

41. Students should learn about the world of work while they are in school.

42. Students should be able to prepare for specific occupations while they are in school if they choose to do so.

43. It is the vocational schools' responsibility to prepare all students for jobs.

44. Vocational education is helpful in meeting employers' manpower needs.
45. Vocational school helps young people prepare for productive work.  
46. Students who complete their academic education are adequately prepared for productive work.  
47. Vocational school is not my first choice.  
48. Skills provided by the vocational schools are no longer needed by industries.  

Additional Information from Students  

Please complete/answer the following items.  

49. What is your sex? (male/female).  
50. What geographical area are you from? (rural/urban).  
51. How many members are there in your immediate family? (your parents/guardian + you + your brothers and sisters + your grandparents?)  

Additional Information from Parents  

Please complete/answer the following items.  

49. I am now:  
1). <40 years of age  
2). 41-55 years of age  
3). > 56 years of age  
50. My monthly income is:  
1). <Rp 60,000,-  
2). Rp 61,000,- - Rp 120,000,-  
3). >Rp 121,000,-  
51. I work as a:  
1). farmer  
2). teacher  
3). civil servant other teacher (............)  
4). others (............).  
52. What was your highest educational background?  
53. Did you attend vocational education?
Translation of the Instrument from
English to Indonesian Language

Petunjuk:
Tujuan survei ini adalah untuk mengidentifikasi perasaan anda terhadap pendidikan kejuruan. Oleh karena itu, jawablah item-item berikut dengan sejujur-jujurnya. Tak ada jawaban yang benar atau salah. Untuk menjawab setiap item, silahkan melingkari jawaban yang menurut anda cocok dengan perasaanmu.

SS = Sangat Setuju
S = Setuju
T = Tidak Setuju
ST = Sangat Tidak Setuju

Contoh: Sekolah kejuruan seharusnya membolehkan siswa-siswanya untuk melanjutkan ke perguruan tinggi. SS S T ST
Lingkaran sekeliling T menunjukkan bahwa responden tidak setuju kalau sekolah kejuruan membolehkan siswa-siswanya melanjutkan ke perguruan tinggi.

Mulailah dari sini

1. Pendidikan kejuruan seharusnya mulai digalakkan kepada anak-anak sekolah menengah pertama.
2. Pendidikan kejuruan yang sebagaimana telah diberikan disekolah-sekolah kejuruan adalah kurang efektif dalam mencapai hasil hasil okupasi yang diharapkan.
3. Pendidikan kejuruan adalah pendidikan yang terlalu mahal apabila dibandingkan dengan nilai kembaliannya terhadap masyarakat.
4. Sebagian besar siswa yang belajar disekolah kejuruan mengalami kekurangan ketrampilan skolastik (intelektual).
5. Lulusan sekolah kejuruan dapat beruntung dari pelajaran yang didapatnya.
6. Pendidikan kejuruan seharusnya menjadi sebagian dari keseluruhan pendidikan siswa disekolah menengah atas apabila mereka memang tertarik.
7. Adalah lebih penting memberikan siswa-siswanya tentang pelajaran membaca, menulis, dan matematik dari pada menggunakan waktu sekolah untuk pelajaran pendidikan kejuruan.

8. Sebagian besar program pendidikan kejuruan yang diberikan disekolah kejuruan sudah ketinggalan jaman.

9. Pendidikan kejuruan yang telah diberikan disekolah kejuruan belum mencetak siswa sebagai anggota masyarakat yang berguna bila dinilai dari besarnya beanya.

10. Pendidikan kejuruan diperlukan untuk menjamin supply tenaga kerja yang cukup jumlahnya dan efisien.

11. Sekolah kejuruan mempunyai kontribusi yang sama terhadap pendidikan masyarakat bila dibandingkan dengan sekolah menengah atas umum.

12. Siswa-siswa yang masuk ke sekolah kejuruan telah mengambil prestasi social yang lebih rendah dari pada siswa-siswa yang masuk ke sekolah menengah atas umum bila dipandang dari mata kawan-kawannya.

13. Sekolah kejuruan merintangi siswa-siswanya untuk melanjutkan ke perguruan tinggi setelah mereka tamat.

14. Pendidikan kejuruan tak mungkin bisa mempersiapkan siswa-siswanya terhadap jenis jenis kesempatan pekerjaan yang ada di masyarakat.

15. Siswa-siswa yang masuk ke sekolah menengah atas umum telah mengambil prestasi sosial yang lebih tinggi bila dipandang dari mata kawan-kawannya.

16. Siswa-siswa yang seharusnya mengambil pendidikan kejuruan adalah mereka yang kekurangan ketrampilan skolastik (intelektual).

17. Pendidikan kejuruan disekolah-sekolah kejuruan adalah terlalu mahal untuk diselenggarakannya.

18. Sekolah menengah pertama seharusnya menggalakan siswa-siswanya untuk mendaftarkan ke sekolah kejuruan bila mereka memang berminat.

19. Keberhargaan (nilai) pendidikan kejuruan seharusnya dilimpahasikan kepada lebih banyak orang tua murid dari pada yang telah dilakukan sekarang ini.
20. Siswa-siswa yang berprestasi rata-rata akan lebih beruntung dari pendidikan akademis (SMA) dari pada pendidikan kejuruan.

21. Pendidikan kejuruan sebagaimana yang telah diselenggarakan disekolah-sekolah kejuruan sekarang ini adalah mempersiapkan siswa-siswanya untuk pekerjaan yang telah ketinggalan jaman.

22. Ketrampilan yang didapat oleh siswa-siswa sekolah kejuruan tidak cukup untuk berwirausahaan.

23. Saya berkeberatan apabila salah satu dari keluarga saya ingin masuk sekolah kejuruan.


26. Pendidikan kejuruan memberikan informasi tentang pekerjaan.

27. Terlalu banyak waktu yang dipakai untuk pelajaran praktek disekolah kejuruan sehingga para siswanya hanya mempunyai waktu yang sedikit baik untuk bermain/berekreasi maupun untuk kegiatan-kegiatan kokurikuler yang lain.

28. Disamping mengajarkan ketrampilan fisik, sekolah kejuruan juga mempersiapkan siswanya untuk menjadi warganegara yang bertanggung jawab.

29. Masyarakat Indonesia memandang tinggi terhadap pekerjaan-pekerjaan seperti tukang kayu, penjahit, montir, atau tukang elektronik.

30. Para siswa yang telah lulus dari sekolah kejuruan seharusnya diperbolehkan untuk melanjutkan ke perguruan tinggi.

31. Siswa-siswa lulusan sekolah kejuruan cukup mempunyai ketrampilan untuk bekerja di industri.

32. Hasil-hasil yang telah dicapai oleh program pendidikan kejuruan menguntungkan masyarakat yang terlihat dipendidikan tersebut.

33. Siswa-siswa yang masuk sekolah kejuruan dirasa sebagai siswa yang berada disekolah yang kurang diinginkannya.

34. Program pendidikan okupasi disekolah kejuruan seharusnya diarahkan untuk anak-anak yang berkemampuan terbatas.
35. Pendidikan kejuruan tidak diperlukan untuk menjamin suplai tenaga kerja yang cukup jumlahnya dan efisien.
36. Baik anak laki-laki maupun perempuan seharusnya digalakkan untuk memasuki sekolah kejuruan.
37. Alokasi anggaran untuk sekolah kejuruan seharusnya lebih besar dari pada alokasi anggaran untuk sekolah umum.
38. Lulusan sekolah kejuruan umumnya bekerja dengan tangan pada fikiran (otak).
39. Lulusan sekolah kejuruan adalah calon pekerja yang trampil.
40. Lulusan sekolah kejuruan akan mempunyai kesempatan yang terbatas untuk memajukan diri.
41. Siswa-siswa seharusnya belajar tentang dunia kerja sewaktu mereka dibangku sekolah.
42. Siswa-siswa seharusnya dapat mempersiapkan diri terhadap okupasi yang spesifik bila mereka memang menginginkannya.
43. Adalah tanggung jawab sekolah kejuruan dalam mempersiapkan semua siswa untuk memasuki pekerjaan.
44. Sekolah kejuruan sangat menolong para majikan dalam memenuhi kebutuhan tenaga kerjanya.
45. Sekolah kejuruan sangat menolong anak-anak muda dalam mempersiapkan diri untuk menjadi pekerja yang produktif.
46. Siswa-siswa yang telah menyelesaikan sekolahnya di sekolah menengah atas umum adalah dipersiapkan untuk bekerja yang produktif.
47. Sekolah kejuruan adalah bukan pilihan saya yang pertama.
48. Ketrampilan yang diajarkan disekolah kejuruan sudah tak dibutuhkan lagi oleh industri-industri.

Informasi Tambahan dari Siswa
Silahkan melengkapi/menjawab item-item berikut.

49. Apakah jenis kelamin anda? (Laki-laki/perempuan).
Informasi Tambahan dari Orang Tua

Silahkan menjawab/melengkapi item-item berikut.

49. Umur saya adalah:
   1). <40 tahun
   2). 41-55 tahun
   3). >55 tahun

50. Penghasilan saya setiap bulan adalah:
   1). <Rp 60,000,-
   2). Rp 61,000,- - Rp 120,000,-
   3). > Rp 121,000,-

51. Saya bekerja sebagai:
   1). petani
   2). guru
   3). pegawai negeri selain guru (...)

52. Apakah latar belakang pendidikan anda yang tertinggi?
53. Apakah anda pernah belajar disekolah disekolah kejuruan?
APPENDIX: F

Letter of Permission to Conduct Research from
Departemen Pendidikan dan Kebudayaan
Kantor Wilayah Propinsi Daerah
Istimewa Yogyakarta
SURAT KETERANGAN/IJIN
Nomor: 231/I13/N/87

Memperhatikan surat keterangan/ijn dari Direktorat Social Politik Daerah Istimewa Yogyakarta tanggal: 2 Januari 1987 Nomor: 070/07 dengan ini diberikan ijin kepada:

Nama : Drs. Slamet PH M.Ed
Pekerjaan : Dosen Jurusan Teknik Bangunan FPTK-IKIP Yogyakarta
Fakultas : FPTK-IKIP Yogyakarta
Alamat : IKIP Karangmalang, Yogyakarta
Bermaksud : Mengadakan penelitian untuk Disertasi Doktor di Ohio USA dengan judul: "SIKAP SISWA DAN ORANG TUA TERHADAP PENDIDIKAN KEJURUAN DI YOGYAKARTA, INDONESIA."

Pelaksanaan ini dibantu oleh beberapa mahasiswa dan dilakukan dalam rangka menyelesaikan studi Doktor.


Tembusan kepada Yth: Yogyakarta, 3 Januari 1987
2. PR.I.IKIP Yogyakarta Ka. bag. Tata Usaha
4. Kepala Sekolah NIP. 130429972
APPENDIX: G

Letter to the Sample
Dari : Slamet PH
FPTK-IKIP Yogyakarta

Yogyakarta, 5 Januari 1987

Dengan hormat,

Pertamakali perkenankanlah saya mengenalkan diri saya. Saya adalah staff pengajar pada Fakultas Pendidikan Teknologi dan Kejuruan IKIP Yogyakarta yang sedang ditugaskan belajar di Ohio State University, di Columbus, Ohio, USA. Pada waktu ini saya tengah melakukan penelitian guna memenuhi persyaratan untuk mencapai gelar Doktor.

Berhubung banyaknya responden yang akan saya mintai untuk menjawab kuestioner cukup banyak, maka tidak mungkin saya harus berhadapann dengan Anda semua. Oleh karenanya perkenankanlah saya minta tolong saudara ............ untuk bertemu dengan Anda guna memberikan kuestioner tersebut. Mohon kuestioner tersebut Anda isi dengan sejujur-jujurnya. Terimakasih atas pertolongan Anda semua.

Hormat saya,

(Slamet PH)
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