DOCUMENT RESUME

ED 235 391 CE 037 338

AUTHOR Maguire, Thomas O.; And Others
TITLE Attitudes towards the World of Work: Development of the Scales and Manual for Administration, Scoring and Interpretation.
INSTITUTION Alberta Dept. of Education, Edmonton. Planning Services Branch.
PUB DATE Aug 83
NOTE 48p.; For related documents, see ED 171 955-956.
PUB TYPE Reports - Descriptive (141) -- Guides - Non-Classroom Use (055)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Attitude Measures; Career Education; Foreign Countries; Secondary Education; *Student Attitudes; *Test Construction; *Test Reliability; *Test Validity; *Work Attitudes
IDENTIFIERS *Alberta

ABSTRACT

A study was commissioned to develop and validate a test to assess the attitudes of Alberta students towards the world of work. A revised instrument was created that used 75 items grouped into 15 scales, of five items each, measuring perceptions about available opportunities. During the validation field trial the instrument was administered to 467 9th graders and 568 12th graders. Results showed that (1) the scales were relatively independent of each other, (2) the differences between the two groups were understandable, (3) sex differences occurred on all but three subscales, (4) differences were found among students taking different programs, and (5) the differences between students with no job experience and those with part-time and full-time job experiences were small. A principal component analysis of item intercorrelations was used to investigate structural validity. Reliability data were calculated three ways: calculation of Cronbach's alphas, readministration of the instrument and use of item means to estimate the scale means, and test-retest reliability estimation. (Appendixes, amounting to over one-half of the report, include the questionnaire, the administration manual, and the Alberta Provincial Percentile Norms Tables.) (YLB)

ATTITUDES TOWARDS THE WORLD OF WORK:

Development Of The Scales And Manual For Administration, Scoring And Interpretation

By

Thomas O. Maguire
Eugene W. Romaniuk
Katherine A. MacRury

Data Collection for Use in Developing Group Norms
by
Edmonton School District #7

Planning Services Branch
Alberta Education.
August, 1983

PREFACE

The Minister's Advisory Committee on Student Achievement (MACOSA) was established by ministerial order in October 1976 in response to growing concerns expressed by the public at large, government, labor, business, students and educators regarding the quality and standards of basic education in Alberta.

MACOSA commissioned a number of studies, primarily to provide basic information for a summary of current levels of achievement in Alberta and to provide baseline data for future assessment. These studies fell into three categories: (1) preliminary studies, (2) achievement studies, and (3) other studies.

This study, Development of Scales on Attitudes Towards the World of Work, was commissioned to develop and validate a test to assess the attitudes of Alberta students towards the world of work.

This report, which represents the findings and conclusions of the researchers, was presented to MACOSA as information.

This report constitutes the administration manual for the Attitudes Toward the World of Work instrument. For the technical manual giving the background to the development of the scales and the necessary data tables please contact the Regional Office of Alberta Education, the Supervisor of Guidance and Counselling, Alberta Education, the university libraries or E.R.I.C. The title of the technical manual is Development of Scales on Attitudes Towards the World of Work: Technical Manual, March, 1979.

Subsequent to the development and validation activities commissioned by MACOSA the Attitude Toward the World of Work instrument was normed for populations of boys and girls in grades 9, 10, 11 and 12 in Alberta schools. Norms tables based on averages for groups of pupils appear later in this publication.

MEMBERS OF THE MACOSA ATTITUDE TESTS STEERING COMMITTEE

Dr. Terry Mott (Chairman), Counselling and Guidance Supervisor, Special Educational Services, Alberta Education

Dr. Tom Maguire, Faculty of Education, University of Alberta
(Dr. Wally Unruh, Faculty of Education, University of Calgary, subsequently replaced Dr. Maguire)

Dr. Harry Mosychuk, Assistant Superintendent of Research and Evaluation, Edmonton Public School Board

Mr. Tony Tomko, School Psychologist, Edmonton Catholic Schools

Dr. Clarence Rhodes (Recorder and Consultant to the Committee), Planning Services Branch, Alberta Education

Dr. Harry Sherk (ex officio), Planning Services Branch, Alberta Education.

TABLE OF CONTENTS

Background 1

Literature Review 2

Instrument Development 3

The Revised Instrument 6

Scale Results From The Field Trial Validation Studies 7

General 7

Difference Between Junior and Senior High School Responses 7

Sex Differences 9

Program Differences 10

Job Aspiration Differences 11

Part-time Job Differences 12

Full-time Job Differences 12

Wetaskiwin Study 13

NAIT Group 14

The AVC Group 14

Validity and Reliability of Scales 15

APPENDIX A: Student Questionnaire 17

APPENDIX B: Administration Manual 18

Instructions for Administration 19

Instructions for Scoring 19

Scoring Service 20

Validity and Reliability 21

APPENDIX C: Alberta Provincial Percentile Norms Tables 24

Aids to Interpretation 25

Selecting the Norming Sample 25

Percentile Norms Tables 27

Attitudes Towards the World of Work

Background

During the past two years, The Minister's Advisory Committee on Student Achievement (MACOSA) has been investigating various aspects of student achievement in the province of Alberta. The activities of MACOSA and its various subcommittees have ranged from surveying the opinions of Alberta citizens about student achievement, to assessing levels of student achievement in core subjects.

As one part of the MACOSA activities, a subcommittee was struck to investigate the feasibility of assessing in the affective domain. As a result of the deliberations of the MACOSA Attitude Test Validation Steering Committee, a study was commissioned to develop and validate an instrument for assessing student attitudes towards the world of work.

The Steering Committee delineated five dimensions of this topic for initial consideration. These were:

- Attitudes towards earning a living.
- Perceptions about employer expectations.
- Perceptions about available opportunities.
- Relevance of school preparation for employment.
- Characteristics of desirable jobs.

In recommending the development of the instrument the Steering Committee expressed optimism that the instrument would be capable of providing useful feedback about the attitudes of groups of students, to teachers, school officials, and the public at large. The Committee was less optimistic regarding the instrument's immediate potential for providing diagnostic information about individual pupils, and noted that the appropriate use for the instrument would likely be to collect information about groups of students in classes, schools, systems, or in the province as a whole.

Literature Review

The domain of "Attitudes Towards Work" is a continuum that stretches from personality characteristics that relate to job selection to opinions about work activities. There are several existing instruments that purport to measure the relatively enduring values that are found at the "values" end of the continuum. At that end, personality characteristics such as values are matched with job descriptions to form job preference scales. Such scales as the Strong Vocational Interest Blank are examples of these, and they are used to guide students in career selection.

Moving from the values end of the continuum, to the opinion end, an area is encountered at which values begin to blend into opinions. This is the area in which a person's view of the world of work is important. It is not a value, because it is not necessarily a strongly held, enduring trait, rather it is an attitude, perhaps even an opinion that changes from one month to the next as a result of experience and personal growth. It is toward this rather vague area of attitudes that the present study is directed.

Little work seems to have been done directly on high school and junior high school students' attitudes, perceptions and anticipation about the world of work, in spite of the number of occupational preference scales, and work values inventories that exist. Specifically, little has been done on perceptions about employers, and about perceptions about the adequacy of training that students receive. This is probably because most test developers prefer to make their tests independent of a particular social and economic context. In contrast, the present study seeks to inquire about students attitudes towards work in the every context that they are likely to be entering. Thus the instrument under development is directed towards students thoughts and beliefs about working in the Alberta context.

While attempting to develop an instrument that caters to the Alberta environment, the authors were aware that some guidance was available from previous work on work values. Clearly one influence on opinions and attitudes are the values that are held by a person, and so the values measured in the published tests provided some clues as to the dimensions that should be covered in the present project.

An extensive review of the literature indicated that the most common motivational properties of jobs appeared to be: salary, job security, working with people, prestige, leadership, achievement, helping people, self development, working conditions, ideas, independence, interesting work, creativity and fringe benefits. Less common, were such characterisites as being boss, adventure, company reputation, sex discrimination, recognition, and way of life.

Instrument Development

Using the literature review and the Steering Committee's dimensions for guidance, the authors created a large pool of statements about the world of work. Students were asked to indicate whether they strongly agreed with each statement, agreed with it, disagreed with it, strongly disagreed with it, or if they were uncertain about it. This kind of questionnaire which is known as a Likert Scale, is commonly used in opinion research because it allows the researchers to obtain respondent's opinions about a large number of topics without requiring a large amount of time.

From the pool of statements, two preliminary forms of the instrument were created. Each form consisted of 125 items, and was administered to approximately 360 students from Medicine Hat, Lethbridge, Lacombe and Ponoka. The students were in grades 8 and 11 (with about one half at each grade level).

Although the sample used for the preliminary study could not be considered representative of the province as a whole, there were a number of interesting observations. The students from the sample seemed to have a pretty traditional and responsible view of the world of work. They seemed to appreciate the importance of hard work, they appeared to have a faith in the economic system's ability to provide them with meaningful employment, and they seemed to have confidence in their own ability to succeed.

A careful study of the items was made to see which items were ambiguous, poorly worded, or beyond the comprehension of the students. Further analyses were carried out to see if the items could be clustered into scales. Based

on these analyses, it was decided to create a revised form of the scale using 75 items that were grouped into 15 scales of 5 items each. A description of the scales is shown below:

1. Preparation by School: Students scoring high on this scale perceive their preparation for entrance into the world of work as being adequate. School Preparation is seen as appropriately job related.

2. Interest and Variability in Jobs: Students scoring high seek jobs that are interesting, challenging and varied.

3. Diligence: Students scoring high have attitudes favorable to hard work, regardless of supervision.

4. Laziness: Students who have high scores on this scale indicate attitudes of getting as much as possible for as little effort as possible.

5. Job Security: This scale describes students who value job security, often over other characteristics of jobs.

6. Positive Employer Characteristics: Students scoring high on this scale view employers as honest, fair and generally upstanding humans.

7. Independence: Students scoring high on this scale rate the preservation of their own independence above that of other job characteristics.

8. Money: Students scoring high on this scale view salary as being one of the most important determinants of a good job.

9. Amibition: Students scoring high on this scale view striving for success as more important than other considerations like friends.

10. Locus of Control: Students scoring high on this scale view getting and holding a job as being largely a matter outside of their control--luck, knowing the right person,etc.

11. Confidence in Succeeding: High scorers on this scale are confident of their ability of getting a job and being successful.

12. Negative Employer Characteristics: Students scoring high on this scale see employers as greedy and unfair—mostly concerned with looking out for their own interests.

13. Social Relations: Students scoring high on this scale see social relations as being the important determiners of job satisfaction. They prefer working with people and being a part of a team.

14. Attitudes Towards Unemployment: Students scoring high on this scale view unemployment as undesirable, even shameful.

15. General Attitudes Towards Earning a Living: Students scoring high on this scale have a positive attitude toward earning a living, typified by a statement "I am looking forward to earning my own way".

Many of the scales are similar to some of the scales found in existing instruments (for example, Independence, Salary, Job Security, Working with People, or Social Relations, all appear in value scales). What is different in this study is that the items themselves are designed to provide information on student opinions directly. In previous studies, the scales were intended to have psychological significance, here they are used to aggregate the views of groups of students. In addition to these scales, there are some areas that have not been tapped before. These are: Laziness, Diligence, Characteristics of Employers, and opinions about Preparation.

The analysis of the preliminary data indicated that the item pool captured the essence of the Steering Committee's concerns.

The Revised Instrument

Based on the preliminary results, a revised instrument was prepared and administered to 467 ninth grade students and 568 twelfth grade students in Andrew, Edmonton, Jasper, Lacombe, Lethbridge, Medicine Hat, Red Deer, and Wetaskiwin. The scale results are provided in this summary for the total sample of 1035 used in the validation field trial (not the provincial norming). Caution must be exercised in generalizing the results to all students in grades 9 and 12 in the province, since only certain areas of the province were included in the sample selected for the field trial. In particular, no areas in Northern Alberta were used, and no schools in Calgary were selected. The Edmonton sample was taken entirely from the Edmonton Separate School System as a consequence of the teachers' strike in the Edmonton Public System. Nonetheless, with these cautions, the data do provide an interesting picture of the student groups that are included. The distribution patterns for provincial populations of boys and girls in each of grades 9 - 12 are displayed in the percentile norms tables in Appendix C.

Scale Results From the Field Trial Validation Studies

1. General

The 15 scales were made up of the items shown in Table 1, with the scale scores being calculated by summing the item scores created by assigning the following numerical values:

1 = Strongly Disagree
2 = Disagree
3 = Undecided
4 = Agree
5 = Strongly Agree

(In the case of item 25 on the subscale 1, the scoring was reversed.) Each scale has a maximum possible value of 25 and a minimum of 5. The average scores for the scales are shown in Table 1, together with the intervals that include 90% of the students' responses for the 1035 students.

The relationships between the scales were investigated, and it was found that the scales were relatively independent of each other. Although, Laziness and Diligence would seem to be direct opposites, the data showed that this was not quite the case. There seemed to be good reason for retaining both of these scales.

Within the constraints of time allocated to the study, several attempts were made to investigate the validity of the subscale scores. The first of these attempts made use of background information to see if different groups responded to the subscales in a different fashion.

2. Differences Between Junior and Senior High School Responses

Junior High (JH) students rated their Preparation higher than did the Senior High (SH) students. The means were 18.5 and 17.5 respectively, suggesting

Table 1: Scale Results

Scale	Items	Average Score	90% Interval
Preparation	18, 19, 25, 32, 68	18.02	14-21*
Interest	16, 34, 36, 40, 46	20.05	18-23
Diligence	15, 20, 22, 69, 70	21.46	19-24
Laziness	33, 35, 55, 66, 75	9.63	6-14
Job Security	3, 5, 23, 45, 57	17.83	14-21
Positive Employer Characteristics	12, 43, 47, 48, 62	17.91	15-21
Independence	1, 17, 41, 51, 74	17.95	14-22
Money	4, 21, 24, 29, 42	16.40	13-21
Ambition	28, 30, 21, 29, 63	17.09	14-20
Locus of Control	8, 50, 61, 64, 71	13.22	9-18
Confidence	9, 54, 60, 67, 72	17.62	14-21
Negative Employer Characteristics	6, 11, 26, 44, 58	14.63	11-18
Social Relations	2, 37, 52, 59, 73	19.75	15-23
Unemployment	7, 14, 49, 53, 65	16.36	12-22
General	10, 13, 27, 38, 56	17.99	15-22

* This means that 90% of the students scores were between 14 and 21, and every score between 14 and 21 was more likely than any score not between 14 and 21.

that as the students approached entry to the world of work, they perceived their training as being slightly less adequate than students who were farther away.

SH students rated the importance of Interest and Variability in a job higher than JH students (JH = 19.8, SH = 20.2). Consistent with this finding was the difference between the means on Independence, where the JH mean was 17.4 and the SH was 18.3

There were no great differences on Diligence, Job Security, Laziness, Ambition, or Negative Employer Characteristics, but the JH group viewed employers more positively (mean = 18.1) than the SH group (mean = 17.7) on Positive Employer Characterisitcs.

The JH students rated the Money factor slightly more important than did the SH group (mean = 16.66 as compared with 16.18), a finding that seems consistent with the findings on Interest and Independence. Perhaps the SH group has begun to develop a realistic assessment of their earning potential.

A somewhat puzzling finding was the difference between the two groups on confidence. The SH group had a higher Confidence mean (17.83 as compared with 17.37), but they also had a higher Locus of Control mean indicating that they tended to see obtaining and holding a job as being less in their control than the JH students. (The means were SH = 13.49, JH = 12.9). Perhaps the SH group is showing a growth toward a realistic assessment, and the JH group is idealistic.

In general, the differences between the two groups made some sense in terms of the kinds of experiences that two groups would have encountered up to this point. The greater likelihood of having had work experience in the SH group would perhaps tend to temper their judgement.

3. Sex Differences

Sex differences occurred on all but three subscales. In general, the girls rated Job Security, Independence, Ambition and Money as being less important than boys did. The girls rated Interest and Variability in a job higher than did boys, they were more negative on Laziness than boys, and rated the Negative Employer Characterisitcs lower than boys. The Social aspects of work seemed more

important to girls, and they had more moderate views on unemployment. The girls tended to rate the external factors on holding jobs as being less important than boys, and, on General Attitudes, had a more positive attitude toward earning a living.

It seems clear from the results of this study that the girls seem to possess many of the attitudes towards work that reflect a male-dominated work environment. Although the differences are not great (less than one point in all cases except for Money and Unemployment), they all seem to be in the direction of what could be described as the stereotype. Given the great inertia that seems to have confronted social movement in the past five years or so, these data are taken as supporting the validity of the scale. In other words, it seems likely that if opinions that appear in the popular press and on radio talk shows are true, the subscales seem to be reflecting attitudes accurately. (An article in the Edmonton Journal, October 16, 1978, supports this contention. It was reported by Canadian Press that two researchers from the Ontario Institute for Studies in Education, Avis Glaze and Lyz Sayer, found that Ontario high school girls in their sample "look to future careers in traditional female jobs and are not prepared for long years of working".)

4. Program Differences

Students were asked to indicate which programs they were taking, or intended to take when they reached high school. They were given the choice of Technical, Academic, Business, General, Undecided, and No Main Emphasis. Program differences appeared on all subscales except Job Security, Ambition, and Social. Interactions appeared on Preparation and Independence.

Generally speaking, the Technical, Academic and Business groups felt better prepared than the other groups, a finding which would tend to support the validity of the scale. However, the Business group showed a two point drop-off from grade 9 to grade 12, suggesting that as they approached the impending job market, this group had the most misgivings of the "decided" groups. The Academic and Technical groups, while experiencing some drop-off, showed less change than the Business group. This would be consistent with the notion that the Business group was closer to entering the world of work than the other two groups.

The Academic group had the highest Interest rating, while the Undecided and General groups had the lowest ratings. Again, this would appear to be consistent with the validity assertion. Similarly, the Undecided and No Main Interest groups had the lowest scores on Diligence (about a point below the others), and the highest rating on Laziness (again, about a point difference).

The Technical, Academic and Business groups had high scores on Positive Employer Characteristics but, on Negative Employer Characteristics, all groups had about the same scores except for the No Main Emphasis group. The Technical group had the highest Independence scores, perhaps because of the broad job market that awaits them. The Academic group had the lowest scores on Money, an opinion consistent with some people's view of reality, and the Business group had the lowest score on Locus of Control, indicating that getting and holding a job was seen as being more under their own control than in the other groups.

The least confident groups were the Undecided and No Main Emphasis groups, possibly indicating a causal relationship. The most confident group was the Business group and, in addition, it had the highest score on the General Attitudes subscale.

The Academic and No Main Emphasis groups had the most moderate scores on Unemployment, the latter perhaps because they may see themselves as being unemployed. The Undecided group scored highest on Negative Employer perceptions. Although the proportion of students in the Undecided group who had work experience was about the same as the proportions in any other group, perhaps the Undecided group contained more people who had some work experience of an unpleasant sort.

In general, the relationships between program and subscale means seem to support the contention that the subscales are producing information that is consistent with the common lore and, in that sense, there is some validity to this attitude opinionnaire when the items are compiled into subscales.

5. Job Aspiration Differences

The students were asked to indicate the kinds of jobs that they would like to have when they were ready to enter the world of work. A very crude rating

scale was placed on the results. An attempt was made to rate the responses according to the amount of training that would be required for the position. Five levels were defined: No Training (or on-the-job training) e.g., salesclerk; Some Training (up to about a year) e.g., secretary, machine driver, pilot; Technical School (more than a year) e.g., electrician, registered nurse, farmer, owner of a business; Bachelor's Degree; and Postgraduate education.

Differences occurred on Preparation, Interest, Laziness, Independence, Money, and Unemployment. In general, the Postgraduate group had highest scores on Preparation, Interest and Independence. The Technical group had the highest scores on Money, and they were the most critical of Unemployment. The No Training group had the highest scores on Laziness, but the differences from the other groups were less than a point.

6. Part-Time Job Differences

Students were asked whether they held a part-time job. About one third of the JH group and about three fifths of the SH group said that they were holding part-time jobs. Confidence was the only subscale which indicated a difference between the two groups. Students who were holding part-time jobs had higher means than those who did not hold such jobs. This is certainly consistent with the validity assertions, but stronger evidence would have been claimed if differences had occurred on such scales as Employer Characterisitcs, Money, and Diligence scales. Perhaps the experience gained through part-time jobs is not viewed by the students as being generalizable to the world of work.

7. Full Time Job Differences

One quarter of the JH group and three fifths of the SH group claimed some previous full-time job experience. Differences between the groups having job experience, and those without the experience occurred on seven subscales.

Students with full-time work experience rated their Preparation lower, and they seemed to rate Interest lower than the other group. They were less

severe in their ratings of employers in terms of Negative Characteristics, but they were more severe in their assessment of Unemployment. The people with full-time experience rated the importance of Money more highly than the other group; they had more Confidence, and they rated employers more positively. All of these findings seem consistent with the hypothesis that full-time work experience may give students a more realistic perspective on the world of work. In no case were the differences great and generally speaking one would have to say that both groups appeared to possess reasonably healthy attitudes towards the world of work, both in terms of their own likelihood of success and in terms of the overall social good.

8. Wetaskiwin Study

Two contrasting groups of high school students from Wetaskiwin were selected for closer experimentation. The first group, enrolled in Chemistry 30, consisted of an achieving, college-bound group. Generally they were students who took their studies seriously and who were likely to be successful in their chosen endeavors. The second group, enrolled in Mathematics 15, was made up of a group of students who didn't do well in school and, possibly as a consequence or perhaps as a casual factor, were not positively disposed to education and its potential benefits.

The two groups showed significant differences on all but five subscales. (Preparation, Job Security, Ambition, Unemployment; and General). On all other scales, the differences were in the hypothesized direction. The Chemistry 30 group saw Interest and Variability as being more important in a job; they seemed to value Diligence more (and Laziness less); they saw employers in a more positive light; they sought more Independence; Money was less of a concern; they saw Control being more likely to be vested in themselves; they were far more Confident; and seemed to value more Social jobs. In short, the subscales seemed to discriminate between the two groups in about the same way that the teacher's professional judgement had.

9. NAIT Group

The instrument was administered to 77 students at the Northern Alberta Institute of Technology. The students are enrolled in a technical upgrading program; approximately 75% have been out of school for at least one year and have had work experience. The NAIT results were compared with the school sample. The NAIT people rated Interest, Independence, and Confidence higher than the school group. They were more likely to attribute job success to factors beyond their control; they were "harder" on Unemployment; and they appeared to be more ambitious than their school counterparts.

results on Locus of Control, Unemployment, Confidence, and Ambition were not unexpected. However, the results of the Interest and Independence scales were not predicted by the investigators but, in retrospect, both results seem reasonable. It was thought that there would be a bigger difference between the two groups on the importance of Job Security because the NAIT group is older and perhaps more conscious of the problems of security. No attempt was made to collect information on age, so perhaps the NAIT group had not reached an age where security becomes a matter of greater concern.

10. The AVC Group

The Attitudes Toward Work questionnaire was administered to 48 students enrolled in the academic upgrading courses at the Alberta Vocational Centre in Edmonton. The male group was composed mostly of people preparing for apprenticeship training, and the female group was made up of people preparing for business education. According to AVC officials, the entire sample was considered to be a high academic group.

In many respects, the AVC sample is similar to the NAIT sample. They are both "harder" on unemployment, have high ambition, are more "external" and are more confident than the school group. With respect to Independence, however, the AVC group is lower than the school group whereas the NAIT group is higher, i.e. seeks greater independence.

Another difference that occurred with the AVC group was the higher mean on the General Attitudes subscale. Assuming the validity of the subscale, this suggests that these people are even more positive about entering the world of work than the high school students.

11. Validity and Reliability of Scales

The validity studies that were carried out on the Attitudes Towards Work Scales are described in the MACOSA Work Attitudes Study - Part II. One of the procedures used to investigate the structural validity was a principal components analysis of item intercorrelations. Fifteen components were extracted and rotated to the varimax criterion. Since the items were supposed to load most highly on the scale to which they belonged, it was possible to rate the structural validity of each scale. If all of the items on a scale had loadings on the same component exceeding .25, then the scale was given a factorial validity rating of 4. A rating of three was given to scales on which four of the five items had loadings greater than .25. If the items were split between two components, a rating of 2 was given. Three items loading on a single component warranted a rating of 1, and 0 was given to scales whose items were spread across four different components. The actual items loadings are given in Part II of the study. The factorial validity ratings are shown in Table II.

Reliability data were calculated in three ways. The first approach was to calculate Cronbach's alphas. The Cronbach alphas are shown in Table 2. They provide an estimate of item homogeneity, and tend to follow the factor validity ratings.

The second appraoch to reliability was to administer the instrument to six of the schools that participated in the first study, and use their item means to estimate the scale means. Since the first study used students in grades eight and eleven, many of the students were also involved in the second study which was carried out in the next school year with students in grades nine and twelve. Because some of the items were revised between the first and second studies, a good estimate of scale score means for the first study is not possible. In Table 2, the number of schools showing significant shifts from June to September is given

together with the number of items that were changed between the two administrations. All of the scales showing two or more school differences between June and September also had two or more item changes.

The third approach to reliability was a test-retest reliability estimation carried out with 192 students, 73 students in grade twelve and 119 students in grade nine. The tests were administered in the second week of December, 1978, and again in the third week of January, 1979. The reliabilities are shown in Table 2. Of the fifteen scales, each consisting of five items, only one scale had a reliability of less than .5.

Table 2: Reliability Studies

Subscale	Cronbach's Alpha	Factor Validity Rating	Number of Schools with Significant Shifts	Number of Item Changes	Test-Retest Correlation
Preparation	.342	2	0	0	.591
Interest	.483	1	1	2	.572
Diligence	.544	4	1	1	.460
Laziness	.620	4	1	1	.647
Job Security	.343	2	4	3	.608
Pos. Emp. Char.	.502	3	0	0	.578
Independence	.496	3	3	2	.646
Money	.425	3	5	3	.618
Ambition	.309	1	0	0	.515
Locus of Control	.571	3	1	0	.642
Confidence	.399	2	1	0	.510
Neg. Emp. Char.	.532	4	0	0	.671
Social	.584	2	1	1	.652
Unemployment	.611	4	0	0	.703
General	.330	0	1	1	.579

APPENDIX A

Attitudes Toward
The World Of Work Scales
Student Questionnaire

Alberta
EDUCATION

ATTITUDES TOWARD THE WORLD OF WORK

School Code

DEPT USE

School Name

Program you are in or intend to take:
- ○ Technical and trades
- ○ Academic
- ○ Business
- ○ General
- ○ Undecided
- ○ No main emphasis

Grade ⑨ ⑩ ⑪ ⑫

Sex Ⓜ Ⓕ

① ② ③ ④ ⑤ ⑥

What kind of job most interests you as a career?

USE HB PENCIL ONLY
MARK ONLY WHERE INDICATED

Do you have a regular part-time job? ○ Yes ○ No

Did you have a full-time job last summer? ○ Yes ○ No

Following are 75 statements of attitudes toward work (both sides of page). Indicate how much you agree with each one by darkening the corresponding response.

SD=STRONGLY DISAGREE; D=DISAGREE; U=UNDECIDED; A=AGREE; SA=STRONGLY AGREE

1. I would like a job where you can do your own thing.	SD	D	U	A	SA
2. I would like a job where I would deal with other people.	SD	D	U	A	SA
3. I would like a job that I can work at for several years.	SD	D	U	A	SA
4. I would like a job with high pay.	SD	D	U	A	SA
5. I would like a job that is still mine when other people are being laid off	SD	D	U	A	SA
6. Employers are always trying to push their employees to work harder.	SD	D	U	A	SA
7. To be unemployed is shameful.	SD	D	U	A	SA
8. In getting a job, it is more important to know somebody,than to know something.	SD	D	U	A	SA
9. There are jobs available for those who want them.	SD	D	U	A	SA
10. The first job that I get will likely be interesting.	SD	D	U	A	SA
11. Most employers think that profits are more important than staff benefits.	SD	D	U	A	SA
12. Most employers are flexible about the way in which their employees dress, provided that the employees get the job done.	SD	D	U	A	SA
13. Earning a living should be fun.	SD	D	U	A	SA
14. A person's major responsibility is to support his or her family.	SD	D	U	A	SA
15. I would like a job where the harder you work, the higher your salary becomes.	SD	D	U	A	SA
16. I would like a job which is a challenge to my abilities.	SD	D	U	A	SA
17. I would like a job where the boss lets you decide how something should be done.	SD	D	U	A	SA
18. My speaking skills are good enough for me to be successful in the job that I choose.	SD	D	U	A	SA
19. I think that I will be able to meet the requirements of the job that I choose.	SD	D	U	A	SA
20. A person should feel a little ashamed for doing a sloppy job.	SD	D	U	A	SA
21. The more work experience you have, the higher your salary should be.	SD	D	U	A	SA
22. One of the most important things about a job is to know that you are doing the best you can.	SD	D	U	A	SA
23. One of the most important things about a job is to be able to keep it as long as you want it.	SD	D	U	A	SA
24. Few things in life are more important than a big salary.	SD	D	U	A	SA
25. There is very little that is taught in high school that will be of use on a job.	SD	D	U	A	SA
26. Most employers don't really want to get to know their employees very well.	SD	D	U	A	SA
27. I would rather have a job with low pay that I liked, than a job with better pay that I did not like.	SD	D	U	A	SA

28. Opportunity for growth is more important than making friends on a job.	SD	D	U	A	SA
29. To be a success you must have a job with a high salary.	SD	D	U	A	SA
30. Sometimes a person will have to make sacrifices in order to get ahead in a job.	SD	D	U	A	SA
31. Sometimes you have to choose between having friends, and getting ahead on the job.	SD	D	U	A	SA
32. Schools are pretty good at teaching you about how to look for a job.	SD	D	U	A	SA
33. Nowadays there is not enough work to go around for everyone, so I'll not worry too much about getting a job.	SD	D	U	A	SA
34. I would like to find a job where you have to keep your mind active.	SD	D	U	A	SA
35. I would like a job that allows you to daydream while you work.	SD	D	U	A	SA
36. I would like a job that is interesting.	SD	D	U	A	SA
37. I would like a job where you work in a group with others.	SD	D	U	A	SA
38. I am looking forward to supporting myself by getting a job.	SD	D	U	A	SA
39. I see that a first job is really a stepping stone for a career.	SD	D	U	A	SA
40. If my job got boring, I would quit.	SD	D	U	A	SA
41. I would like a job where you can be your own boss.	SD	D	U	A	SA
42. I would like a job that allows you to make lots of overtime pay.	SD	D	U	A	SA
43. Employers are prepared to pay good wages in order to keep qualified staff happy.	SD	D	U	A	SA
44. Employers seem concerned only with getting as much out of their employees for as little as possible.	SD	D	U	A	SA
45. I would like a job where it is difficult to be fired.	SD	D	U	A	SA
46. I would like a job that has some excitement associated with it.	SD	D	U	A	SA
47. Most employers are prepared to give a fair wage for an honest day's work.	SD	D	U	A	SA
48. Most employers are prepared to reward good effort.	SD	D	U	A	SA
49. To have a job is the duty of every Canadian.	SD	D	U	A	SA
50. Getting a good job is usually a matter of luck--being in the right place at the right time.	SD	D	U	A	SA
51. I would move away from my home town in order to get the job that suited me.	SD	D	U	A	SA
52. I would like to work as part of a team.	SD	D	U	A	SA
53. All people should work.	SD	D	U	A	SA
54. When I finish my education, I'll be able to get the kind of job that I want.	SD	D	U	A	SA
55. Wasting time on a job wouldn't bother me very much.	SD	D	U	A	SA
56. Most jobs are pretty interesting.	SD	D	U	A	SA
57. It's better to hold on to a boring job than to risk changing to a new one.	SD	D	U	A	SA
58. Most employers don't want employees who have minds of their own.	SD	D	U	A	SA
59. One of the most important things about a job is to have the respect of the other people who work at the same place.	SD	D	U	A	SA
60. More than ever before, there is a greater variety of job opportunities.	SD	D	U	A	SA
61. To be successful, it is important to know someone in the right place.	SD	D	U	A	SA
62. Most employers are prepared to give their employees credit for their original ideas.	SD	D	U	A	SA
63. Most jobs are competitive, so you have to do a better job than the next person.	SD	D	U	A	SA
64. It is unlikely that you can get a decent job if you don't join a union or association.	SD	D	U	A	SA
65. Earning a living is the most important thing in adult life.	SD	D	U	A	SA
66. After you have worked for several months, you have every right to quit your job and go on unemployment insurance.	SD	D	U	A	SA
67. I think that I know what the requirements of most jobs are.	SD	D	U	A	SA
68. It's usually possible to get the training needed for a job.	SD	D	U	A	SA
69. A person should try to do a good job whether or not the boss is around.	SD	D	U	A	SA
70. I am prepared to work hard for good wages.	SD	D	U	A	SA
71. When I am ready to go to work, I'll probably have to take what is available rather than what I really want.	SD	D	U	A	SA
72. I feel confident that I will be able to handle the next step in my training.	SD	D	U	A	SA
73. One of the most important things in a job is to have friendly co-workers.	SD	D	U	A	SA
74. I would like to be free to move from one company to another as my interests change.	SD	D	U	A	SA
75. Frankly, when I get a job I don't really want to work very hard.	SD	D	U	A	SA

APPENDIX B

Administration Manual To Accompany
Attitudes Towards The World Of Work.

Instruction for Administration

For students in grades 9 through 12, the entire instrument requires about 20 minutes to complete. The instructions are as follows:

> In this instrument, you will find various statements of attitudes towards work. Read each statement, and decide how much you agree with it.
>
> If you STRONGLY DISAGREE with the statement, circle SD.
> If you DISAGREE with the statement, circle D.
> If you are UNDECIDED or if you partly agree and partly disagree circle U.
> If you AGREE with the statement, circle A.
> If you STRONGLY AGREE with the statement, circle SA.
>
> Work quickly. Your first impressions are important.

Instructions for Scoring

The 15 scales in this instrument are made up of the items shown in Table 1. Each scale consists of five items. To calculate the score for each scale, sum the scores for each of the five items by assigning the following numerical values to each item.

1 = Strongly Agree
2 = Disagree
3 = Undecided
4 = Agree
5 = Strongly Agree

In the case of item 25, on scale 1, the scoring is reversed. Thus, each scale has a possible maximum score of 25 and a possible minimum of 5. Any item which is left blank is assigned a score of 3.

Table 1: Scale Composition

Scale	Items
Preparation	18, 19, 25, 32, 68
Interest	16, 34, 36, 40, 46
Diligence	15, 20, 22, 69, 70
Laziness	33, 35, 55, 66, 75
Job Security	3, 5, 23, 45, 57
Positive Employer Characteristics	12, 43, 47, 48, 62
Independence	1, 17, 41, 51, 74
Money	4, 21, 24, 29, 42
Ambition	28, 30, 21, 29, 63
Locus of Control	8, 50, 61, 64, 71
Confidence	9, 54, 60, 67, 72
Negative Employer Characterisitcs	6, 11, 26, 44, 58
Social Relations	2, 37, 52, 59, 73
Unemployment	7, 14, 49, 53, 65
General	10, 13, 27, 38, 56

Scoring Serivce

For school districts in the province of Alberta a machine scoring service is provided by the Student Records and Computer Services Branch, Alberta Education, Devonian Building, 11160 Jasper Avenue, Edmonton, Alberta, T5K OL2 Telephone 403/427-5739

---

* The scoring of item 25 is reversed.

For other users and those outside of the province of Alberta a machine scoring service is provided from the following source:

Psican Consulting Ltd.
P. O. Box 170,
Students' Union Bldg.
University of Alberta,
Edmonton, Alberta
T6G 2J7
Telephone: 403/433-6467

The Attitude Toward World of Work scales on mark-sense response sheets may be purchased from the following source:

Alberta School Book Branch
10410 - 121 Street,
Edmonton, Alberta
T5N 1L2
Telephone: 403/427-8806

Validity and Reliability

The validity studies that were carried out on the Attitudes Towards Work Scales are described in the MACOSA Work Attitudes Study—Part II. One of the procedures used to investigate the structural validity was a principal components analysis of item intercorrelations. Fifteen components were extracted and rotated to the varimax criterion. Since the items were supposed to load most highly on the scale to which they belonged, it was possible to rate the structural validity of each scale. If all of the items on a scale had loadings on the same component exceeding .25, then the scale was given a factorial validity rating of 4. A rating of three was given to scales on which four of the five items had loadings greater than .25. If the items were split between two components, a rating of 2 was given. Three items loading on a single component warranted a rating of 1, and

0 was given to scales whose items were spread across four different components. The actual items loadings are given in Part II of the study. The factorial validity ratings are shown in Table 2.

Reliability data were calculated in three ways. The first approach was to calculate Cronbach's alphas. The Cronbach alphas are shown in Table 2. They provide an estimate of item homogeneity, and tend to follow the factor validity ratings.

The second approach to reliability was to administer the instrument to six of the schools that participated in the first study, and use their item means to estimate the scale means. Since the first study used students in grades eight and eleven, many of the students were also involved in the second study which was carried out in the next school year with students in grades nine and twelve. Because some of the items were revised between the first and second studies, a good estimate of scale score means for the first study is not possible. In Table 2, the number of schools showing significant shifts from June to September is given together with the number of items that were changed between the two administrations. All of the scales showing two or more school differences between June and September also had two or more item changes.

The third approach to reliability was a test-retest reliability estimation carried out with 192 students, 73 students in grade twelve and 119 students in grade nine. The tests were administered in the second week of December, 1978, and again in the third week of January, 1979. The reliabilities were shown in Table 2. Of the fifteen scales, each consisting of five items, only one scale had a test-retest reliability of less than .5.

Table 2: Reliability Studies

Subscale	Cronbach's Alpha	Factor Validity Rating	Number of Schools with Significant Shifts	Number of Item Changes	Test-Retest Correlation
Preparation	.342	2	0	0	.591
Interest	.483	1	1	2	.572
Diligence	.544	4	1	1	.460
Laziness	.620	4	1	1	.647
Job Security	.343	2	4	3	.608
Pos. Emp. Char.	.502	3	0	0	.578
Independence	.496	3	3	2	.646
Money	.425	3	5	3	.618
Ambition	.309	1	0	0	.515
Locus of Control	.571	3	1	0	.642
Confidence	.399	2	1	0	.510
Neg. Emp. Char.	.532	4	0	0	.671
Social	.584	2	1	1	.652
Unemployment	.611	4	0	0	.703
General	.330	0	1	1	.579

APPENDIX C

Alberta Provincial Group
Percentile Norms (Fall, 1981)

Aids to Interpretation

Responses to the Attitudes Toward World of Work scales are intended to be anonymous. The student is not asked to affix his/her name to the response sheet. The reasons for ensuring anonymity are 1) that the reliability of scores for individuals is too low to warrant their use, and 2) that the respondent will be less inclined to provide socially acceptable ratings.

Since scores for individual students will not be available there is no need for conventional percentile norms for use in interpretation. Instead, group percentile norms have been developed. These norms are based on the distributions of average scores for groups of boys and girls in a representative sample of schools throughout the province.

An average (mean) for each sub-scale is calculated for each group of boys or girls in a class, grade or school. The group average is used as the entry point to the percentile norms tables. The percentile rank for the group of interest is then determined by reference to the lists in the appropriate grade/sex column. For example, if the average score for a group of boys in a grade 9 class on the subscale Preparation for Employment was 18.0 the appropriate table is entered at this point in the "Group Average" column. The percentile rank for grade 9 M corresponding to a raw score average of 18.0 is 38. A ranking at the thirty eighth percentile means that 38 percent of the provincial groups had average scores at this level or lower. Sixty two percent of the provincial groups of grade 9 boys scored higher.

Selecting the Norming Sample

Alberta Education selected the samples of schools. Table 1 provides information about populations of publicly supported schools from which a 20 percent sample of schools offering grade 9 and 40 percent samples of senior high schools teaching grades 10, 11 and 12 were randomly selected. The numbers of schools selected were sufficient to develop percentile norms for class or school averages. The respective school populations and sample sizes were as follows: grade 9 schools, 614 and 120; senior high schools teaching grade 10 only, 8 and 3;

senior high schools offerings grades 10, 11 only - 11 and 4; and senior high schools teaching grades 10, 11 and 12 - 261 and 104. The total number of schools contributing to the norming activity exceeded 200. The instrument was administered during October and November 1981 under contractual arrangements with Edmonton School District #7.

Table 1

Norming the Attitudes Toward World of Work Scales in Grades 9, 10, 11, 12: Proportions and Numbers of Schools and Students and Numbers of Groups

Numbers and Proportions of Schools

Type of School	Population Number	Sample Number of Schools	Sample Percent
Junior High Schools			
- Teaching Grade 9	614	120	20
Senior High Schools			
- Teaching Grade 10	8	3	40*
- Teaching Grade 11	11	4	40*
- Remainder, Teaching Grades 10, 11, 12	261	104	40*
Totals	894	231	

Numbers and Proportions of Students

Grade	Population Number	Pupils Sampled Number	Pupils Sampled Percent	Groups of Pupils in Sample (Number)
Grade 9	38,803	5,634	14.5	699
Grade 10	34,752	4,707	13.5	588
Grade 11	31,920	3,919	12.3	622
Grade 12	35,301	4,431	12.6	682

* Note: Only students enrolled in first semester English classes responded.

ATTITUDE TOWARD WORLD OF WORK
PROVINCIAL GROUP PERCENTILE NORMS
SUBSCALE - PREPARATION FOR EMPLOYMENT

GROUP AVERAGE	PERCENTILE RANKS BY SEX WITHIN GRADES								GROUP AVERAGE
	GRADE 9		GRADE 10		GRADE 11		GRADE 12		
	M	F	M	F	M	F	M	F	
14.0	1	1	2	2	2	1	2	2	14.0
15.0	3	2	3	3	3	5	5	4	15.0
16.0	7	4	6	5	10	9	11	9	16.0
16.5	11	5	10	9	17	13	17	12	16.5
17.0	17	8	18	13	28	18	27	18	17.0
17.2	20	10	22	17	33	24	34	23	17.2
17.5	24	11	28	19	42	29	41	31	17.5
17.6	26	13	31	20	45	32	43	34	17.6
17.8	31	16	35	23	51	38	48	42	17.8
18.0	38	22	43	29	61	46	57	53	18.0
18.2	45	29	51	37	68	53	64	61	18.2
18.4	52	33	55	42	74	58	68	66	18.4
18.6	56	39	61	47	76	65	76	73	18.6
18.8	61	44	66	54	80	69	80	78	18.8
19.0	68	55	73	62	84	75	85	82	19.0
19.2	75	63	79	70	87	81	88	85	19.2
19.5	81	72	84	79	91	85	94	88	19.5
19.7	84	76	87	83	92	87	93	90	19.7
20.0	88	84	90	89	94	92	96	93	20.0
20.5	94	92	93	94	96	95	97	96	20.5
21.0	96	95	96	96	97	82	99	97	21.0
21.5	98	96	97	98	99	98	99	97	21.5
22.0	98	98	98	99	99	99	99	99	22.0
22.5	99	99	98	99	99	99	99	—	22.5
MEAN	18.3	18.8	18.2	18.5	17.7	18.1	17.7	17.9	
STANDARD DEVIATION	1.64	1.48	1.63	1.62	1.55	1.58	1.49	1.51	

ATTITUDE TOWARD WORLD OF WORK
PROVINCIAL GROUP PERCENTILE NORMS
SUBSCALE - INTEREST

GROUP AVERAGE	PERCENTILE RANKS BY SEX WITHIN GRADES								GROUP AVERAGE
	GRADE 9		GRADE 10		GRADE 11		GRADE 12		
	M	F	M	F	M	F	M	F	
15.0	2	1	1	2	1	—	1	1	15.0
16.0	3	2	2	4	2	1	2	1	16.0
17.0	5	3	4	6	4	2	3	1	17.0
18.0	11	7	11	12	10	7	7	3	18.0
18.5	22	13	14	15	14	11	11	5	18.5
18.8	28	20	20	17	17	13	12	7	18.8
19.0	37	28	26	22	23	16	17	11	19.0
19.1	43	34	31	26	28	19	21	15	19.1
19.2	46	37	33	29	30	20	23	15	19.2
19.3	50	40	35	32	32	22	25	18	19.3
19.4	53	43	38	35	36	25	27	20	19.4
19.5	56	47	41	39	39	28	30	22	19.5
19.6	59	50	44	44	41	30	33	25	19.6
19.7	61	53	47	46	43	32	35	27	19.7
19.8	63	57	50	50	47	35	37	28	19.8
19.9	66	61	53	53	50	39	40	30	19.9
20.0	73	67	60	59	55	44	47	36	20.0
20.3	82	79	73	71	65	58	58	51	20.3
20.5	85	84	79	77	71	67	65	59	20.5
20.7	88	86	81	81	74	74	71	64	20.7
21.0	92	91	88	90	83	82	80	75	21.0
21.5	96	95	92	94	91	90	89	87	21.5
22.0	97	97	96	97	95	94	94	93	22.0
22.5	98	98	98	98	97	96	98	96	22.5
23.0	99	99	99	99	98	97	98	97	23.0
23.5	99	99	99	99	99	99	98	99	23.5
24.0	99	99	99	99	99	99	99	99	24.0
MEAN	20.0	19.5	19.6	19.5	19.8	20.1	20.0	20.3	
STANDARD DEVIATION	1.71	1.36	1.46	1.53	1.52	1.33	1.44	1.30	

ATTITUDE TOWARD WORLD OF WORK
PROVINCIAL GROUP PERCENTILE NORMS
SUBSCALE - DILIGENCE

GROUP AVERAGE	PERCENTILE RANKS BY SEX WITHIN GRADES								GROUP AVERAGE
	GRADE 9		GRADE 10		GRADE 11		GRADE 12		
	M	F	M	F	M	F	M	F	
16.0	2	1	1	1	2	1	1	—	16.0
17.0	3	2	3	2	3	1	2	—	17.0
18.0	5	3	4	3	4	2	5	1	18.0
19.0	10	6	8	6	9	3	9	4	19.0
19.5	15	8	13	9	12	6	11	6	19.5
20.0	20	12	19	13	18	10	17	10	20.0
20.3	27	18	25	18	24	16	24	17	20.3
20.5	31	21	30	22	28	19	29	19	20.5
20.8	38	28	38	29	38	25	36	23	20.8
21.0	45	36	49	37	48	31	44	31	21.0
21.1	50	42	55	42	54	34	51	36	21.1
21.2	53	44	57	44	56	36	54	38	21.2
21.3	56	48	62	48	58	40	58	41	21.3
21.4	60	53	65	51	61	44	61	44	21.4
21.5	63	58	67	55	64	48	64	47	21.5
21.6	66	62	70	58	67	53	67	51	21.6
21.7	68	64	74	60	69	57	70	54	21.7
21.8	71	67	77	65	71	62	72	57	21.8
21.9	74	69	79	68	74	65	74	60	21.9
22.0	78	75	82	73	77	71	77	65	22.0
22.2	83	82	86	80	83	77	82	73	22.2
22.4	86	86	88	85	86	83	86	78	22.4
22.6	88	88	90	87	87	85	88	82	22.6
22.8	88	89	91	88	89	87	89	85	22.8
23.0	92	93	94	92	91	91	92	89	23.0
23.5	95	96	96	95	95	96	95	94	23.5
24.0	97	98	97	97	97	98	97	96	24.0
25.0	99	99	99	99	99	99	99	99	25.0
25.5	99	—	—	—	—	—	—	—	25.5
26.0	99	—	—	—	—	—	—	—	26.0
MEAN	20.9	21.2	20.9	21.3	21.0	21.4	21.0	21.5	
STANDARD DEVIATION	1.71	1.47	1.60	1.53	1.67	1.28	1.58	1.32	

ATTITUDE TOWARD WORLD OF WORK
PROVINCIAL GROUP PERCENTILE NORMS
SUBSCALE - LAZINESS

GROUP AVERAGE	PERCENTILE RANKS BY SEX WITHIN GRADES								GROUP AVERAGE
	GRADE 9		GRADE 10		GRADE 11		GRADE 12		
	M	F	M	F	M	F	M	F	
5.5	1	1	—	1	1	1	1	1	5.5
6.0	2	3	2	2	1	2	2	1	6.0
6.5	2	4	3	3	2	5	3	2	6.5
7.0	3	6	4	5	3	6	4	4	7.0
7.5	4	8	4	5	4	8	6	7	7.5
8.0	7	12	6	8	6	12	9	14	8.0
8.5	10	18	8	14	9	18	12	26	8.5
8.8	12	21	11	18	12	21	14	34	8.8
9.0	15	26	14	23	16	29	19	42	9.0
9.3	21	34	18	32	21	39	25	52	9.3
9.5	23	40	21	38	25	43	29	57	9.5
9.8	33	47	26	44	33	53	36	66	9.8
10.0	39	53	33	49	38	61	42	71	10.0
10.2	44	61	38	56	43	67	50	76	10.2
10.4	47	66	44	60	49	70	55	78	10.4
10.6	52	69	46	66	53	74	60	80	10.6
10.8	56	73	52	68	55	76	62	82	10.8
11.0	63	78	57	72	60	81	65	86	11.0
11.2	69	81	63	75	66	85	69	89	11.2
11.4	72	83	67	78	69	87	73	90	11.4
11.6	76	85	69	80	75	89	75	90	11.6
11.8	79	86	70	81	77	90	77	91	11.8
12.0	81	88	74	84	81	91	81	93	12.0
12.5	86	90	79	89	88	94	85	95	12.5
13.0	89	92	84	91	91	95	89	96	13.0
13.5	92	94	87	94	94	98	92	97	13.5
14.0	94	95	90	96	95	98	93	98	14.0
14.5	95	95	93	97	96	99	94	99	14.5
15.0	96	96	95	97	98	99	95	99	15.0
15.5	97	97	97	98	99	99	96	99	15.5
16.0	98	97	97	98	99	99	97	99	16.0
16.5	99	98	97	98	99	99	98	99	16.5
17.0	99	98	97	98	—	—	99	—	17.0
17.5	99	99	99	99	—	—	—	—	17.5
MEAN	10.7	10.1	11.0	10.3	10.6	9.8	10.5	9.5	
STANDARD DEVIATION	2.13	2.29	2.44	2.10	1.86	1.77	2.25	1.67	

ATTITUDE TOWARD WORLD OF WORK
PROVINCIAL GROUP PERCENTILE NORMS
SUBSCALE - JOB SECURITY

GROUP AVERAGE	PERCENTILE RANKS BY SEX WITHIN GRADES								GROUP AVERAGE
	GRADE 9		GRADE 10		GRADE 11		GRADE 12		
	M	F	M	F	M	F	M	F	
13.5	1	1	1	1	1	—	1	—	13.5
14.0	1	2	1	2	2	2	2	—	14.0
14.5	2	2	1	2	3	3	2	1	14.5
15.0	2	4	2	4	3	3	3	3	15.0
15.5	3	6	3	5	4	5	4	5	15.5
16.0	5	10	5	8	7	8	6	8	16.0
16.5	6	15	6	13	11	12	9	14	16.5
17.0	12	23	12	22	16	23	14	21	17.0
17.3	18	34	17	28	22	30	21	29	17.3
17.5	21	41	20	36	25	34	27	35	17.5
17.7	23	47	23	44	30	41	30	42	17.7
17.8	28	50	26	48	33	45	32	46	17.8
18.0	37	60	36	56	41	55	41	56	18.0
18.1	44	66	42	62	45	61	48	63	18.1
18.2	47	69	44	65	47	63	51	64	18.2
18.3	51	73	46	69	50	65	54	68	18.3
18.4	54	77	50	72	54	67	57	71	18.4
18.5	57	80	53	74	58	70	60	75	18.5
18.6	59	81	56	76	61	73	62	78	18.6
18.7	61	83	59	78	61	74	64	79	18.7
18.8	65	84	61	81	63	76	67	80	18.8
18.9	68	85	64	83	65	77	69	82	18.9
19.0	72	88	70	86	70	80	74	85	19.0
19.2	77	90	79	89	75	85	80	89	19.2
19.4	81	92	83	90	79	87	83	90	19.4
19.6	85	94	87	92	82	90	85	92	19.6
19.8	87	94	88	93	84	91	87	93	19.8
20.0	90	96	91	95	89	94	90	96	20.0
20.5	94	98	95	97	95	97	94	98	20.5
21.0	95	99	97	98	97	98	96	99	21.0
21.5	97	—	98	98	99	99	98	99	21.5
22.0	97	—	98	99	99	99	98	99	2.20
22.5	98	—	99	99	99	99	99	99	22.5
23.0	99	—	99	99	99	99	99	—	23.0
MEAN	18.4	17.7	18.4	17.8	18.3	17.9	18.2	17.8	
STANDARD DEVIATION	1.54	1.39	1.43	1.43	1.55	1.47	1.61	1.27	

ATTITUDE TOWARD WORLD OF WORK
PROVINCIAL GROUP PERCENTILE NORMS
SUBSCALE - POSITIVE EMPLOYER CHARACTERISTICS

GROUP AVERAGE	PERCENTILE RANKS BY SEX WITHIN GRADES								GROUP AVERAGE
	GRADE 9		GRADE 10		GRADE 11		GRADE 12		
	M	F	M	F	M	F	M	F	
11.0	1	—	1	1	—	—	1	1	11.0
12.0	1	—	1	1	1	1	2	1	12.0
13.0	2	1	1	2	1	2	3	1	13.0
14.0	3	1	2	4	2	3	4	1	14.0
15.0	4	4	4	5	6	4	6	4	15.0
16.0	9	9	10	10	10	12	11	12	16.0
16.5	13	14	16	17	14	20	16	23	16.5
17.0	23	25	25	27	24	32	23	35	17.0
17.2	30	32	32	36	30	38	29	41	17.2
17.4	36	38	37	43	35	45	34	48	17.4
17.6	42	45	44	50	39	50	40	54	17.6
17.7	44	48	47	54	42	53	42	56	17.7
17.8	48	52	50	57	45	56	45	58	17.8
17.9	51	55	53	60	47	59	47	61	17.9
18.0	58	61	59	65	53	65	52	68	18.0
18.1	65	67	64	71	57	70	57	73	18.1
18.2	67	71	67	74	59	73	59	75	18.2
18.3	69	74	71	76	62	76	62	77	18.3
18.4	72	78	74	79	64	78	64	78	18.4
18.6	76	82	77	83	69	83	70	82	18.6
18.8	81	85	79	85	73	84	74	83	18.8
18.9	83	87	81	86	74	85	75	85	18.9
19.0	87	89	84	88	80	88	80	89	19.0
19.2	91	92	88	91	86	92	84	92	19.2
19.5	91	92	91	94	89	93	87	93	19.5
20.0	95	95	94	95	94	96	93	95	20.0
20.5	96	98	96	96	97	98	96	97	20.5
21.0	97	99	97	97	98	99	97	98	21.0
21.5	98	99	99	98	99	—	98	99	21.5
22.0	99	99	99	98	99	—	99	99	22.0
22.5	99	99	99	99	—	—	99	99	22.5
MEAN	17.7	17.7	17.7	17.5	17.8	17.5	17.8	17.4	
STANDARD DEVIATION	1.62	1.36	1.60	1.71	1.62	1.48	1.91	1.52	

ATTITUDE TOWARD WORLD OF WORK
PROVINCIAL GROUP PERCENTILE NORMS
SUBSCALE - INDEPENDENCE

GROUP AVERAGE	PERCENTILE RANKS BY SEX WITHIN GRADES								GROUP AVERAGE
	GRADE 9		GRADE 10		GRADE 11		GRADE 12		
	M	F	M	F	M	F	M	F	
12.0	1	1	1	2	—	1	—	—	12.0
13.0	2	2	1	3	1	1	—	1	13.0
13.5	3	3	2	3	1	1	1	1	13.5
14.0	4	3	3	4	2	2	1	2	14.0
14.5	4	4	4	6	2	3	1	2	14.5
15.0	6	7	4	9	4	4	2	3	15.0
15.5	9	11	5	13	6	7	2	4	15.5
16.0	11	20	6	18	7	10	3	7	16.0
16.5	15	34	8	25	8	16	5	10	16.5
16.8	21	42	10	30	10	21	5	14	16.8
17.0	28	52	14	36	11	26	7	18	17.0
17.2	34	61	18	42	13	31	10	22	17.2
17.4	39	64	22	49	15	35	12	25	17.4
17.6	45	69	25	54	19	41	14	29	17.6
17.7	47	71	27	57	20	43	14	31	17.7
17.8	50	73	30	59	21	46	15	33	17.8
17.9	53	74	34	61	22	49	15	36	17.9
18.0	58	78	39	65	26	55	18	41	18.0
18.1	63	81	44	69	31	61	22	47	18.1
18.2	65	83	46	71	34	63	23	48	18.2
18.3	68	84	48	73	38	64	24	50	18.3
18.4	70	86	50	76	40	66	26	54	18.4
18.6	74	88	56	79	46	71	31	62	18.6
19.0	81	91	69	86	61	82	44	73	19.0
19.2	85	93	75	90	67	85	53	78	19.2
19.4	88	94	78	91	72	88	59	81	19.4
19.6	89	95	81	92	76	89	65	85	19.6
20.0	91	97	88	94	84	94	76	91	20.0
20.5	94	98	93	96	91	98	85	96	20.5
21.0	95	98	95	97	94	99	90	97	21.0
21.5	97	98	97	98	96	99	93	98	21.5
22.0	97	98	98	99	97	99	96	98	22.0
22.5	98	99	98	99	97	99	98	99	22.5
23.0	99	99	99	99	98	99	99	99	23.0
MEAN	17.8	17.0	18.3	17.3	18.6	17.8	19.1	18.2	
STANDARD DEVIATION	1.83	1.65	1.74	1.89	1.74	1.60	1.63	1.60	

ATTITUDE TOWARD WORLD OF WORK
PROVINCIAL GROUP PERCENTILE NORMS
SUBSCALE - MONEY

GROUP AVERAGE	PERCENTILE RANKS BY SEX WITHIN GRADES								GROUP AVERAGE
	GRADE 9		GRADE 10		GRADE 11		GRADE 12		
	M	F	M	F	M	F	M	F	
11.5	—	—	—	1	—	—	—	1	11.5
12.0	1	1	1	2	—	1	1	2	12.0
12.5	1	1	1	3	—	2	1	2	12.5
13.0	2	2	1	4	0	3	2	3	13.0
13.5	2	2	1	4	0	5	2	4	13.5
14.0	3	5	2	7	2	8	3	7	14.0
14.5	3	9	3	9	3	12	4	12	14.5
15.0	5	15	4	15	6	20	6	22	15.0
15.5	9	26	8	27	11	30	9	35	15.5
16.0	15	41	12	40	16	45	17	51	16.0
16.2	19	47	15	47	21	50	21	58	16.2
16.4	22	55	18	52	25	55	25	63	16.4
16.6	26	60	22	57	29	61	30	67	16.6
16.8	31	64	27	61	33	66	36	71	16.8
17.0	39	70	34	67	39	71	43	75	17.0
17.1	44	74	39	71	44	74	49	78	17.1
17.2	46	76	41	73	47	74	50	79	17.2
17.3	47	77	44	75	49	76	53	80	17.3
17.4	50	78	46	78	53	78	56	81	17.4
17.5	52	79	49	80	57	80	58	82	17.5
17.6	55	80	53	81	61	82	61	84	17.6
17.8	61	83	59	84	65	84	65	85	17.8
18.0	68	88	66	88	71	87	71	88	18.0
18.2	74	90	73	91	75	90	76	91	18.2
18.4	72	91	79	92	77	91	79	92	18.4
18.6	79	93	82	93	81	92	81	94	18.6
19.0	83	94	88	94	83	94	86	96	19.0
19.5	90	95	91	96	92	97	89	98	19.5
20.0	94	97	94	97	94	98	91	98	20.0
20.5	96	98	97	98	96	99	93	99	20.5
21.0	97	98	98	99	96	99	95	99	21.0
21.5	97	99	98	99	97	99	97	99	21.5
22.0	98	99	99	—	98	—	97	—	22.0
22.5	99	—	—	—	98	—	98	—	22.5
23.0	99	—	—	—	99	—	99	—	23.0
MEAN	17.5	16.4	17.5	16.4	17.4	16.2	17.4	16.1	
STANDARD DEVIATION	1.76	1.68	1.62	1.76	1.68	1.67	1.88	1.70	

ATTITUDE TOWARD WORLD OF WORK
PROVINCIAL GROUP PERCENTILE NORMS
SUBSCALE - AMBITION

GROUP AVERAGE	PERCENTILE RANKS BY SEX WITHIN GRADES								GROUP AVERAGE
	GRADE 9		GRADE 10		GRADE 11		GRADE 12		
	M	F	M	F	M	F	M	F	
11.5	1	1	1	2	—	2	1	1	11.5
12.0	1	2	2	3	—	3	2	1	12.0
12.5	2	3	2	4	1	4	2	2	12.5
13.0	3	6	3	6	2	5	3	3	13.0
13.5	5	10	4	10	3	7	3	5	13.5
14.0	8	16	6	15	5	12	5	9	14.0
14.5	12	30	9	24	7	19	8	16	14.5
14.8	16	40	12	31	8	24	11	21	14.8
15.0	21	49	15	39	11	30	14	28	15.0
15.2	26	57	19	46	15	40	17	36	15.2
15.4	31	62	23	53	19	46	18	42	15.4
15.6	37	68	28	60	25	52	22	49	15.6
15.8	43	74	34	66	29	59	26	56	15.8
15.9	46	78	37	69	32	63	27	59	15.9
16.0	52	82	43	74	40	67	32	65	16.0
16.1	58	85	49	78	47	71	38	70	16.1
16.2	60	85	52	80	50	74	40	72	16.2
16.3	62	86	56	82	53	76	44	76	16.3
16.4	65	87	60	84	58	78	49	80	16.4
16.6	72	89	67	86	64	82	56	82	16.6
16.8	75	90	72	88	69	83	62	84	16.8
17.0	82	92	78	92	76	88	71	89	17.0
17.5	89	95	87	94	84	93	82	93	17.5
18.0	93	97	93	97	90	96	88	96	18.0
18.5	95	99	95	98	92	98	91	98	18.5
19.0	96	99	96	98	95	99	94	98	19.0
19.5	97	99	97	99	97	—	96	99	19.5
20.0	98	—	98	99	98	—	97	99	20.0
20.5	99	—	99	—	99	—	98	99	20.5
21.0	99	—	99	—	99	—	98	99	21.0
MEAN	16.0	15.1	16.2	15.2	16.3	15.4	16.5	15.6	
STANDARD DEVIATION	1.57	1.41	1.56	1.50	1.49	1.45	1.69	1.41	

ATTITUDE TOWARD WORLD OF WORK
PROVINCIAL GROUP PERCENTILE NORMS
SUBSCALE - LOCUS OF CONTROL

GROUP AVERAGE	PERCENTILE RANKS BY SEX WITHIN GRADES								GROUP AVERAGE
	GRADE 9		GRADE 10		GRADE 11		GRADE 12		
	M	F	M	F	M	F	M	F	
7.0	1	1	—	1	—	1	—	1	7.0
7.5	1	1	—	1	1	1	1	1	7.5
8.0	2	1	1	2	1	2	1	2	8.0
8.5	3	2	1	3	1	2	1	2	8.5
9.0	4	3	2	4	2	3	1	3	9.0
9.5	5	4	2	6	3	4	1	4	9.5
10.0	6	6	3	8	5	7	3	6	10.0
10.5	8	9	4	13	7	10	5	9	10.5
11.0	11	16	8	17	10	17	8	16	11.0
11.5	15	26	13	29	14	27	14	25	11.5
11.8	19	32	18	34	18	31	16	30	11.8
12.0	25	40	22	39	22	40	19	36	12.0
12.2	32	46	28	45	27	47	20	43	12.2
12.4	37	52	30	51	30	53	24	49	12.4
12.6	42	57	34	55	34	58	27	55	12.6
12.8	46	62	38	59	38	63	31	59	12.8
12.9	48	64	41	61	41	64	33	62	12.9
13.0	52	69	45	64	44	67	38	66	13.0
13.1	56	74	50	67	47	70	42	69	13.1
13.2	57	75	52	69	49	71	43	71	13.2
13.3	59	77	54	70	51	73	45	73	13.3
13.4	62	79	56	71	53	74	48	75	13.4
13.6	65	81	61	74	58	79	54	79	13.6
13.8	67	82	66	76	61	80	57	80	13.8
14.0	71	85	71	78	68	84	63	84	14.0
14.5	80	89	78	83	76	88	74	89	14.5
15.0	86	91	86	88	84	91	79	91	15.0
15.5	90	93	91	91	90	95	84	94	15.5
16.0	92	96	93	94	93	96	87	96	16.0
16.5	93	97	95	96	94	98	89	97	16.5
17.0	94	98	96	97	96	98	91	98	17.0
18.0	96	99	98	99	98	99	94	99	18.0
19.0	97	99	99	99	98	99	97	99	19.0
20.0	99	—	99	99	99	99	98	99	20.0
21.0	99	—	99	—	99	—	99	—	21.0
MEAN	13.1	12.5	13.2	12.5	13.3	12.5	13.7	12.5	
STANDARD DEVIATION	2.31	1.85	1.94	2.08	2.01	1.82	2.28	1.86	

ATTITUDE TOWARD WORLD OF WORK
PROVINCIAL GROUP PERCENTILE NORMS
SUBSCALE - CONFIDENCE

GROUP AVERAGE	PERCENTILE RANKS BY SEX WITHIN GRADES								GROUP AVERAGE
	GRADE 9		GRADE 10		GRADE 11		GRADE 12		
	M	F	M	F	M	F	M	F	
13.5	1	1	1	1	1	2	1	1	13.5
14.0	1	2	2	2	2	3	1	2	14.0
14.5	2	3	3	3	3	4	1	3	14.5
15.0	3	6	5	5	3	4	3	4	15.0
15.5	5	8	6	7	4	5	4	5	15.5
16.0	8	11	7	10	6	8	6	7	16.0
16.5	13	17	10	16	10	13	8	11	16.5
16.8	17	24	15	19	12	16	10	14	16.8
17.0	21	31	18	24	16	20	14	18	17.0
17.2	27	39	22	30	20	23	17	23	17.2
17.4	32	46	28	35	23	30	20	27	17.4
17.6	39	51	35	40	28	35	24	31	17.6
17.8	45	58	42	46	32	39	28	35	17.8
17.9	49	61	44	49	34	42	29	37	17.9
18.0	55	66	49	55	39	48	35	42	18.0
18.1	61	70	54	61	45	54	41	47	18.1
18.2	64	72	55	62	48	57	42	49	18.2
18.3	67	75	57	64	52	60	44	51	18.3
18.4	72	78	59	68	55	63	47	55	18.4
18.6	75	84	65	74	62	68	54	62	18.6
18.8	79	86	72	79	67	72	58	72	18.8
18.9	80	87	74	80	68	74	60	75	18.9
19.0	84	90	79	84	72	78	66	78	19.0
19.2	87	94	85	87	77	83	74	81	19.2
19.4	88	95	88	89	83	86	80	84	19.4
19.6	89	95	89	90	86	87	84	86	19.6
20.0	92	97	93	94	91	91	89	91	20.0
20.5	95	98	95	96	95	93	93	94	20.5
21.0	97	99	97	97	96	96	95	96	21.0
21.5	98	99	98	98	97	98	97	97	21.5
22.0	99	100	98	98	98	99	98	98	22.0
22.5	99	100	99	98	98	99	99	99	22.5
MEAN	17.9	17.5	18.0	17.8	18.2	18.0	18.4	18.1	
STANDARD DEVIATION	1.48	1.42	1.56	1.69	1.59	1.64	1.56	1.62	

ATTITUDE TOWARD WORLD OF WORK
PROVINCIAL GROUP PERCENTILE NORMS
SUBSCALE - NEGATIVE EMPLOYER CHARACTERISTICS

GROUP AVERAGE	PERCENTILE RANKS BY SEX WITHIN GRADES								GROUP AVERAGE
	GRADE 9		GRADE 10		GRADE 11		GRADE 12		
	M	F	M	F	M	F	M	F	
8.0	1	—	—	—	—	1	1	—	8.0
8.5	1	—	—	—	—	1	1	—	8.5
9.0	1	—	—	—	—	1	1	—	9.0
9.5	2	—	—	—	1	1	1	1	9.5
10.0	2	1	1	1	1	1	2	1	10.0
10.5	3	1	1	2	2	2	3	2	10.5
11.0	4	3	1	3	3	3	3	4	11.0
11.5	5	4	1	3	4	4	3	7	11.5
12.0	6	6	3	6	5	5	5	10	12.0
12.5	8	8	4	9	8	9	8	13	12.5
13.0	10	15	7	14	11	14	12	20	13.0
13.5	18	25	13	21	18	22	20	29	13.5
13.8	24	31	18	26	22	28	26	37	13.8
14.0	30	39	25	33	28	35	31	47	14.0
14.2	37	47	31	40	33	42	36	53	14.2
14.4	42	54	34	47	37	48	41	58	14.4
14.5	45	58	37	50	39	51	43	61	14.5
14.6	48	61	40	53	41	55	46	64	14.6
14.7	50	63	44	57	43	57	48	66	14.7
14.8	53	66	46	59	46	59	50	68	14.8
14.9	55	68	48	60	48	61	53	70	14.9
15.0	60	72	53	63	53	66	58	45	15.0
15.1	64	76	58	67	58	71	62	78	15.1
15.2	66	77	59	70	60	72	64	79	15.2
15.3	68	79	63	72	61	74	66	80	15.3
15.4	70	80	66	73	63	76	68	82	15.4
15.6	74	82	70	76	67	79	71	83	15.6
15.8	77	84	73	78	71	82	73	84	15.8
16.0	81	87	78	83	75	85	76	87	16.0
16.5	88	91	85	88	82	88	82	91	16.5
17.0	92	94	88	91	88	92	87	94	17.0
17.5	96	96	91	94	93	94	89	96	17.5
18.0	97	97	93	96	95	95	92	97	18.0
18.5	97	98	96	98	96	96	95	97	18.5
19.0	98	98	96	99	97	98	96	98	19.0
19.5	99	99	97	99	97	99	97	99	19.5
20.0	99	99	97	—	98	99	98	99	20.0
MEAN	14.7	14.4	15.1	14.6	15.0	14.6	14.9	14.2	
STANDARD DEVIATION	1.84	1.68	1.88	1.72	1.95	1.86	2.21	1.80	

ATTITUDE TOWARD WORLD OF WORK
PROVINCIAL GROUP PERCENTILE NORMS
SUBSCALE - SOCIAL RELATIONS

GROUP AVERAGE	PERCENTILE RANKS BY SEX WITHIN GRADES								GROUP AVERAGE
	GRADE 9		GRADE 10		GRADE 11		GRADE 12		
	M	F	M	F	M	F	M	F	
14.5	1	1	2	—	—	1	1	1	14.5
15.0	1	1	3	1	—	1	2	1	15.0
15.5	2	1	5	2	1	2	3	2	15.5
16.0	4	2	6	2	1	3	5	2	16.0
17.0	10	6	9	4	7	4	11	5	17.0
17.5	15	8	14	6	13	7	18	7	17.5
17.8	20	10	16	8	15	7	22	7	17.8
18.0	26	12	21	10	20	10	27	9	18.0
18.2	33	15	25	13	26	12	31	10	18.2
18.4	39	16	31	14	30	14	33	13	18.4
18.5	41	18	35	16	33	14	35	14	18.5
18.6	44	20	39	18	36	15	38	15	18.6
18.7	47	23	43	19	39	16	40	16	18.7
18.8	49	26	46	22	42	17	43	17	18.8
18.9	52	28	49	24	44	18	45	18	18.9
19.0	57	32	56	28	49	21	50	23	19.0
19.1	62	37	63	33	53	24	55	26	19.1
19.2	65	40	65	35	55	25	56	27	19.2
19.3	68	44	67	37	57	28	59	28	19.3
19.4	69	48	70	40	59	32	63	31	19.4
19.6	73	55	76	45	66	36	68	36	19.6
19.8	79	61	79	50	71	42	71	43	19.8
19.9	81	65	81	53	74	46	73	46	19.9
20.0	85	70	84	59	79	52	77	53	20.0
20.1	88	75	86	65	83	57	81	59	20.1
20.2	88	77	88	68	84	59	83	62	20.2
20.4	90	81	89	74	87	68	85	69	20.4
20.6	91	84	89	78	89	74	88	74	20.6
21.0	94	90	93	87	93	84	93	77	21.0
21.5	96	93	96	92	95	90	94	90	21.5
22.0	97	96	97	95	97	94	96	95	22.0
22.5	98	98	98	96	98	96	97	96	22.5
23.0	99	98	98	97	99	98	99	98	23.0
23.5	99	99	99	98	—	99	99	99	23.5
24.0	99	99	99	98	—	99	—	99	24.0
MEAN	18.8	19.4	18.8	19.7	19.1	19.8	18.9	19.8	
STANDARD DEVIATION	1.53	1.48	1.66	1.55	1.40	1.62	1.71	1.53	

ATTITUDE TOWARD WORLD OF WORK
PROVINCIAL GROUP PERCENTILE NORMS
SUBSCALE - UNEMPLOYMENT

GROUP AVERAGE	PERCENTILE RANKS BY SEX WITHIN GRADES								GROUP AVERAGE
	GRADE 9		GRADE 10		GRADE 11		GRADE 12		
	M	F	M	F	M	F	M	F	
9.5	—	—	—	—	—	—	1	1	9.5
10.0	1	1	—	1	—	1	1	2	10.0
10.5	1	1	—	2	—	1	1	2	10.5
11.0	1	1	1	2	—	1	1	3	11.0
11.5	1	2	2	3	1	2	1	4	11.5
12.0	1	3	3	4	1	4	2	6	12.0
12.5	2	4	4	4	2	6	2	7	12.5
13.0	3	7	5	6	3	10	3	9	13.0
13.5	4	10	6	9	5	17	5	14	13.5
14.0	6	16	8	16	7	22	7	21	14.0
14.5	9	27	10	29	11	33	9	29	14.5
15.0	13	39	14	41	14	42	13	40	15.0
15.3	16	49	19	51	17	51	17	48	15.3
15.5	18	54	22	54	19	56	20	54	15.5
15.8	21	59	27	60	23	61	23	60	15.8
16.0	26	64	31	68	27	64	27	65	16.0
16.2	31	68	35	72	33	68	32	68	16.2
16.4	36	73	39	76	38	72	36	73	16.4
16.6	41	76	44	79	42	76	40	76	16.6
16.8	45	78	50	80	45	78	43	78	16.8
16.9	47	79	53	81	47	79	45	80	16.9
17.0	51	81	57	83	51	82	50	82	17.0
17.1	55	83	60	85	54	84	57	85	17.1
17.2	57	83	62	86	54	84	57	86	17.2
17.3	60	84	64	87	57	85	59	87	17.3
17.4	63	84	67	87	59	85	61	88	17.4
17.5	65	85	70	87	61	86	64	88	17.5
17.6	66	86	73	88	63	88	66	89	17.6
17.8	69	88	77	89	68	88	68	89	17.8
18.0	73	90	81	92	73	90	74	92	18.0
18.5	80	93	85	94	82	94	81	94	18.5
19.0	87	95	89	95	88	95	86	95	19.0
19.5	90	96	93	97	90	96	90	96	19.5
20.0	92	97	95	97	93	97	94	97	20.0
20.5	94	98	96	98	94	98	96	97	20.5
21.0	96	99	97	98	96	98	97	98	21.0
21.5	98	99	98	98	97	98	98	99	21.5
22.0	99	99	98	99	98	98	99	99	22.0
22.5	99	99	99	99	98	99	99	—	22.5
23.0	99	99	—	99	99	99	99	—	23.0
MEAN	17.0	15.6	16.7	15.5	17.0	15.5	17.0	15.4	
STANDARD DEVIATION	2.08	1.99	2.06	1.99	2.11	2.16	2.08	2.13	

ATTITUDE TOWARD WORLD OF WORK
PROVINCIAL GROUP PERCENTILE NORMS
SUBSCALE - GENERAL

GROUP AVERAGE	PERCENTILE RANKS BY SEX WITHIN GRADES								GROUP AVERAGE
	GRADE 9		GRADE 10		GRADE 11		GRADE 12		
	M	F	M	F	M	F	M	F	
12.0	1	—	1	—	1	1	1	—	12.0
12.5	1	—	1	—	2	1	1	—	12.5
13.0	2	1	1	—	2	1	1	—	13.0
13.5	3	1	2	—	3	1	2	1	13.5
14.0	3	2	2	1	4	2	4	1	14.0
14.5	4	2	3	2	5	3	5	2	14.5
15.0	6	3	5	4	7	5	7	3	15.0
15.5	9	4	8	6	10	6	9	4	15.5
16.0	13	6	12	8	15	9	13	6	16.0
16.5	19	11	21	11	23	12	19	9	16.5
17.0	31	18	32	18	34	17	31	17	17.0
17.2	39	22	37	23	40	22	38	23	17.2
17.3	42	24	39	24	43	25	40	24	17.3
17.4	45	26	42	25	46	28	43	26	17.4
17.5	49	28	45	26	49	31	46	28	17.5
17.6	54	31	48	29	52	35	49	30	17.6
17.7	58	33	51	31	55	37	51	32	17.7
17.8	61	35	53	33	58	39	53	36	17.8
18.0	68	44	63	40	66	44	62	45	18.0
18.1	72	49	69	46	71	49	68	50	18.1
18.2	73	53	72	48	73	52	70	53	18.2
18.4	76	59	77	55	78	59	75	60	18.4
18.6	81	65	81	62	80	66	80	66	18.6
18.8	84	70	83	67	84	70	82	72	18.8
19.0	87	78	87	74	87	77	86	79	19.0
19.5	91	89	92	83	92	86	91	86	19.5
20.0	94	93	95	91	94	90	94	94	20.0
20.5	96	97	97	95	96	94	95	95	20.5
21.0	97	98	98	95	97	96	96	97	21.0
21.5	98	99	99	97	99	98	97	98	21.5
22.0	99	99	99	97	99	99	98	99	22.0
22.5	—	—	—	98	—	—	99	99	22.5
23.0	—	—	—	99	—	—	99	—	23.0
MEAN	17.5	18.1	17.5	18.2	17.4	18.1	17.6	18.1	
STANDARD DEVIATION	1.68	1.41	1.59	1.64	1.78	1.69	1.77	1.43	