

**Life-Skills, Schooling, and the Labor Market  
in Urban China:  
New Insights from Adult Literacy Measurement**

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## **Life-Skills, Schooling, and the Labor Market in Urban China: New Insights from Adult Literacy Measurement\***

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### Abstract

This report presents results from initial analysis of the China Adult Literacy Survey (CALs), a study of adult literacy among urban workers in China. We document how the instruments were designed to measure quantitative, document, and prose literacy in the Chinese context, describe how literacy is related to different worker characteristics, and use the literacy measures to analyze how human capital affects wage and employment outcomes.

One contribution of the study is to explain how adult literacy surveys can be designed and implemented in China. A second is to describe the adult literacy of the Chinese work force in different cities and how it relates to worker characteristics. We find substantial differences in adult literacy across levels of education and across cities (even after controlling for education). Finally, preliminary explorations using test scores in standard wage regressions and employment model estimations suggest that use of the CALs or similar instruments can provide useful insight into China's transitional labor market. Literacy tests measure important aspects of human capital, not captured by years of education, that have important effects on labor outcomes.

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## **I. Background**

With its entry into the WTO, China is committed to integrating itself into the global economy, allowing foreign firms to compete directly with domestic firms in a range of previously protected sectors, and eliminating special treatment toward state-owned enterprises and their workers. These changes will put great pressure on China's labor force to adapt and adjust to structural change and are likely to increase the demand for skilled labor (OECD, 2000). An important policy challenge is to help labor acquire the right sets of skills to meet the new challenges. Nearly twenty-five years of economic reform and rapid socioeconomic change have already altered the value placed on different types of human capital as well as the demands being placed on the educational system.

Given this context, an important policy priority is to better measure the functional abilities, or literacy and numeracy skills, of the labor force, and to track how differences in adult literacy affects economic outcomes. Recently, important strides have been made in scientifically designing international adult literacy tests to measure multiple dimensions of literacy necessary for completing various types of social tasks, and to use such test instruments to broadly characterize the human capital accumulation of national labor forces. However, although many countries in the West have begun to systematically conduct adult literacy surveys, to date such tests have not been expanded widely to developing countries in general, or to China in particular. This report summarizes results from a recent pilot adult literacy survey in five Chinese cities.

The rapid labor market changes occurring in China make information from adult literacy surveys particularly valuable. In China, the shift from plan to market has

greatly increased standards of living, but has also led to growing social inequality. In many transition economies, including China, the economic returns to education have increased over time, explaining one important dimension of increasing inequality (e.g., Zhou, 2001; Knight and Song, 2001). This trend should not be surprising if we expect open labor markets to reward productivity without concern for social equity goals. However, in China and elsewhere, labor markets function far from perfectly. Despite twenty years of reform, there is significant evidence of continued labor market segmentation across ownership sectors, regions, gender, and residence status--urban versus rural (Zhao, forthcoming; Knight and Song, 2001; Maurer-Fazio, Rawski, and Zhang, 1999; Meng and Zhang, forthcoming). Several studies suggest that despite the increasing returns to schooling, in China the returns are still not very high in international comparative perspective. This suggests that the relationship between human capital and both earnings and occupational choice may be quite complicated, and that systematic study of these relationships over time could shed light on how labor markets are performing, with direct implications for policy.

Most existing studies of human capital and labor market outcomes in China and elsewhere are sharply circumscribed by the lack of human capital measures. In fact, the vast majority of studies consider only two measures--education and potential experience.<sup>1</sup> The lack of more direct measures of labor-relevant skills is particularly limiting in the Chinese case. First, there are very large differences in the quality of education in different regions, in rural versus urban areas, and during different historical periods. This can make inference quite difficult. For example, if one finds that the return to

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<sup>1</sup>This tradition dates back to Mincer (1974). Potential experience is usually calculated as age minus years of schooling minus six.

years of schooling is higher for urban residents than for migrants, this could be due to labor market segmentation or simply to differences in education quality. Similar ambiguity could cloud interpretation of differences in rates of return to education for different cohorts, ownership types, or economic sectors. Second, given the dramatic institutional changes that have occurred in China over the past 50 years, especially during the recent 20 years of reform, the way in which different skills are valued may have changed dramatically over time, and this also complicates interpretation of changes in the effects of education and experience over time.

Studies of wage inequality in the U.S. have found evidence that skill-biased technical change has contributed to growing income inequality associated with differences in education levels.<sup>2</sup> Juhn, Murphy, and Pierce (1993) attribute increasing inequality associated with unobserved factors (i.e., the error term in annual wage regressions) to increasing returns to skill not associated with education, and found that this component of inequality increased significantly over time. Evidence from studies that include new adult literacy measures from the International Adult Literacy Survey find that adult literacy significantly affects earnings independently of education (OECD, 2000).<sup>3</sup> Rosen (1977) points out that educational measures of human capital are used mainly because they exist and not because they reflect a specific human capital concept. Many aspects of cognitive skills, or ability, are unrelated to education (Gintis, 1971).

The five-city China Adult Literacy Survey (CAL5) is a first attempt to implement a literacy survey in China and to explore ways of improving measures of human capital. As an accurate measure of adult literacy, numeracy, and basic skills of adult laborers in

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<sup>2</sup> See Katz (1999) for a review of this literature.

<sup>3</sup> When we refer to adult literacy only, we are actually referring to adult literacy, numeracy, and basic skills.

urban China (both long-term residents and migrants), the CALS can be used to study several fundamental questions about the performance of China's urban labor markets. The CALS was conducted in the same households surveyed as part of the China urban labor survey (CULS) in December 2001.<sup>4</sup> The CULS includes detailed questions about each laborer's educational history and includes, among other things, questions on whether each school attended was rural or urban, the province in which each school was located, whether each school attended was a magnet school, and whether education was disrupted by the Cultural Revolution. Combined with the CALS score and detailed data on wages, occupation, and other job characteristics from the CULS work history form, these data make it possible to more convincingly answer several key policy-relevant research questions, such as whether different groups (e.g., migrants, women) are discriminated against in the labor market and the true economic return to education and other skills.

Perhaps more importantly, this survey will be an important vehicle for building capacity for China to better measure the skill level of its labor force. The CALS will enable researchers to describe the strengths and weaknesses of the urban labor force in different cities with respect to specific types of work-relevant skills. This makes it possible to better understand how the demands for different skills in different sectors or jobs is changing over time, and also to identify the skills that are relatively weak and merit attention through educational reforms or training programs. The results also will allow policy makers to better understand which population groups suffer from poor life skills that limit employment and other opportunities. By demonstrating the value of new adult literacy measures, this project may help China's Labor Ministry decide

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<sup>4</sup>The China urban labor survey was designed and implemented by Institute for Population and Labor Economics at the Chinese Academy of Social Sciences in consultation with scholars from the University of Michigan and Michigan State University.

whether supporting future efforts to gather similar data systematically is an attractive idea.

Below, we first discuss adult literacy tests in general and distinguish the types of literacy identified in the International Adult Literacy Survey project developed by Statistics Canada. Next we discuss the design and implementation of the China adult literacy survey, and provide a summary review of the rates of correct response of participants from three of five survey cities. Finally, we present preliminary results of the survey, describing broad patterns in adult literacy and how they relate to economic outcomes. We discuss the ways that literacy tests can be used for policy-relevant research on China's transitional labor market.

## **II. Literacy Measurement and the Design of the China Adult Literacy Survey.**

IALS researchers at Statistics Canada have created a databank of questions whose validity has been tested in multiple countries. Following the literacy classifications used in the IALS we attempt to separately identify three dimensions of life skills:

Prose Literacy. Prose literacy focuses on the knowledge and skills needed to understand and use information from texts that contain extended prose organized in a paragraph structure typically found in news stories, editorials, brochures and pamphlets, manuals, and fiction.

Document Literacy. Document literacy focuses on knowledge and skills required to locate and use information found in qualitatively different printed materials that contain more abbreviated language and use a variety of structural devices to convey meaning. These include tables, charts, graphs, indices, diagrams, maps and schematics.

Quantitative Literacy. Quantitative literacy refers to the ability to interpret, apply, and communicate mathematical information in commonly encountered situations. Quantitative tasks can be characterized by the computational skills required and by the problem-solving strategies used.

In order to make our survey instrument relevant for a random sample of employment age adults, we first considered the educational attainment of China's urban population. About half of China's urban workers have not completed high school (these workers are middle school graduates, primary graduates, or illiterate). The other half are relatively evenly split between high school graduates and those who have graduated from institutes of higher education (Table 3). The broad dispersion of educational attainment levels led researchers to include questions of widely varying difficulty, with more low-difficulty questions than would be found in a test instrument for a developed country.

The Chinese team also considered the international comparability of the study, and thus used items from the data bank compiled by the IALS project at Statistics Canada (which were translated into Chinese). They also drew on another Chinese test instrument designed for a small-scale pilot in rural Gansu, and other preparatory work completed by team members. Where appropriate, we adapted and designed new questions to fit the China's cultural context. We aimed to design a 30-minute instrument capable of measuring the range of adult literacy outcomes expected for laborers with educational backgrounds ranging from primary school to college.

Given the education attainment of the present employed population and our efforts to limit the length of the test, we focused on developing an instrument aimed at testing Performance Level 2 in the corresponding IALS. A brief description of the



performance levels in three domains of IALS is presented in Table 1.

A 40-minute instrument was developed and pre-tested. Based on the pretest, we implemented a final instrument containing 6 extended questions and requiring 30 minutes. The distribution of the items on the three domains of literacy and their corresponding performance level is shown in Table 2. Appendix 1 describes in detail the skills required by each test item.

It is desirable to develop three scales to identify the levels in the three domains. Our strategy for this project was to select representative items from existing international studies such as IALS with minimum cultural bias and basic skills. The levels assigned to each item on the IALS are used as a reference. A traditional item analysis was used to explore the item characteristics and a specialized scaling technology will be used for further exploratory analysis at a later stage.

A few features distinguish the design of the CALS from most other international adult literacy surveys. First, the test instrument is much shorter (30 minutes) than most other tests. Second, all respondents were given the same test, rather than being randomly assigned different modules from a larger question set designed to measure different literacy levels with greater precision. Third, the tests were given in conjunction with an in-depth urban labor survey which provides a detailed work history of each respondent. In addition to budgetary limitations, these choices in design were made because of a specific desire to analyze the connections between literacy and labor force outcomes rather than solely to describe the skill level of the labor force and how it varies with background characteristics. Thus, our literacy test seeks to compare the experience of different individuals and so requires a standardized test measure, even if

that measure is less precise. In addition, in order to make international comparisons with the IALS, many of the questions in our instrument are based on questions from the IALS test banks.

### III. Survey Implementation and Sampling

The above-mentioned instruments were implemented in 5 cities: Shenyang, Xian, Wuhan, Fuzhou, Shanghai in China during August-October, 2002. The scoring and data processing were completed in February 2003. Analyses presented in this report are based on the correct response rates for different items, or the raw test scores. In the future, we plan to conduct analyses using scores that are scaled based on more systematic analysis of the test questions and responses.<sup>5</sup>

The CALS was conducted among the working-age population of adults sampled the previous year in the China urban labor survey (CULS). The CULS was conducted in five cities: Shenyang, Xian, Wuhan, Shanghai and Fuzhou. For each city chosen, households were selected based on a PPS (Probability Proportional to Size) sampling method. The probability of sample units being chosen varied with their size such that the larger size units had a higher probability of being chosen. Specifically, our sampling had three stages. In stage one we chose a *jiedao* (equivalent to neighborhood) in a city. At this stage, we undertook the following steps: (1) listed all *jiedao* of the city with their population size; (2) found the sampling distance by dividing the total population of the city by the number of *jiedao* we needed to choose; (3) decided a starting point randomly; and (4) selected each *jiedao* as our sample unit based on the sampling distance. Similarly, in stage two we chose *juweihui* (communities/residents' committees) and in

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<sup>5</sup>Specialists at Statistics Canada are currently helping us develop appropriate scoring scales.

stage three we chose households following the same procedures as we did for *jiedao*. After a household was selected, all of the family members above age 16 who were no longer in school were interviewed.<sup>6</sup> More details of the CULS survey protocol are included in Appendix 2.

The CALS was given to each respondent in the CULS who was under age 60 (the mandatory retirement age for men). The test required 30 minutes, and the respondent could finish it in advance and record the time required, but was required to hand in the test at the end of 30 minutes.

#### **IV. Findings**

##### *Adult Literacy in Urban China*

Below we first present summary information on mean test scores by gender, educational attainment, and age. The scores are normalized to equal the number of standard deviations from the weighted mean score for the entire sample of urban residents and migrants in the five cities. Thus, positive values are above the sample mean and negative values are below.

A comparison of sample means of male and female urban residents and migrants reveals some interesting patterns (Table 4). First, there are substantial differences in literacy scores across cities that do not follow the same pattern as educational attainment (compare to Table 3). Among urban residents, those in Shanghai score highest, followed by those in Fuzhou and Xian, followed by those in Shenyang and Wuhan. The city differences among migrants are quite different, with Xian migrants scoring the

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<sup>6</sup>English language translations of the CULS instruments can be found at: <http://www.msu.edu/~gilesj/>.

highest. This suggests that the ability of migrants are not necessarily correlated with the ability of urban residents in comparisons across cities. Second, urban resident men score higher than women in cities with highly skilled workers (Shanghai and Fuzhou), but not in other cities. Finally, Table 4 reveals that migrants generally score lower than urban residents in the same city.

A simple cross-tabulation of scores by level of educational attainment shows that, as expected, differences in educational attainment are strongly associated with differences in literacy (Table 5). An urban resident with college education scores one standard deviation higher on the literacy test than an urban resident with primary schooling or less. The relationship holds robustly for all three dimensions of literacy. There are some differences in the skill gaps between better and less-educated workers across cities and resident permit status. There also remain large differences across cities in the skill level of workers with the same level of education. There do not appear to be significant differences in scores of urban residents and migrants with the same educational level, suggesting that skill differences between these groups are due more to education differences than to differences in unobserved skills.

When we examine literacy test results by age category, we also observe sharp declines in mean test scores with age (Table 6). This decline may reflect the lower quality of education received by older cohorts, the inappropriateness of the human capital of older workers for the new market economy, or the decline in some dimensions of ability during the aging process. In all age groups, urban residents have higher average scores than migrants, and the difference in average scores for migrants and urban residents is smaller for younger migrants.

To examine how specific characteristics and background factors best predict literacy attainment, we estimate multivariate linear specifications of literacy test scores as a function of years of education, whether one lived in the countryside or city when young, gender, school quality, and parental background variables. One year of education increases literacy scores by 0.062 standard deviations for urban residents and by 0.088 percent for rural residents, controlling for other factors. For urban residents, education has the largest effect on prose literacy, while for migrants, the largest effect is on document literacy. Women score about 0.050 standard deviations lower than men, all things equal, with the difference being particularly pronounced for quantitative scores of urban residents. The sets of school quality and parental background variables are each jointly statistically significant. The effect of mother's college education is especially pronounced. Overall, the multivariate results confirm the earlier findings that adult literacy differs by education level and gender, with school quality and family background also being important.

### *Literacy and Labor Market Outcomes*

Consider a standard wage or earnings regression using cross-sectional data specified as follows:

$$(1) Y = aS + bE + cX + e$$

Here,  $Y$  is log of wages,  $S$  is years of schooling,  $E$  is years of experience,  $X$  is a vector of other individual or job attributes that may affect wage levels, the error term  $e$

includes unobserved individual and job characteristics and measurement error, and  $a$ ,  $b$ , and the vector  $c$ , are parameters to be estimated.  $Y$  could also be other labor market outcomes of interest, such as occupational choice, labor force participation (including retirement), or job mobility.  $X$  can include such traits such as gender, resident permit status, ownership, type of work unit, and economic sector, which may shed light on labor market performance. One could also interact elements of  $X$  with the other independent variables, including  $S$  and  $E$ , or run separate regressions for different sample sub-groups. Then, differences in how wages are determined for different subgroups could be decomposed using well-know procedures (Oaxaca, 1973). For purposes of exposition, here we focus only on the single equation (1).

The main problem with estimating (1) is potential bias from omitted variables. In the Chinese context, as described earlier, bias from differences in the quality of education as well as unobserved ability are likely to be significant. Simply by including our new measure(s) of life skills, denoted by  $L$ , we believe our insight into how labor markets function will be substantially improved. We thus estimate the following:

$$(2) Y = aS + bE + cX + dL + e$$

One main goal of the project is to estimate  $d$ , the direct effect of life skills on labor outcomes. Because this measure is standardized by design, we believe it is not subject to unobserved quality differences when comparing, for example, the education of urban residents and migrants. Including  $L$  might also alter the other coefficient estimates such as schooling and experience. If  $a$  and  $b$  become statistically not different

from zero, it would suggest that the life skills measure captures all of the important skills relevant for labor market performance. In this case, it becomes interesting to explore how S and E are related to L. If a and b remain significant, it raises interesting questions about what they are actually measuring (e.g., signaling effects, historical preference in job placement, or individual productivity traits such as motivation not captured in L).

Similarly, inclusion of L may affect our estimates of the importance of other individual and job characteristics (X), which may alter our beliefs about how the labor market is functioning. For example, if we find that the returns to L are the same for urban residents and migrants while the returns to E are different, it may suggest that the differences in return to E may be due to unobserved quality differences, since it is unlikely that discrimination would affect E but not L.

In addition to including our new measure, L, we also have additional variables collected in the CULS which directly measure school quality. Specific information on the timing of enrollment in each schooling level and a direct question on the influence of the Cultural Revolution will enable us to devise more convincing identification strategies using instrumental variables or additional controls to estimate the true returns to education and life skills. Here, we do not describe in detail these identification strategies, but simply make the point that the availability of high quality data on educational histories in the CULS are highly complementary to the analysis of the effect of new life skills measures. We believe these data will enable us to come up with the most convincing estimates to date of the relationship between human capital and labor market outcomes in urban China.

Next, we present some preliminary estimates of equations (1) and (2) using the CALS and CULS data for urban resident workers in the five cities. We focus on two outcomes: log of wages, and whether the individual is working or not (employment). The wage regression is a simple linear regression and the employment estimate employs a probit model.

The first table reports estimation results for a Mincer-type regression for log wages (Table 8). There has been no correction for selection bias, i.e., wage data exists only for those who work, although other results (not reported) suggest these effects are likely to be small. In all specifications, the independent variables include age, age squared, a gender dummy, and city dummies. We report estimates for five model specifications. The first includes years of schooling only, the second includes the total literacy test score only, the third equation includes both years of schooling and the total literacy test score, the fourth includes the three literacy subscores separately, and the final preferred specification includes years of schooling and the three literacy subscores.

Important results from the wage equation estimation results in Table 8 are the following. First, the return to education is very high (7.5 to 9.1 percent for each year of schooling), whether or not we include the literacy measure. Inclusion of literacy reduces the measured return to schooling as expected, by 0.8-0.9 percent for urban residents and 0.7-0.8 percent for migrants. However, it is somewhat surprising that inclusion of the literacy test scores has such a small effect on the returns to education. This could be due to many factors, such as unobserved ability, parental background, or school quality that is picked up by the literacy measure but not by years of education. Second, the literacy measures are also highly significant determinants of wages after



controlling for education. A one standard deviation increase in the percent of total questions correct increases wages by 11.4 percent for urban residents and 7.9 percent for migrants. One way to compare this magnitude to the education effect on wages is to compare it to the wage effect of a one standard deviation increase in years of education (about 3 years), which turns out to be 25 and 24 percent for urban residents and migrants. Thus, the effect of both human capital measures is large and significant, but the education effect remains larger. In other estimates not reported, we also find that the importance of literacy scores is greater for workers with lower levels of education.

Table 8 reveals some interesting differences in the results for urban residents and migrants. First, the human capital effects of both education and literacy are slightly smaller for migrants than urban residents. Second, the type of literacy that is most important for migrants differs from that which is most important for urban residents. For migrants, only numeracy has a statistically significant effect, and the magnitude of the wage effect is quite large (9.6 percent for a one standard deviation difference in quantitative test score). For urban residents, prose literacy is by far the most important, and numeracy is the least important. Document literacy has a moderate wage effect for both migrants and urban residents. These results suggest that urban residents and migrants work in different parts of the labor market that emphasize different types of skills.

Next, we report results from a second wage regression with a larger set of regressors (Table 9). The additional regressors are expected to control better for unobserved differences in school quality and family background, and include the following: whether or not the individual held an urban *hukou* at age 16, parental

education, parental occupation (industry, sector), type of primary school (rural, urban, magnet), and type of middle school. Interestingly, in comparison to the basic specification results, the full specification estimates find much lower returns to education for urban residents (ranging from 4.4 to 4.9 percent), but only slightly lower rates of return for migrants (from 6.4 to 7.1 percent). Thus, inclusion of additional controls reverses the earlier finding of higher returns to education for urban residents. Meanwhile, the estimated return to adult literacy falls moderately from 11.4 to 9.3 percent for urban residents and actually rises slightly from 7.9 to 8.2 percent for migrants. As before, numeracy matters the most for migrants, while prose literacy matters the most for urban residents.

Next, we examine the results for employment outcomes. Table 10 summarizes the unemployment rate (those not working and looking for work as a share of those working or looking for work), labor force participation rate (those working or looking for work as a share of all workers), and employment rate (those working as a share of all workers) for the five sample cities, based on the 2000 census data. Shenyang has the highest unemployment rate and lowest employment rate, while Xian has the lowest labor force participation rate and lowest unemployment rate (suggesting that those in Xian non working are more likely to report they are not looking for work). It is often difficult to distinguish workers who are discouraged and not looking for work from those who are looking for work. The employment rates range from 59.6 percent in Shenyang to 66.6 percent in Fuzhou. Also, women have higher unemployment rates (except for Xian) and lower labor force participation rates and employment rates.

Next, we examine the determinants of being employed (Table 11). We find that

human capital does not help predict whether migrants are working or not, likely because nearly all migrants work; otherwise they return home to rural areas and are not sampled. Thus, we focus on the results for urban residents only. We find that a year of education increases the likelihood that one is working by 2.7 percent, and that a one standard deviation increase in literacy test scores increases the probability of employment by 5.0 percent. Thus, just as for wages, a one standard deviation change in education (three years) has a larger effect on employment probability than a one standard deviation in literacy, but the difference is less than for wages. We also find that controlling for literacy only slightly reduces the marginal effect of education on employment, and vice versa, suggesting that schooling and literacy measures are independently important and measure different dimensions of skill. Finally, just as for wages, prose literacy has a larger marginal effect on employment than quantitative or document literacy.

## **V. Conclusion**

In this report, we present the results from initial analysis of new adult literacy measures for urban workers in China. We document how the instruments were designed to measure quantitative, document, and prose literacy in the Chinese context, describe how literacy is related to different worker characteristics, and use the literacy measures to systematically analyze how human capital affects wage and employment outcomes.

One contribution of the study is to explain how adult literacy surveys can be designed and implemented in China. A second is to describe the adult literacy of the Chinese work force in different cities and how it relates to worker characteristics. We find substantial differences in adult literacy across levels of education and across cities

(even after controlling for education). Finally, preliminary explorations using test scores in standard wage regressions and employment model estimations suggest that use of the CALS or similar instruments can provide useful insight into China's transitional labor market. Literacy tests measure important aspects of human capital, not captured by years of education, that have important effects on labor outcomes.

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**Table 1: Performance Levels by Domain, Statistics Canada International Adult Literacy Survey**

	Prose Literacy	Document Literacy	Quantitative Literacy
Level 1	To locate one piece of information in the text that is identical or synonymous to the information given in the directive. If a plausible incorrect answer is present in the text, it tends not to be near the correct information	To locate a piece of information based on a literal match. Distracting information, if present, is typically located away from the correct answer. Some may direct the reader to enter personal information onto a form.	To perform a single, relatively simple operation (usually addition) for which either the numbers are already entered onto the given document and the operation is stipulated, or the numbers are provided and the operation does not require the reader to borrow.
Level 2	To locate one or more pieces of information in the text, but several distractors may be present, or low-level inferences may be required. And begin to ask readers to integrate two or more pieces of information, or to compare and contrast information.	To match on a single feature, more distracting information may be present The match may require a low level inference. Some may require to enter information onto a form or to cycle through information in a document.	To perform a single arithmetic operation (frequently addition or subtraction) using numbers that are easily located in the text or document. The operation to be performed may be easily inferred from the wording or the format of the material (for example, a bank deposit form or an order form).
Level 3	To search texts to match information that requires low-level inferences or that meet specified conditions. Sometimes the reader is required to identify several pieces of information that are located in different sentences or paragraphs rather than in a single sentence. Readers may also be asked to integrate or to compare and contrast information across paragraphs or sections of text.	Some require the reader to make literal or synonymous matches, but usually the matches require the reader to take conditional information into account or to match on multiple features of information. Some tasks require the reader to integrate information from one or more displays of information. Other tasks require to cycle through a document to provide multiple responses.	Typically require the reader to perform a single operation. However, the operations become more varied-some multiplication and division tasks are found. Sometimes two or more numbers are needed to solve the problem and the numbers are frequently embedded in more complex display. While semantic relation terms such as “how many” or “calculate the difference” are often used, some of tasks require the reader to make higher order inferences to determine the appropriate operation. .

Level 4	To perform multiple-feature matching or to provide several responses where the requested information must be identified through text-based inferences. Tasks may also require the reader to integrate or contrast pieces of information, sometimes presented in relatively length texts. Typically, these texts contain more distracting information and the information that is requested is more abstract.	To match on multiple features of information, to cycle through documents, and to integrate information; frequently however, these tasks require the reader to make higher order inferences to arrive at correct answer. Sometimes, conditional information is present in the document, which must be taken into account by the reader.	With one exception, the tasks require the reader to perform a single arithmetic operation where typically either the quantities or the operation are not easily determined. For most of the tasks the question or directive does not provide a semantic relation term such as “how many” or “calculate the difference” to help the reader.
Level 5	Some tasks require the reader to search for information in dense text that contains a number of plausible distractors. Some require readers to make high-level inferences or use specialized knowledge	To search through complex displays of information that contain multiple distractors, to make high-level inferences, process conditional information, or use specialized knowledge.	These tasks require reader to perform multiple operations sequentially, and they must dis-embed the features of the problem from the material provided or rely on background knowledge

Source: OECD, 2000.



**Table 2: The Distribution of the Items Across Domains and Levels**

Question Number	Content	Skill Domain	Performance Level
1	Gas gauge	Quantitative	2
2	Tree	Quantitative	2
3.1	Distance	Quantitative	4
3.2	Distance	Quantitative	4
4.1	Fire chart	Document	2
4.2	Fire chart	Document	2
4.3	Fire chart	Document	2
5.1a	Receipt	Document	2
5.1b	Receipt	Document	2
5.1c	Receipt	Document	2
5.1d	Receipt	Document	2
5.2	Receipt	Document	2
5.3	Receipt	Document	2
5.4	Receipt	Document	3
5.5	Receipt	Document	3
6.1	Bees	Prose	3
6.2	Bees	Prose	2
6.3	Bees	Prose	4
6.4	Bees	Prose	4
6.5	Bees	Prose	2
6.6	Bees	Prose	3

**Table 3: Educational Distribution of Working Age Population (Age 15-59) by City, from 2000 Census (unit=percentage)**

	Shanghai	Wuhan	Shenyang	Fuzhou	Xian	All
Illiterate	1.24	1.80	0.35	0.81	0.46	1.10
semi-illiterate	0.22	0.40	0.03	0.13	0.13	0.21
Primary School	8.33	10.18	4.25	16.79	6.13	8.48
Junior School	39.29	35.67	45.80	37.27	29.72	38.21
Senior School	23.03	20.59	20.24	21.09	26.66	22.34
Technical School	10.82	11.41	7.27	10.75	8.14	10.09
College	9.15	10.27	12.81	6.85	14.61	10.44
University	7.21	8.42	8.50	5.91	13.39	8.31
Graduate	0.72	1.25	0.74	0.40	0.76	0.82

Source: Calculated from 0.095% Sampling Data from the Long Questionnaire of the China 2000 Census.

**Table 4: Mean CALS Test Scores by Gender**

		All	Shanghai	Wuhan	Shenyang	Fuzhou	Xian
<b>Urban residents</b>							
Men	Total	0.24	0.66	0.09	-0.07	0.26	0.15
	Quantitative	0.26	0.22	0.38	0.17	0.09	0.47
	Document	0.22	0.56	0.11	-0.03	0.24	0.17
	Prose	0.13	0.81	-0.16	-0.26	0.28	-0.15
Women	Total	0.16	0.56	0.04	-0.05	0.10	0.16
	Quantitative	0.13	0.05	0.17	0.11	-0.03	0.38
	Document	0.18	0.51	0.09	0.03	0.10	0.19
	Prose	0.08	0.71	-0.16	-0.25	0.13	-0.11
<b>Migrants</b>							
Men	Total	0.01	-0.05	-0.13		-0.25	0.29
	Quantitative	-0.02	0.03	-0.17		-0.09	0.09
	Document	0.06	0.11	-0.17		-0.02	0.18
	Prose	-0.05	-0.34	0.03		-0.62	0.47
Women	Total	-0.10	-0.25	-0.06		-0.49	0.23
	Quantitative	-0.10	-0.19	-0.03		-0.28	0.07
	Document	-0.03	-0.04	-0.07		-0.31	0.07
	Prose	-0.17	-0.53	-0.03		-0.70	0.50

**Table 5: Mean CALS Test Scores by Education Level**

		All	Shanghai	Wuhan	Shenyang	Fuzhou	Xian
<b>Urban residents</b>							
$\leq$ primary	Total	-0.39	0.35	-0.27	-0.69	-0.52	-0.30
	Quantitative	-0.20	-0.19	0.01	-0.17	-0.29	-0.14
	Document	-0.32	0.54	-0.23	-0.75	-0.47	-0.18
	Prose	-0.44	0.23	-0.41	-0.61	-0.52	-0.47
Middle School	Total	0.07	0.46	-0.10	-0.27	0.09	0.05
	Quantitative	0.05	0.02	0.10	-0.05	-0.07	0.38
	Document	0.12	0.45	-0.03	-0.18	0.16	0.06
high school	Total	-0.03	0.54	-0.30	-0.45	0.03	-0.19
	Quantitative	0.30	0.75	0.13	0.07	0.41	0.11
	Document	0.26	0.24	0.34	0.14	0.16	0.37
$\geq$ college	Total	0.29	0.61	0.15	0.13	0.39	0.17
	Quantitative	0.20	0.97	-0.09	-0.11	0.41	-0.20
	Document	0.64	0.98	0.41	0.42	0.92	0.58
	Prose	0.62	0.50	0.64	0.67	0.43	0.84
<b>Migrants</b>	Total	0.54	0.72	0.41	0.41	0.67	0.54
	Quantitative	0.54	1.28	0.11	0.09	1.24	0.23
	Document						
	Prose						
$\leq$ primary	Total	-0.23	-0.51	-0.32		-0.71	-0.04
	Quantitative	-0.18	-0.30	-0.24		-0.39	0.19
	Document	-0.20	-0.33	-0.34		-0.57	-0.26
	Prose	-0.23	-0.71	-0.20		-0.84	0.20
Middle School	Total	0.01	-0.02	-0.07		-0.09	0.27
	Quantitative	-0.03	-0.04	-0.06		-0.02	0.01
	Document	0.10	0.18	-0.09		0.19	0.19
high school	Total	-0.11	-0.34	-0.02		-0.58	0.45
	Quantitative	0.28	0.25	0.21		0.13	0.39
	Document	0.11	0.27	-0.08		0.15	0.05
$\geq$ college	Total	0.34	0.40	0.13		0.35	0.29
	Quantitative	0.15	-0.11	0.44		-0.30	0.60
	Document	0.60	0.37	0.77		-0.01	0.98
	Prose	0.56	0.74	0.67		-0.17	0.71
$\geq$ college	Total	0.46	0.30	0.64		0.16	0.62
	Quantitative	0.59	0.12	0.73		-0.21	1.34
	Document						
$\geq$ college	Total						
	Quantitative						
	Document						

**Table 6: Mean CALS Test Scores by Age Category**

		All	Shanghai	Wuhan	Shenyang	Fuzhou	Xian
<b>Urban residents</b>							
16≤age<25	Total	0.56	0.86	0.38	0.19	0.76	0.35
	Quantitative	0.41	0.28	0.71	0.22	0.27	0.53
	Document	0.44	0.63	0.25	0.25	0.57	0.37
	Prose	0.62	1.22	0.24	-0.02	1.05	0.05
25≤age<45	Total	0.21	0.61	0.10	-0.03	0.26	0.17
	Quantitative	0.22	0.16	0.28	0.18	0.07	0.41
	Document	0.22	0.53	0.16	0.02	0.24	0.19
	Prose	0.09	0.76	-0.16	-0.21	0.30	-0.11
45≤age<60	Total	0.13	0.57	-0.07	-0.18	-0.08	0.10
	Quantitative	0.12	0.09	0.18	0.04	-0.09	0.44
	Document	0.15	0.53	-0.05	-0.09	-0.04	0.14
	Prose	0.04	0.67	-0.23	-0.39	-0.10	-0.20
<b>Migrants</b>							
16≤age<25	Total	0.25	-0.03	0.13		-0.11	0.36
	Quantitative	0.05	-0.13	0.22		0.02	-0.02
	Document	0.27	0.11	0.06		0.13	0.30
	Prose	0.22	-0.20	0.15		-0.53	0.53
25≤age<45	Total	-0.10	-0.11	-0.13		-0.40	0.34
	Quantitative	-0.08	-0.02	-0.16		-0.24	0.18
	Document	-0.04	0.07	-0.16		-0.19	0.18
	Prose	-0.18	-0.43	-0.02		-0.68	0.56
45≤age<60	Total	-0.38	-0.36	-0.29		-0.60	-0.37
	Quantitative	-0.21	-0.13	-0.36		-0.18	-0.30
	Document	-0.29	-0.16	-0.22		-0.51	-0.42
	Prose	-0.48	-0.67	-0.24		-0.75	-0.16

**Table 7: Socioeconomic Determinants of Literacy**

Model	Quantitative Literacy		Document Literacy		Prose Literacy		Combined	
	1	2	3	4	5	6	7	8
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
DepVar	Quant Percent	Quant Percent	Doc Percent	Doc Percent	Prose Percent	Prose Percent	Total Percent	Total Percent
Years of Schooling	0.051 (0.006)	0.071 (0.013)	0.049 (0.005)	0.089 (0.013)	0.063 (0.006)	0.058 (0.011)	0.062 (0.005)	0.088 (0.011)
<i>Hukou</i> Before	-0.010 (0.063)	0.101 (0.136)	-0.015 (0.055)	0.075 (0.106)	-0.142 (0.050)	0.036 (0.096)	-0.060 (0.052)	0.078 (0.098)
Age 16								
Gender (Female=1)	-0.139 (0.027)	-0.046 (0.056)	-0.015 (0.023)	-0.037 (0.054)	-0.034 (0.025)	-0.076 (0.047)	-0.050 (0.022)	-0.058 (0.048)
Primary School in Village	-0.046 (0.092)	-0.335 (0.110)	0.078 (0.083)	-0.259 (0.119)	-0.095 (0.089)	-0.209 (0.097)	0.003 (0.078)	-0.297 (0.104)
Primary School in Town	-0.118 (0.124)	-0.143 (0.156)	0.026 (0.142)	-0.262 (0.146)	-0.007 (0.123)	-0.141 (0.128)	-0.012 (0.130)	-0.234 (0.127)
Primary School in County	0.033 (0.121)	-0.357 (0.185)	0.300 (0.091)	-0.559 (0.186)	0.144 (0.098)	-0.362 (0.156)	0.235 (0.084)	-0.533 (0.160)
Lower Secondary School in Village	0.154 (0.094)	0.027 (0.094)	-0.040 (0.084)	0.142 (0.100)	0.052 (0.088)	0.002 (0.076)	0.027 (0.079)	0.090 (0.086)
Lower Secondary School in Town	0.170 (0.106)	0.052 (0.111)	-0.077 (0.121)	0.147 (0.109)	0.010 (0.112)	0.153 (0.097)	-0.006 (0.111)	0.151 (0.095)
Lower Secondary School in County	0.108 (0.126)	0.232 (0.185)	-0.125 (0.092)	0.441 (0.163)	0.008 (0.102)	0.277 (0.154)	-0.048 (0.087)	0.407 (0.147)
Father College or Above	-0.007 (0.048)	0.221 (0.124)	-0.021 (0.038)	-0.085 (0.110)	-0.017 (0.045)	0.121 (0.100)	-0.019 (0.038)	0.039 (0.099)
Father High School Grad	-0.007 (0.040)	-0.103 (0.085)	0.067 (0.034)	-0.097 (0.078)	0.059 (0.039)	0.051 (0.066)	0.059 (0.034)	-0.061 (0.068)
Father Jr High Grad	0.114 (0.102)	0.524 (0.600)	-0.042 (0.076)	0.367 (0.368)	0.106 (0.092)	-0.074 (0.357)	0.036 (0.084)	0.303 (0.408)
Father Elementary Grad	0.096 (0.062)	-0.166 (0.195)	0.025 (0.050)	-0.267 (0.145)	-0.047 (0.056)	-0.263 (0.203)	0.019 (0.049)	-0.285 (0.134)
Mother College or Above	-0.007 (0.052)	0.194 (0.133)	0.095 (0.040)	-0.020 (0.104)	0.141 (0.046)	0.140 (0.106)	0.104 (0.040)	0.078 (0.093)
Mother High School Grad	0.019 (0.041)	0.045 (0.094)	-0.015 (0.034)	0.130 (0.084)	0.004 (0.040)	0.030 (0.073)	-0.004 (0.034)	0.097 (0.074)
Mother Jr High Grad	0.006 (0.013)	0.014 (0.030)	-0.005 (0.011)	0.042 (0.027)	0.001 (0.012)	0.009 (0.022)	-0.001 (0.009)	0.027 (0.020)
Mother Elementary Grad	0.006 (0.013)	0.014 (0.030)	-0.005 (0.011)	0.042 (0.027)	0.001 (0.012)	0.009 (0.022)	-0.001 (0.009)	0.027 (0.020)
R-Squared	0.105	0.149	0.166	0.207	0.302	0.309	0.237	0.255
Obs	6113	1310	6113	1310	6113	1310	6113	1310

Each specification includes 14 dummies for parent occupations, 42 dummies for parent industries, 10 dummies for parent institutional sector and city location dummies. Each group of dummy variables is jointly statistically significant.

**Table 8: Returns to Education and Literacy, Base Specification (Individuals Younger than Retirement Age)**

Model	1		2		3		4		5	
	Urban	Migrant	Urban	Migrant	Urban	Migrant	Urban	Migrant	Urban	Migrant
DepVar	lwage2	lwage2	lwage2	lwage2	lwage2	lwage2	lwage2	lwage2	lwage2	lwage2
Years of Education	0.091 (0.004)	0.083 (0.010)	---	---	0.083 (0.004)	0.076 (0.011)	---	---	0.082 (0.004)	0.075 (0.011)
Standardized Total Score	---	---	0.193 (0.015)	0.185 (0.037)	0.114 (0.014)	0.079 (0.038)	---	---	---	---
Standardized Quantitative Score	---	---	---	---	---	---	0.040 (0.014)	0.126 (0.038)	0.016 (0.014)	0.096 (0.037)
Standardized Document Score	---	---	---	---	---	---	0.068 (0.018)	0.071 (0.042)	0.040 (0.017)	0.012 (0.040)
Standardized Prose Score	---	---	---	---	---	---	0.115 (0.016)	0.027 (0.041)	0.075 (0.015)	-0.004 (0.041)
Age	0.004 (0.008)	0.022 (0.021)	-0.004 (0.009)	0.015 (0.022)	0.009 (0.008)	0.021 (0.021)	-0.002 (0.009)	0.013 (0.022)	0.010 (0.008)	0.019 (0.021)
Age-Squared	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
Female==1	-0.195 (0.022)	-0.129 (0.059)	-0.207 (0.024)	-0.180 (0.061)	-0.192 (0.022)	-0.126 (0.059)	-0.206 (0.024)	-0.176 (0.060)	-0.193 (0.022)	-0.123 (0.058)
R-Sqr	0.283	0.22	0.198	0.163	0.297	0.224	0.201	0.17	0.299	0.23
Observations	4045	936	4045	936	4045	936	4045	936	4045	936

Note: City dummy variables included in all regression models.

**Table 9: Returns to Education and Literacy, Full Specification (All Individuals Under Retirement Age)**

Model	1		2		3		4		5	
	Urban	Migrant	Urban	Migrant	Urban	Migrant	Urban	Migrant	Urban	Migrant
DepVar	lwave2	lwave2	lwave2	lwave2	lwave2	lwave2	lwave2	lwave2	lwave2	lwave2
Years of Education	0.049 (0.005)	0.071 (0.014)	---	---	0.044 (0.005)	0.064 (0.014)	---	---	0.044 (0.005)	0.064 (0.014)
Standardized Total Score	---	---	0.110 (0.014)	0.126 (0.038)	0.093 (0.014)	0.082 (0.040)	---	---	---	---
Standardized Quantitative Score	---	---	---	---	---	---	0.016 (0.014)	0.096 (0.037)	0.012 (0.014)	0.085 (0.036)
Standardized Document Score	---	---	---	---	---	---	0.034 (0.017)	0.059 (0.041)	0.028 (0.017)	0.033 (0.041)
Standardized Prose Score	---	---	---	---	---	---	0.077 (0.015)	-0.005 (0.041)	0.067 (0.015)	-0.018 (0.041)
Age	0.009 (0.009)	0.020 (0.024)	0.007 (0.009)	0.016 (0.025)	0.012 (0.009)	0.018 (0.024)	0.009 (0.009)	0.014 (0.025)	0.013 (0.009)	0.017 (0.024)
Age-Squared	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
Female==1	-0.201 (0.022)	-0.142 (0.061)	-0.201 (0.022)	-0.164 (0.061)	-0.197 (0.022)	-0.139 (0.061)	-0.201 (0.022)	-0.162 (0.061)	-0.198 (0.022)	-0.138 (0.061)
R-Sqr	0.345	0.328	0.338	0.313	0.354	0.333	0.34	0.317	0.355	0.337
Observations	4045	936	4045	936	4045	936	4045	936	4045	936

Note: Controls for *hukou* before 16, parent education, parent industry, parent sector, individual primary and secondary school locations and city dummy variables all included as regressors.



**Table 10: Labor Supply Outcomes by City in 2000 (unit=percentage)**

Cities	Male	Female	Total
Unemployment Rate			
Shanghai	9.80	13.60	11.37
Wuhan	10.62	14.27	12.21
Shenyang	15.40	20.08	17.47
Fuzhou	9.69	11.07	10.31
Xian	8.98	7.95	8.54
Average	10.72	13.97	12.11
Labor Force Participation Rate			
Shanghai	82.81	64.20	73.98
Wuhan	77.01	64.11	70.79
Shenyang	79.66	64.60	72.22
Fuzhou	84.23	64.88	74.28
Xian	73.87	57.45	65.87
Average	80.10	63.49	72.07
Employment Rate			
Shanghai	74.70	55.46	65.58
Wuhan	68.83	54.97	62.14
Shenyang	67.39	51.63	59.61
Fuzhou	76.07	57.70	66.62
Xian	67.24	52.89	60.24
Average	71.51	54.62	63.34

Source: Calculated from 0.095% Sampling Data from the Long Questionnaire of the China 2000 Census.

**Table 11: Probability of Being Employed, Full Specification -- Marginal Effects**

Model	1		2		3		4		5	
	Urban	Migrant	Urban	Migrant	Urban	Migrant	Urban	Migrant	Urban	Migrant
DepVar	working=1	lwage2	lwage2	lwage2	lwage2	lwage2	lwage2	lwage2	lwage2	lwage2
Years of Education	0.030 (0.004)	-0.002 (0.002)	---	---	0.027 (0.004)	-0.002 (0.002)	---	---	0.027 (0.004)	-0.002 (0.002)
Standardized Total Score	---	---	0.060 (0.009)	-0.003 (0.006)	---	-0.002 (0.006)	---	---	---	---
Standardized Quantitative Score	---	---	---	---	---	---	0.020 (0.009)	-0.006 (0.005)	0.018 (0.009)	-0.005 (0.005)
Standardized Document Score	---	---	---	---	---	---	0.020 (0.011)	0.008 (0.006)	0.017 (0.011)	0.009 (0.006)
Standardized Prose Score	---	---	---	---	---	---	0.031 (0.010)	-0.011 (0.007)	0.025 (0.010)	-0.010 (0.007)
Age	0.051 (0.006)	0.002 (0.003)	0.049 (0.006)	0.002 (0.003)	0.052 (0.006)	0.002 (0.003)	0.050 (0.006)	0.002 (0.003)	0.052 (0.006)	0.002 (0.003)
Age-Squared	-0.001 (0.000)	0.000 (0.000)	-0.001 (0.000)	0.000 (0.000)	-0.001 (0.000)	0.000 (0.000)	-0.001 (0.000)	0.000 (0.000)	-0.001 (0.000)	0.000 (0.000)
Female==1	-0.207 (0.014)	-0.089 (0.017)	-0.210 (0.014)	-0.088 (0.017)	-0.207 (0.014)	-0.089 (0.017)	-0.209 (0.014)	-0.087 (0.017)	-0.206 (0.014)	-0.088 (0.017)
R-Sqr	6917	1054	6917	1054	6917	1054	6917	1054	6917	1054
Obs	6917	1054	6917	1054	6917	1054	6917	1054	6917	1054

Note: Controls for *hukou* before 16, parent education, parent industry, parent sector, individual primary and secondary school locations and city dummy variables all included as regressors.

## **Appendix 1**

### **Question-Specific Literacy Measurement**

In order to provide better intuition into how these questions measure different dimensions of adult literacy, in this section we evaluate performance on the adult literacy test question by question. Table 11 summarizes the correct response rate for each question on the test. Annex I contains the actual questions and test result tabulations for each question. Examination question by question suggests the following preliminary observations:

- Both laborers with urban registration and migrants have basic competencies of literacy.
- Differences in the performance between urban registered laborers and migrants is observable in all three domains of the sampled cities.
- In general, the performance of migrants in three domains is lower than that of the laborers with urban household registration.
- On more difficult questions, there was less difference in average scores of urban laborers and migrants. It seems that at a certain level of the literacy, both urban labor and migrants have the same difficulties.
- In general, workers performed relative poorly when asked to make a literal matches from different sources, make simple inferences, and summarize information. This seems to suggest that the quality of the present labor force in terms of their ability to effectively use written words in their daily work and life does not yet meet the requirements of China's knowledge economy.

#### ***Quantitative Literacy***

Item 1 requires a respondent to manage an everyday situation in which he or she has to interpret information regarding a measurement that is represented in a diagram.

This task involves interpreting a measurement scale and requires that respondent to make an estimate of a quantity, perhaps by generating and then using the benchmark fraction of  $\frac{3}{4}$ . Others may merely attach numbers to the scale, reasoning proportionally to estimate the quantity. No additional distracting information is present in the problem. This item belongs to Level 2 in the IALS. 73.6 percent of respondents with urban registration and 67 percent of migrants answered this question correctly.

Item 2 requires the respondent estimate the height of an unknown object by comparing its height to that of a man standing next to it.

The respondent may make notations (using a piece of paper, a ruler, or a length of finger) to measure the pictured height of the man and determine how many man-heights equal the pictured height of the tree, then multiply the number of man-heights by a typical man's height.

The photo of the man and the tree clearly shows the feet of the man and the foot of the tree to be the same distance from the camera, thus avoiding any question about distortion due to perspective. No information is given as to the height of the man.

**Table A-1: The Correct Response Rate by Question, Cities (percent)**

Question	Urban Registration Holder				Migrant			
	Wuhan	Shenyang	Xian	Total	Wuhan	Shenyang	Xian	Total
<i><b>Quantitative</b></i>								
1	71.6	74.3	75.5	73.6	65.3	65.7	72.7	67.0
2	70.9	59.4	70.5	67.2	57.6	64.6	55.8	59.0
3.1	35.0	30.1	41.2	35.3	20.7	29.8	28.6	24.8
3.2	30.8	22.7	37.6	30.3	14.9	21.0	24.7	18.6
<i><b>Document</b></i>								
4.1	60.5	62.9	73.7	65.2	53.4	68.5	59.7	58.7
4.2	71.0	60.8	74.6	68.9	60.6	73.5	76.6	67.5
4.3	69.1	66.2	76.6	70.5	46.0	76.8	64.9	58.2
5.1a	56.2	54.9	53.3	54.9	43.0	70.2	53.9	52.4
5.1b	68.3	63.6	70.4	67.5	58.7	72.9	67.5	64.3
5.1c	69.6	64.9	73.6	69.4	62.0	77.9	70.8	68.1
5.1d	46.5	47.9	50.5	48.2	46.0	56.9	51.3	50.0
5.2	78.5	67.6	76.1	74.4	67.8	81.2	72.7	72.3
5.3	82.3	75.7	82.9	80.5	71.9	86.7	77.3	76.9
5.4	29.0	28.8	37.5	31.5	25.3	39.2	29.2	29.8
5.5	40.2	40.4	41.2	40.6	35.3	54.1	40.3	41.3
<i><b>Prose</b></i>								
6.1	63.4	56.3	50.0	57.2	44.4	74.6	62.3	56.2
6.2	62.6	54.7	69.0	62.1	52.9	69.1	69.5	60.7
6.3	34.4	36.2	35.9	35.4	22.3	27.6	29.2	25.2
6.4	34.0	25.6	28.9	29.9	17.6	20.4	20.1	18.9
6.5.1	13.9	9.4	14.0	12.5	8.8	10.5	11.7	9.9
6.6	41.4	40.6	36.0	39.5	25.6	51.9	47.4	37.2

This task also requires the respondent to understand the relationship between tree and man in the photo and to use measurement units correctly.

The correct rate for this item is slightly lower than the rate for Item 1. The correct rates are 67.2 percent and 59 percent for urban and migrant residents respectively. This item also belongs to Level 2.

The results shown in two questions of Item 3 in the Quantitative domain are more difficult for respondents in all three cities. The correct rates for Question 3.1 are 35.3 percent and 24.8 percent for urban residents and migrants respectively. The correct rates for Question 3.2 are 30.3 percent and 18.6 percent respectively. Both questions are more difficult for the migrant population and the differences between cities can also be observed.

The task in Question 3.1 involves the distance chart, readers were asked to “according to the table, locate the information on which city is closest to Farilo.” Here a semantic relation term was provided, but the quantities were not easily identified. As a result, this task is more difficult than Item 1 and 2 for both city laborers and migrants. The task in Question 3.2 requires the respondents to make an inference to answer the question: ”which two cities are farthest apart?” and was more

difficult for respondents in this study. Both Question 3.1 and 3.2 required the respondents to perform some kind of inference and comparison. In these items, the question or directive does not provide a semantic relation term such as “how many:” or “calculate the difference” to help the reader.

Generally speaking, it is observed that the more difficult items in the quantitative domain are also the most difficult in this study. The differences between city laborers and migrants are bigger for the more difficult items than the easier items. The differences between cities are less than the difference between city laborers and migrants.

### ***Document Literacy***

Item 4 involves 3 questions. Question 4.1 directs the reader to use a chart to identify the year in which the fewest people in Henan were injured by fireworks. Part of what may have made this task somewhat more difficult is that two charts were presented instead of just one. One, labeled “fireworks in Henan,” depicts years and numbers representing funds spent in millions of RMB Yuan, while the other, “Victims of fireworks,” uses a line to show numbers of people treated in hospitals. Another contributing factor may have been that neither graph contains the label “number injured by fireworks.” The reader needs to make a low inference that victims or number treated equates to injuries.

The correct rates of the Question 4.1 are 65.2 percent and 58.7 percent, respectively, for urban laborers and migrants.

This task belongs to Document level 2 in IALS. The Document tasks at this level are a bit more varied: some still require the reader to pick up a single important feature, but more distracting information may be present or the match may require a low level inference. Some tasks at this level may require the reader to enter information onto a form or to cycle through information in a document. Question 4.3 also belongs to this level.

The correct rates of the Question 4.3 are 70.5 percent and 58.2 percent, respectively, for city laborers and migrants.

The task involved in Question 4.2 is relatively simple: it requires respondents to identify the value of fireworks in a given year and all of the information is clearly presented on the chart. The correct rates for Question 4.2 are 68.9 percent and 67.5 percent, respectively, for city laborers and migrants. The possible low level of performance may explain why the difference in the correct rate on this item between urban labor and migrants is smallest among the 3 questions in Item 4.

Item 5 includes 8 questions. The first 4 questions, Question 5.1a to 5.1d, required the respondents to use information from another source to fill out a form. The required pieces of information were model, serial number, date of purchase and purchase price, respectively, in Question 5.1a to 5.1d. This is a frequent task in daily life.

Among the 4 questions, Question 5.1a and Question 5.1d proved relatively difficult for both urban and migrant respondents. Some information apparently caused difficulty for the respondents. The correct rates of Question 5.1a and 5.1d are 54.9 percent, 48.2 and 52.4 percent, 50 percent respectively.

The Question 5.1b and 5.1c were relatively easy for the respondents. They required respondents to

simply locate the specific information. The correct rates were 67.5 percent and 69.5 percent for question 5.1b, and 64.3 percent and 68.1 percent for question 5.1c. The results show again that there is less difference between city laborers and migrants. Sizable numbers of both sampled urban and migrant laborers achieved basic competences.

Question 5.2 and 5.3 require the respondents to make a literal match in order to fill out a form using the information from other resources. The correct rates were also very close between urban laborers and migrants. The correct rates for Question 5.2 were and 5.3 are 74.4 percent, 80.5 percent and 72.3 percent, 76.9 percent, respectively, for city laborers and migrants.

The Question 5.4 and 5.5 require the respondents to make an inference based on the information provided by the item and draw a conclusion. This task was difficult for both the city laborers and migrant. The correct rates of Question 5.4 and 5.5 are 31.5 percent, 40.6 percent and 29.8 percent, 41.3 percent respectively. It is first observed in Question 5.5, the performance of migrants was slightly higher than the performance of city laborers, although the difference is not statistically significant. Relatively lower correct rates for these two questions may relate to the unfamiliar situations presented in the questions.

### ***Prose Literacy***

Item 6 is a representative item of Prose Literacy. It includes 6 questions. The questions require different skills that include understanding the idea of a text; literal match; inferring relationships between a sequence of facts; gathering information expressed in text and diagram; and finding explicit information in a text and recognizing the main idea of a text, when ideas are contained in sub-headings. All these skills are basic competences in the reading and understanding of prose.

Question 6.1 requires the respondent to understand the main idea of a self-contained section of a text. The correct rates of the Question 6.1 are 57.2 percent and 56.2 percent, respectively, for the city laborers and migrants. The differences between cities are relatively significant in this item. The highest value of city laborers in Wuhan is 63.4 percent, while the lowest is 50 percent in Xian. It is also worth mentioning that the highest value of this question among migrants in Shenyang, 74.6 percent, is higher than the highest value of city laborers in Wuhan. The difference is about 11 percent. The biggest difference between cities is observed in this question as well. The lowest value for migrants in Wuhan is 44 percent. The difference between the highest and lowest values for migrant is about 30 percent. This result needs to be explored further. The difference between city laborers and migrants is biggest in Wuhan in this question.

Question 6.2 requires the respondent to make a literal match without any distracting information.

Question 6.3 requires the respondent to make an inferring of the relationship between a sequence of facts. This seems again to be more difficult for respondents. The correct rates are 35.4 percent and 25.2 percent, respectively, for the city laborers and migrants. This pattern is consistent among the cities both for city laborers and migrants.

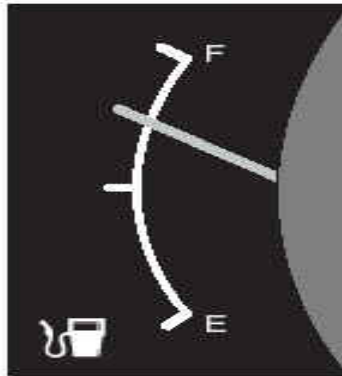
Question 6.4 requires the respondent to gather information expressed in text and diagram. This item also seems relatively difficult to the respondent of this project. The correct rates are 29.9 percent and 18.9, respectively, for the city laborers and migrants. A similar pattern appeared among the three cities. The performance of migrants is lower than city laborers.

Question 6.5 is no more than asking the respondent to find explicit information in a text. It is very

surprising that this item seems to be the most difficult item in this survey. The correct rates of this item are 12.5 percent and 9.9 percent, respectively, for the city laborers and migrants. Actually the message is very clearly displayed in the text. The reader needs find the explicit information in a text, summarize the idea, and write it down in his or her own words. This result requires further exploration.

Question 6.6 requires the respondent to recognize the main idea of a text, when ideas are contained in sub-headings. The correct rates for this question are 39.5 percent and 37.2 percent, respectively, for city laborers and migrants. It seems this question is also relatively difficult for the respondents, although the performance level of this question is still in level 2. A possible reason for the lower correct rates of the last two questions may be time constraints: the respondents were not able to think the questions through during the test time period.

### Question 1



注：F 代表满，E 代表空

1. 这辆车的油箱可以加满48公升的汽油。图上表明现在这个油箱还剩多少油？

-----

This item requires a respondent to manage an everyday situation in which he or she has to interpret information regarding a measurement that is represented in a diagram.

This task involves interpreting a measurement scale and requires that respondent to make an estimate of a quantity, perhaps by generating and then using the benchmark fraction of  $\frac{3}{4}$ . Others may merely attach numbers to scale, reasoning proportionally to estimate the quantity. No additional distracting information is present in the problem.

This item in the IALS belongs to Level 2.



The correct rates of Item 1 by city, sex, education, income, occupation and type of laborer

	Urban Residents				Migrants			
	Wuhan	Shenyang	Xian	Total	Wuhan	Shenyang	Xian	Total
Total	71.6	74.3	75.5	73.6	65.3	65.7	72.7	67.0
Sex								
M	78.1	76.1	77.1	77.2	64.8	61.5	75.7	67.1
F	65.2	72.7	74.0	70.2	66.1	70.2	65.1	67.1
Age Group								
16-20	80.0	70.0	60.0	72.7	77.8	73.5	50.0	69.8
21-30	85.3	75.0	77.4	80.2	68.9	68.4	69.6	68.8
31-40	71.8	79.8	73.1	74.8	64.9	54.1	76.6	66.1
41-50	71.7	69.0	78.3	72.7	52.5	55.6	66.7	55.7
51-60	60.6	76.1	74.2	70.2	71.4	66.7	91.7	81.8
Education								
Illiterate	43.8	50.0	40.0	43.2	50.0		50.0	46.7
Primary	41.9	54.2	62.5	50.8	64.1	45.0	75.0	61.5
Junior Sec	65.1	68.4	70.5	67.7	65.9	62.2	75.0	67.1
Senior Sec	73.2	76.5	75.6	74.8	63.8	80.0	74.3	71.4
Sec Special	81.1	75.6	81.0	79.4	81.8	77.3	66.7	77.8
College & above	85.7	87.7	85.3	86.2	87.5	76.2	88.9	81.6
Master	55.6	83.3	100.0	77.3				
PhD	100.0	100.0	100.0	100.0				
Income								
Below 100	67.4	69.4	71.0	69.3	47.9	75.0	62.1	57.0
100-200	76.3	77.0	77.6	77.0	65.0	66.7	75.0	67.8
200-300	81.7	82.8	77.1	80.7	70.7	68.0	81.8	71.3
300-400	83.1	82.1	84.0	83.1	82.6	75.0	70.0	77.4
400 & above	90.6	85.0	81.6	86.6	64.7	42.3	62.5	55.9
Occupation								
Self-employed	61.4	71.2	69.2	66.5	62.0	60.0	87.9	64.7
Farmers								
Workers	72.6	72.3	75.7	73.5	72.7		66.7	69.2
Administrator	80.2	79.8	77.5	79.0				
Technician	80.3	84.2	83.8	82.7	88.9	100.0	85.7	88.9
Administrator & Technician	78.6	94.4	85.4	85.1			100.0	100.0
Other	68.4	71.6	62.9	68.6	78.6	67.4	64.3	69.1
Total	74.70	75.90	77.20	75.90	77.40	67.80	66.70	70.20

## Question 2



1.您认为树的实际高度是多少？解释一下您的理由。

---

-----  
*This item requires the respondent estimate the height of an unknown object by comparing its height to that of a man standing next to it.*

*The respondent may make some notation (using a piece of paper, a ruler, or a length of finger) of the pictured height of the man. Determine how many man-heights there are in the pictured height of the tree. Multiply the number of man-heights by a typical man's height.*

*Between 24 and 36 feet or its equivalent in meters (7 to 11 meters). Estimated by comparing the tree to the man.*

*The photo of the man and the tree clearly shows the feet of the man and the foot of the tree to be the same distance from the camera, thus avoiding any question about distortion due to perspective. No information is given as to the height of the man.*

*This task also requires the respondent to understand the relationship between tree and man in photo and to use measurement unit correctly.*

## LT2

	Urban Residents			Migrants				
	Wuhan	Shenyang Xian	Total	Wuhan	Shenyang Xian	Total		
Total	70.9	59.4	70.5	67.2	57.6	64.6	55.8	59.0
Sex								
M	74.4	61.1	73.3	70.0	52.0	64.6	56.8	56.5
F	67.7	58.0	67.9	64.7	63.4	64.3	53.5	62.3
Age Group								
16-20	80.0	55.0	70.0	69.1	88.9	55.9	60.0	62.3
21-30	82.8	68.3	67.0	74.3	62.3	68.4	58.9	63.8
31-40	68.0	65.2	73.1	68.6	56.8	62.2	57.8	57.7
41-50	70.8	53.2	70.8	65.4	40.0	66.7	50.0	45.9
51-60	65.4	58.4	69.3	64.6	57.1	66.7	33.3	45.5
Education								
Illiterate	37.5	37.5	40.0	35.1	58.3		50.0	53.3
Primary	58.1	58.1	50.0	52.4	51.6	50.0	25.0	47.9
Junior Sec	63.3	63.3	67.9	60.2	61.1	63.4	54.8	60.2
Senior Sec	73.7	73.7	69.6	69.6	53.2	63.3	68.6	60.7
Sec Special	78.4	78.4	74.7	70.2	72.7	68.2	66.7	69.4
College& above	79.3	79.3	80.2	78.0	62.5	85.7	88.9	81.6
Master	77.8	77.8	100.0	86.4				
PhD	100.0	100.0	100.0	100.0				
Income								
Below 100	65.1	54.8	63.4	60.4	43.8	68.8	37.9	46.2
100-200	74.8	63.3	71.5	70.5	51.8	66.7	56.3	56.3
200-300	84.0	73.1	77.9	78.9	55.4	68.0	68.2	61.0
300-400	81.7	64.3	78.0	75.1	82.6	55.0	50.0	66.0
400 & above	82.4	65.0	83.7	77.3	70.6	53.8	87.5	66.2
Occupation								
Self-employed	62.7	60.6	61.5	61.7	54.6	53.3	69.7	56.2
Farmers		100.0		100.0				
Workers	72.9	58.1	68.7	67.6	69.7		55.6	61.5
Administrators	76.7	61.7	74.6	71.8			100.0	100.0
Technician	78.0	74.2	76.6	76.3	69.0	100.0	57.1	66.7
Administrator & Technician	92.9	77.8	80.5	83.9				0.0
Other	85.7	61.5	80.0	62.1		100.0	100.0	66.7
Total	74.3	62.3	71.6	69.9	69.0	67.1	56.5	65.2

### Question 3

下图代表 6 个城市间的近似距离 ( 公里 )

	板达				
224		法利罗			
98	322		尔文尼		
371	340	273		克曼	
45	269	62	330		米拉坦
244	171	342	515	289	
					左洛斯

1. 根据上表的资料那个城市离法利罗最近？

-----

2. 那两个城市之间距离最远？

-----

*The task in Question 3.1 involves the distance chart, readers were asked to “according to the table, locate the information on which city is closest to Farilo.” Here a semantic relation term was provided, but the quantities were not easily identified.*

*The task in Question 3.2 requires the respondents to making the inference that “which two cities are farthest apart?” was more difficult for the respondents in this study. Both of Question 3.1 and 3.2 required the respondents to perform on some kind of inference and comparison. In these items, the question or directive does not provide a semantic relation term such as “how many:” or “calculate the difference” to help the reader.*

## LT31

	Urban Residents			Migrants				
	Wuhan	Shenyang	Xian	Total	Wuhan	Shenyang		
Total	35.0	30.1	41.2	35.3	20.7	29.8	28.6	24.8
Sex								
M	37.5	33.2	43.8	38.1	19.6	36.5	27.9	26.2
F	32.6	27.3	38.7	32.8	21.9	22.6	30.2	23.2
Age Group								
16-20	44.0	20.0	30.0	32.7	22.2	17.6	10.0	17.0
21-30	45.4	44.2	54.7	47.7	27.0	28.6	26.8	27.5
31-40	33.3	34.8	43.0	36.7	18.4	43.2	35.9	25.5
41-50	33.2	24.7	40.3	32.6	10.0	33.3	33.3	18.0
51-60	32.5	26.8	35.2	31.7	28.6	33.3	8.3	18.2
Education								
Illiterate	18.8		13.3	13.5	25.0			20.0
Primary	30.6	29.2	27.5	29.4	10.9	35.0	25.0	17.7
Junior Sec	27.0	24.5	37.1	28.1	21.3	36.6	26.2	25.7
Senior Sec	31.3	26.5	37.3	32.8	19.1	26.7	34.3	25.9
Sec Special	47.7	29.3	48.1	42.3	36.4	4.5		13.9
College& above	50.2	47.4	57.1	51.5	62.5	38.1	44.4	44.7
Master	66.7	50.0	57.1	59.1				
PhD	100.0	100.0	50.0	75.0				
Income								
Below 100	26.7	28.2	34.4	29.7	6.3	12.5	17.2	10.8
100-200	32.8	30.1	44.9	36.5	19.7	25.0	21.9	21.5
200-300	39.4	35.1	48.1	40.7	21.7	26.0	50.0	26.8
300-400	46.5	39.3	62.0	48.6	34.8	40.0	30.0	35.8
400 & above	64.7	50.0	53.1	57.2	23.5	46.2	62.5	36.8
Occupation								
Self-employed	30.1	27.3	35.9	30.3	16.6	23.3	39.4	19.9
Peasant		100.0		100.0				
Worker	32.5	25.2	39.5	32.7	36.4		11.1	21.8
Administrator	44.0	41.5	45.7	44.0				0.0
Technician	49.6	52.5	49.5	50.6	33.3	50.0	71.4	50.0
Administrator & Technician	53.6	55.6	63.4	58.6				0.0
Other	28.6	38.5	20.0	27.1		50.0		27.9
Total	36.7	33.5	43.0	37.9	28.6	31.5	17.4	27.4

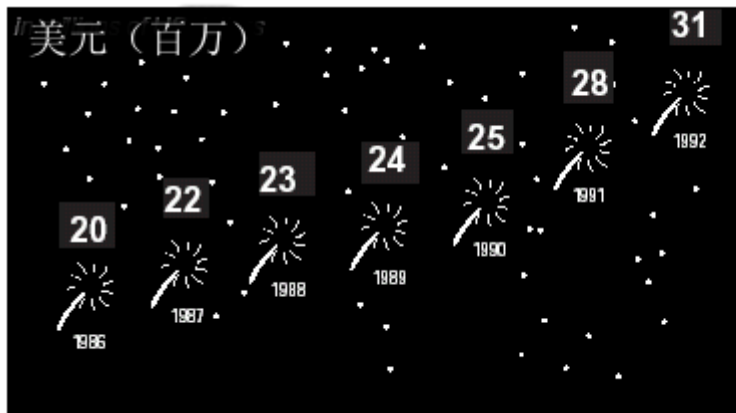
LT32

	Urban Residents				Migrants			
	Wuhan	Shenyang	Xian	Total	Wuhan	Shenyang	Xian	Total
Total	30.8	22.7	37.6	30.3	14.9	21.0	24.7	18.6
Sex								
M	34.1	23.7	41.8	33.2	14.0	20.8	22.5	18.1
F	27.5	21.8	33.6	27.5	15.8	21.4	30.2	19.4
Age Group								
16-20	12.0	20.0	40.0	32.7	22.2	20.6	30.0	22.6
21-30	14.1	11.5	12.3	40.2	17.2	22.4	21.4	19.9
31-40	20.7	19.9	17.8	28.6	13.5	21.6	26.6	17.5
41-50	22.4	23.0	20.8	28.2	10.0	11.1	50.0	18.0
51-60	23.4	22.5	21.3	30.3	28.6			9.1
Education								
Illiterate	18.8		20.0	16.2	16.7			13.3
Primary	25.8	25.0	17.5	23.0	6.3	20.0	8.3	9.4
Junior Sec	25.2	18.0	32.6	23.7	16.6	24.4	22.6	19.6
Senior Sec	29.6	16.3	34.8	29.2	14.9	23.3	28.6	21.4
Sec Special	36.9	25.6	43.0	35.3	36.4	13.6	33.3	22.2
College & above	40.9	36.3	52.0	43.0	25.0	19.0	55.6	28.9
Master	55.6		85.7	50.0				
PhD	100.0	100.0	50.0	75.0				
Income								
Below 100	23.3	19.4	24.7	22.1	2.1	12.5	6.9	5.4
100-200	29.4	26.5	42.6	33.4	16.1	20.0	26.6	19.5
200-300	37.1	23.1	45.8	35.5	14.1	24.0	36.4	20.1
300-400	35.2	19.6	52.0	35.0	21.7	30.0	30.0	26.4
400 & above	52.9	48.3	51.0	51.0	20.6	19.2	37.5	22.1
Occupation								
Self-employed	26.5	24.2	23.1	25.0	13.1	13.3	30.3	15.1
Peasant				0.0				
Worker	30.2	18.1	35.5	28.6	27.3		22.2	24.4
Administrator	35.3	31.9	44.2	37.9				0.0
Technician	39.4	36.7	50.5	41.9	11.1		57.1	27.8
Administrator & Technician	50.0	38.9	43.9	44.8				0.0
Other	14.3	30.8	40.0	24.3		50.0		20.9
Total	32.3	24.8	39.3	32.4	19.0	22.6	24.6	22.1

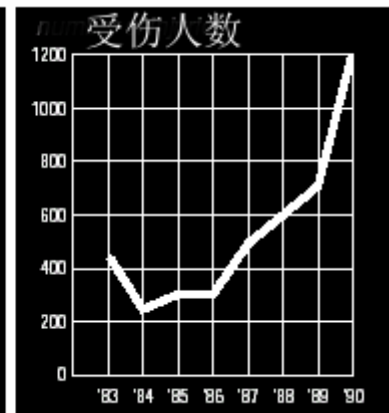
#### Question 4

根据下图回答问题

河南的烟花消费情况



受烟花伤害的情况



1.那一年河南受烟花伤害的人数最少？

-----

2.如图所示，1991年河南烟花的销售价值应为多少？

-----

3.请描述烟花的销售和受烟花伤害之间的关系。

-----

*The Item 4 involves 3 questions. The Question 4.1 directs the reader to use a chart to identify the year in which the fewest people in Henan were injured by fireworks. Part of what may have made this task somewhat more difficult is that two charts were presented instead of just one. One, labeled "fireworks in the Netherlands," depicts years and numbers representing funds spent in millions of US dollars, while the other, "Victims of fireworks," uses a line to show numbers of people treated in hospitals. Another contributing factor may have been that neither graph contains the label "number injured by fireworks." The reader needs to make a low inference that victims or number treated equates to injuries.*

*This kind of tasks belongs to the Document level 2 in IALS. Although the Document tasks at this level are a bit more varied. While some still require the reader to match on a single feature, more distracting information may be present or the match may require a low level inference. Some tasks at this level may require the reader to enter information onto a form or to cycle through information in a document. The Question 4.3 also belongs to this level.*

*The task involves in Question 4.2 is relatively simple. It requires respondents just to identify the value of the firework in a given year. And all of the information is clearly presented on the chart.*

LT41

	Urban Residents				Migrants			
	Wuhan	Shenyang	Xian	Total	Wuhan	Shenyang	Xian	Total
Total	60.5	62.9	73.7	65.2	53.4	68.5	59.7	58.7
Sex								
M	63.9	65.1	72.4	65.5	54.2	70.8	58.6	59.6
F	57.3	62.9	74.9	65.0	53.0	66.7	62.8	58.1
Age Group								
16-20	52.0	65.0	70.0	60.0	55.6	67.6	60.0	64.2
21-30	68.1	73.1	78.3	72.4	47.5	72.4	60.7	59.1
31-40	64.3	65.2	71.5	66.7	56.8	59.5	65.6	59.1
41-50	59.2	56.9	73.6	62.5	57.5	77.8	41.7	57.4
51-60	54.1	64.6	74.2	64.5	42.9	33.3	41.7	40.9
Education								
Illiterate	18.8	16.7	66.7	37.8	66.7		50.0	60.0
Primary	48.4	45.8	70.0	54.8	48.4	70.0	50.0	53.1
Junior Sec	53.0	61.1	71.4	60.4	50.7	72.0	59.5	57.3
Senior Sec	62.8	65.1	69.9	66.1	63.8	73.3	68.6	67.9
Sec Special	73.0	62.2	70.9	69.1	72.7	54.5	66.7	61.1
College& above	69.5	69.0	85.9	74.6	87.5	71.4	44.4	68.4
Master	66.7	83.3	100.0	81.8				
PhD	100.0	100.0	50.0	75.0				
Income								
Below 100	64.0	62.9	77.4	67.7	39.6	50.0	44.8	43.0
100-200	61.1	67.3	73.4	67.3	60.6	66.7	59.4	61.7
200-300	73.7	68.7	78.6	73.6	50.0	72.0	72.7	59.8
300-400	66.2	67.9	80.0	70.6	56.5	50.0	80.0	58.5
400 & above	72.9	55.0	87.8	65.2	55.9	80.8	62.5	66.2
Occupation								
Self-employed	55.4	66.7	74.4	63.3	53.3	60.0	81.8	57.2
Peasant				0.0				
Worker	59.2	63.3	71.7	64.2	48.5		42.2	44.9
Administrator	68.1	63.8	74.6	69.5			100.0	100.0
Technician	72.4	70.0	82.0	74.6	66.7	100.0	85.7	77.8
Administrator & Technician	67.9	77.8	87.8	79.3				0.0
Other	57.1	38.5	80.0	55.0		50.0		66.2
Total	62.0	64.2	74.1	66.6	53.6	70.5	50.7	61.2



LT42

	Urban Residents				Migrants			
	Wuhan	Shenyang	Xian	Total	Wuhan	Shenyang	Xian	Total
Total	71.0	60.8	74.6	68.9	60.6	73.5	76.6	67.5
Sex								
M	74.2	63.7	75.8	71.5	56.4	78.1	78.4	68.1
F	67.9	58.2	73.4	66.5	65.0	67.9	72.1	66.8
Age Group								
16-20	76.0	60.0	60.0	67.3	100.0	64.7	100.0	77.4
21-30	81.6	64.4	72.6	74.3	64.8	79.6	71.4	71.4
31-40	68.7	60.7	73.1	67.4	56.2	64.9	82.8	63.3
41-50	71.7	58.6	76.1	68.9	62.5	77.8	58.3	63.9
51-60	64.5	62.7	75.4	67.8	42.9	66.7	66.7	59.1
Education								
Illiterate	50.0	16.7	40.0	40.5	58.3		50.0	53.3
Primary	59.7	50.0	55.0	56.3	45.3	85.0	75.0	57.3
Junior Sec	67.2	56.1	74.6	64.1	62.1	69.5	73.8	66.3
Senior Sec	71.8	59.0	74.5	70.5	70.2	83.3	82.9	77.7
Sec Special	71.2	61.0	78.5	70.2	81.8	81.8	100.0	83.3
College & above	77.8	74.9	81.9	78.2	75.0	61.9	100.0	73.7
Master	88.9	83.3	71.4	81.8				
PhD	100.0	100.0	100.0	100.0				
Income								
Below 100	74.4	54.0	69.9	64.7	47.9	56.3	69.0	55.9
100-200	74.8	58.7	76.8	71.2	62.8	73.3	79.7	69.3
200-300	75.4	68.7	79.4	74.5	56.5	76.0	77.3	65.2
300-400	74.6	69.6	76.0	73.4	73.9	65.0	70.0	69.8
400 & above	87.1	76.7	87.8	80.4	61.8	76.9	87.5	70.6
Occupation								
Self-employed	69.9	66.7	71.8	69.1	55.5	73.3	81.8	60.3
Peasant		100.0		100.0				
Worker	68.6	58.1	74.5	67.6	63.6		77.8	71.8
Administrator	76.7	70.2	80.4	76.4			100.0	100.0
Technician	79.5	69.2	76.6	75.1	88.9	50.0	85.7	83.3
Administrator & Technician	75.0	77.8	90.2	82.8			100.0	100.0
Other	71.4	53.8	40.0	63.6		100.0	100.0	73.6
Total	71.1	63.3	76.1	70.5	69.0	74.0	79.7	73.9

LT43

	Urban Residents			Migrants			Total	
	Wuhan	Shenyang Xian	Total	Wuhan	Shenyang Xian	Total		
Total	69.1	66.2	76.6	70.5	46.0	76.8	64.9	58.2
Sex								
M	70.6	66.8	78.7	71.9	47.5	76.0	68.5	60.6
F	67.5	65.9	74.7	69.2	44.8	77.4	55.8	55.2
Age Group								
16-20	72.0	65.0	40.0	63.6	88.9	79.4	50.0	75.5
21-30	77.9	80.8	84.9	80.7	47.5	80.6	67.9	63.4
31-40	69.4	68.9	78.1	71.9	43.8	70.3	68.8	52.8
41-50	68.3	59.5	75.5	67.6	42.5	55.6	66.7	49.2
51-60	63.6	67.0	74.6	68.6	42.9	66.7	41.7	45.5
Education								
Illiterate	37.5		53.3	37.8	41.7			33.3
Primary	51.6	41.7	55.0	50.8	31.3	55.0	50.0	38.5
Junior Sec	60.9	57.0	70.1	61.2	45.0	70.7	61.9	54.4
Senior Sec	67.3	63.9	75.3	70.0	59.6	86.7	80.0	73.2
Sec Special	79.3	78.0	82.3	79.8	90.9	100.0	100.0	97.2
College& above	88.7	86.0	91.5	88.7	75.0	85.7	77.8	81.6
Master	88.9	100.0	100.0	95.5				
PhD	100.0	100.0	100.0	100.0				
Income								
Below 100	68.6	60.5	68.8	65.3	25.0	68.8	37.9	36.6
100-200	70.6	66.8	79.5	72.8	46.0	81.7	71.9	60.5
200-300	77.7	72.4	85.5	78.4	51.1	82.0	68.2	62.8
300-400	88.7	82.1	90.0	87.0	56.5	70.0	60.0	62.3
400 & above	89.4	80.0	91.8	87.1	52.9	65.4	87.5	61.8
Occupation								
Self-employed	57.8	68.2	71.8	64.4	43.7	63.3	78.8	49.7
Peasant		100.0		100.0				
Worker	68.4	62.7	76.4	69.4	63.6		64.4	64.1
Administrator	83.6	73.4	80.4	79.6			100.0	100.0
Technician	83.5	82.5	83.8	83.2	77.8	100.0	42.9	66.7
Administrator & Technician	85.7	83.3	97.6	90.8				0.0
Other	71.4	92.3	100.0	65.0		100.0	100.0	71.6
Total	72.4	68.4	79.7	73.7	54.8	79.5	65.2	69.2

Question 5

保修卡  
照相摄影

视录商店

和平里北大街 89 号  
电话: 9670 9601 传真: 9602 5527  
网址:

<http://www.camerashots.com.au>

消费者  
张强  
东四南大街 151 号

照相摄影视录器材商店  
和平里北大街 89 号

发票 26802	日期 99.10.18	时间 12:10
帐号 195927	商品 24 线	REG. 16

产品	品名	序号	目录	数量	单	总价	备注
150214	尼康 80-250mm 变焦相机	30910963		1	249.08	249.08	X
33844	三角架			1	5.66	5.66	X

感谢您的合作!

交易方式 . . . . .	数量 . . . 找赎	小计	254.74
信用卡	\$254.74	总计	254.74

上面是张强在购买照相机时得到的收据，下面是照相机的保修单，利用收据中的信息回答下面的问题。

保修卡 2

<p><b>一年保修：(个人使用)</b></p> <p>此保修业务只适于中国</p> <p>视录器材有限责任公司向原购买者保证此相机无任何材料或工艺方面的缺陷。此保修卡不得转让。</p> <p>在保修期间经公司检验发现产品任何部件在材料或工艺方面有缺陷，公司将负责服务、维修、退换。</p>
<p>请填写清楚</p> <p style="text-align: right;">NO. M 409668</p> <p>相机型号.....</p> <p>.....</p> <p>序列号:..... <i>张强</i>.....</p> <p style="padding-left: 100px;">东四南大街 151 号</p> <p>购机者姓名:.....</p> <p>地址:.....</p> <p>.....</p> <p>.....</p> <p>购机日期:.....</p> <p>购机价格:.....</p>
<p style="text-align: center;">经销商盖章 <i>r</i></p>
<p>请注意:</p> <p><u>及时寄回 - 需贴邮票</u></p>

请于购机后 10 日内填写此卡并寄回视录商店。

根据需要可发放全球范围保修卡。

**题 5.**

**1.利用收据中提供的信息把保修卡填写完整。其中购买者的姓名和地址已经填好了。**  
Using information from another resources to fill form

**2.张强应在多少天内寄回保修卡？**

---

Literal match

**3.张强在商店里买了什么商品？**

---

Literal match

**4.在保修卡的最后印有“需要时可发放全球范围保修卡”。**  
张强非常希望能申请到一张全球范围保修卡，因为：

- A.他刚从国外回来。
- B.他正计划到另一个国家去渡假。
- C.国外的一个朋友要来看他。
- D.相机由某个国家制造，而他住在另一个国家。

**5.收据的末尾印有“谢谢您的合作”，一种可能只是简单的出于礼貌，另一种可能是什么？**

---

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Questions 5.4 and 5.5 require the respondents to make a inference based on the information provided by the item and draw a conclusion.

## LT51A

	Urban Residents				Migrants			
	Wuhan	Shenyang	Xian	Total	Wuhan	Shenyang	Xian	Total
Total	56.2	54.9	53.3	54.9	43.0	70.2	53.9	52.4
Sex								
M	57.8	56.6	55.1	56.6	39.1	64.6	52.3	49.2
F	54.8	53.3	51.5	53.3	47.0	76.2	58.1	56.5
Age Group								
16-20	52.0	55.0		43.6	55.6	67.6	80.0	67.9
21-30	60.7	66.3	66.0	63.8	48.4	73.5	46.4	56.9
31-40	62.6	60.7	60.7	61.4	39.5	70.3	57.8	47.6
41-50	55.4	46.0	47.2	50.2	40.0	55.6	58.3	45.9
51-60	47.2	56.5	50.4	51.2	42.9	33.3	41.7	40.9
Education								
Illiterate	31.3	16.7	26.7	27.0	20.0			33.3
Primary	38.7	25.0	42.5	37.3	41.7	65.0	16.7	39.6
Junior Sec	48.3	48.6	46.0	47.9	35.9	65.9	59.5	51.5
Senior Sec	56.7	56.0	47.4	52.8	42.7	66.7	62.9	58.0
Sec Special	65.8	62.2	65.8	64.7	48.9	90.9		72.2
College& above	71.9	70.8	74.6	72.4	54.5	81.0	66.7	78.9
Master	77.8	66.7	85.7	77.3	87.5			
PhD	100.0		50.0	50.0				
Income								
Below 100	54.7	47.6	31.2	44.6	37.5	75.0	48.3	47.3
100-200	53.8	52.6	58.6	55.2	39.4	71.7	57.8	51.3
200-300	58.9	67.9	66.4	63.9	48.9	64.0	45.5	53.0
300-400	76.1	80.4	70.0	75.7	52.2	75.0	70.0	64.2
400 & above	87.1	58.3	65.3	72.7	50.0	61.5	50.0	54.4
Occupation								
Self-employed	54.2	50.0	48.7	51.6	40.6	56.7	72.7	45.9
Peasant		100.0		100.0				
Worker	53.2	52.3	52.1	52.6	54.5		55.6	55.1
Administrator	67.2	71.3	53.6	62.9				0.0
Technician	70.9	69.2	66.7	69.0	55.6	100.0	42.9	55.6
Administrator & Technician	78.6	55.6	65.9	67.8			100.0	100.0
Other	57.1	69.2	60.0	52.9		100.0		63.7
Total	57.9	58.6	55.5	57.3	46.4	73.3	52.2	60.9

## LT51B

	Urban Residents				Migrants			
	Wuhan	Shenyang	Xian	Total	Wuhan	Shenyang	Xian	Total
Total	68.3	63.6	70.4	67.5	58.7	72.9	67.5	64.3
Sex								
M	69.0	63.7	71.6	68.2	58.7	71.9	67.6	64.5
F	67.5	63.6	69.4	66.9	59.0	73.8	67.4	64.2
Age Group								
16-20	68.0	55.0	50.0	60.0	90.0	70.6	66.7	73.6
21-30	72.4	80.8	81.1	77.2	67.9	76.5	59.0	67.0
31-40	71.1	68.2	74.8	71.2	65.6	70.3	58.9	61.9
41-50	69.1	58.0	68.2	65.5	75.0	55.6	52.5	57.4
51-60	60.2	59.3	65.2	61.7	50.0	66.7	71.4	59.1
Education								
Illiterate	43.8	16.7	40.0	37.8	66.7		50.0	60.0
Primary	51.6	37.5	57.5	50.8	46.9	65.0	33.3	49.0
Junior Sec	61.4	58.0	66.1	61.0	59.2	72.0	67.9	63.9
Senior Sec	68.4	66.3	66.3	67.2	63.8	66.7	77.1	68.8
Sec Special	81.1	69.5	75.9	76.1	72.7	81.8	33.3	75.0
College& above	80.3	78.4	87.6	82.0	87.5	90.5	88.9	89.5
Master	88.9	83.3	100.0	90.9				
PhD	100.0		100.0	75.0				
Income								
Below 100	69.8	56.5	58.1	60.7	50.0	68.8	65.5	58.1
100-200	67.2	65.3	76.4	70.0	54.0	71.7	68.8	61.7
200-300	74.9	75.4	79.4	76.4	65.2	68.0	54.5	64.6
300-400	87.3	78.6	82.0	83.1	65.2	80.0	80.0	73.6
400 & above	89.4	66.7	87.8	82.0	67.6	73.1	62.5	69.1
Occupation								
Self-employed	68.7	59.1	71.8	66.0	56.3	56.7	66.7	57.5
Peasant		100.0		100.0				
Worker	65.4	62.5	69.6	66.0	54.5		75.6	66.7
Administrator	83.6	78.7	73.9	78.4			100.0	100.0
Technician	79.5	75.8	84.7	79.9	66.7	100.0	71.4	72.2
Administrator & Technician	82.1	77.8	82.9	81.6			100.0	100.0
Other	57.1	46.2	60.0	60.0		100.0		72.1
Total	70.1	67.5	72.9	70.3	60.7	76.0	72.5	70.9



## LT51C

	Urban Residents			Migrants			Total	
	Wuhan	Shenyang Xian	Total	Wuhan	Shenyang Xian	Total		
Total	69.6	64.9	73.6	69.4	62.0	77.9	70.8	68.1
Sex								
M	70.1	65.7	73.8	69.9	60.9	77.1	71.2	67.9
F	69.2	64.2	73.4	68.9	63.4	78.6	69.8	68.4
Age Group								
16-20	72.0	65.0	60.0	67.3	66.7	73.5	100.0	77.4
21-30	74.8	80.8	80.2	78.0	61.5	84.7	71.4	71.7
31-40	71.4	68.5	78.9	72.7	63.8	70.3	68.8	65.7
41-50	70.6	59.5	73.0	67.9	52.5	55.6	75.0	57.4
51-60	61.5	61.2	66.8	63.3	71.4	66.7	50.0	59.1
Education								
Illiterate	43.8	16.7	40.0	37.8	66.7		50.0	60.0
Primary	51.6	33.3	60.0	50.8	51.6	65.0	41.7	53.1
Junior Sec	63.8	58.0	68.3	62.3	63.5	76.8	71.4	68.2
Senior Sec	70.7	68.1	71.0	70.3	66.0	70.0	77.1	70.5
Sec Special	82.0	72.0	81.0	78.7	72.7	100.0	66.7	88.9
College & above	79.3	80.7	88.7	82.8	87.5	90.5	88.9	89.5
Master	88.9	83.3	100.0	90.9				
PhD	100.0		100.0	75.0				
Income								
Below 100	70.9	58.9	64.5	64.0	52.1	75.0	62.1	59.1
100-200	67.9	68.9	78.3	72.0	54.7	80.0	75.0	65.5
200-300	77.1	75.4	83.2	78.4	68.5	72.0	59.1	68.3
300-400	85.9	82.1	84.0	84.2	73.9	80.0	90.0	79.2
400 & above	88.2	71.7	87.8	83.0	70.6	76.9	62.5	72.1
Occupation								
Self-employed	74.7	59.1	74.4	69.1	61.1	56.7	75.8	62.3
Peasant		100.0		100.0				
Worker	66.5	63.3	72.2	67.4	57.6		77.8	69.2
Administrator	82.8	80.9	80.4	81.3			100.0	100.0
Technician	79.5	76.7	87.4	81.0	66.7	100.0	71.4	72.2
Administrator & Technician	85.7	77.8	82.9	82.8			100.0	100.0
Other	42.9	69.2	60.0	62.9		100.0		78.1
Total	70.7	68.7	76.2	72.0	63.1	82.9	75.4	75.6

LT51D								
	Urban Residents				Migrants			
	Wuhan	Shenyang	Xian	Total	Wuhan	Shenyang	Xian	Total
Total	46.5	47.9	50.5	48.2	46.0	56.9	51.3	50.0
Sex								
M	45.3	48.7	52.4	48.5	44.7	58.3	55.9	51.3
F	47.7	47.3	48.7	47.9	47.5	54.8	39.5	48.4
Age Group								
16-20	44.0	45.0	30.0	41.8	55.6	52.9	70.0	56.6
21-30	49.1	62.5	61.3	56.3	44.3	59.2	51.8	51.1
31-40	47.3	50.9	52.9	50.2	46.5	56.8	51.6	49.0
41-50	48.8	43.1	49.4	47.2	42.5	44.4	66.7	47.5
51-60	39.4	45.0	45.9	43.4	71.4	66.7	16.7	40.9
Education								
Illiterate	25.0	16.7	26.7	24.3	58.3		50.0	53.3
Primary	35.5	12.5	47.5	34.9	39.1	60.0	33.3	42.7
Junior Sec	41.7	43.0	50.4	44.1	47.4	57.3	53.6	50.9
Senior Sec	48.0	48.2	46.8	47.6	48.9	53.3	54.3	51.8
Sec Special	59.5	53.7	54.4	56.3	36.4	63.6	66.7	55.6
College& above	51.7	60.2	60.5	57.2	50.0	52.4	33.3	47.4
Master	55.6	66.7	57.1	59.1				
PhD			50.0	25.0				
Income								
Below 100	52.3	46.8	49.5	49.2	45.8	50.0	44.8	46.2
100-200	47.3	45.4	55.1	49.7	38.7	61.7	57.8	48.7
200-300	50.3	55.2	52.7	52.5	46.7	64.0	50.0	52.4
300-400	53.5	66.1	58.0	58.8	52.2	45.0	70.0	52.8
400 & above	51.8	53.3	53.1	52.6	55.9	50.0	37.5	51.5
Occupation								
Self-employed	50.6	50.0	53.8	51.1	45.9	50.0	57.6	47.6
Peasant		100.0		100.0				
Worker	45.9	48.2	50.5	48.0	33.3		44.4	39.7
Administrator	54.3	61.7	53.6	56.0			100.0	100.0
Technician	52.0	56.7	55.9	54.7	44.4	50.0	57.1	50.0
Administrator & Technician	42.9	50.0	58.5	51.7				0.0
Other	28.6	46.2	20.0	39.3		100.0		55.2
Total	47.6	51.0	51.5	49.9	41.7	58.2	46.4	50.8

LT52

	Urban Residents				Migrants			
	Wuhan	Shenyang	Xian	Total	Wuhan	Shenyang	Xian	Total
Total	78.5	67.6	76.1	74.4	67.8	81.2	72.7	72.3
Sex								
M	79.7	66.6	75.6	74.4	65.9	77.1	72.1	70.5
F	77.3	68.7	76.6	74.4	69.9	85.7	74.4	74.8
Age Group								
16-20	80.0	60.0	50.0	67.3	77.8	88.2	80.0	84.9
21-30	89.0	77.9	84.9	84.7	72.1	87.8	75.0	78.3
31-40	83.0	68.2	80.6	77.3	66.5	64.9	75.0	68.2
41-50	77.0	65.2	78.0	73.7	60.0	66.7	66.7	62.3
51-60	68.4	66.5	66.4	67.1	57.1	33.3	50.0	50.0
Education								
Illiterate	43.8	16.7	60.0	45.9	66.7		50.0	60.0
Primary	62.9	41.7	60.0	57.9	57.8	50.0	50.0	55.2
Junior Sec	73.0	60.0	65.6	65.9	69.7	82.9	70.2	72.7
Senior Sec	79.9	71.7	77.5	77.4	72.3	83.3	88.6	80.4
Sec Special	90.1	79.3	78.5	83.5	90.9	95.5	33.3	88.9
College& above	89.2	83.0	89.8	87.5	87.5	95.2	100.0	94.7
Master	100.0	83.3	100.0	95.5				
PhD	100.0		100.0	75.0				
Income								
Below 100	75.6	67.7	65.6	69.3	54.2	75.0	48.3	55.9
100-200	80.5	68.9	81.7	77.8	67.9	85.0	81.3	75.1
200-300	87.4	78.4	82.4	83.2	69.6	82.0	77.3	74.4
300-400	91.5	80.4	86.0	86.4	73.9	75.0	70.0	73.6
400 & above	95.3	71.7	89.8	86.6	70.6	73.1	75.0	72.1
Occupation								
Self-employed	74.7	60.6	71.8	69.1	65.1	56.7	75.8	65.4
Peasant		100.0		100.0				
Worker	77.0	66.3	75.7	73.7	78.8		73.3	75.6
Administrator	88.8	83.0	80.4	83.9				0.0
Technician	88.2	79.2	83.8	83.8	77.8	100.0	85.7	83.3
Administrator & Technician	92.9	83.3	92.7	90.8			100.0	100.0
Other	100.0	69.2	80.0	70.0		100.0	100.0	84.6
Total	80.6	71.4	78.5	77.3	78.6	87.7	73.9	81.9

LT53

	Urban Residents				Migrants			
	Wuhan	Shenyang	Xian	Total	Wuhan	Shenyang	Xian	Total
Total	82.3	75.7	82.9	80.5	71.9	86.7	77.3	76.9
Sex								
M	84.2	74.3	84.0	81.1	69.8	85.4	79.3	76.4
F	80.5	77.2	81.9	79.9	74.3	88.1	72.1	77.7
Age Group								
16-20	76.0	75.0	70.0	74.5	66.7	88.2	90.0	84.9
21-30	90.8	87.5	88.7	89.3	74.6	89.8	76.8	80.4
31-40	85.4	77.2	88.0	83.4	71.9	83.8	75.0	74.1
41-50	82.0	74.1	85.2	80.5	62.5	66.7	83.3	67.2
51-60	73.6	70.8	73.0	72.5	85.7	66.7	75.0	77.3
Education								
Illiterate	50.0	16.7	60.0	48.6	75.0			60.0
Primary	67.7	45.8	67.5	63.5	67.2	70.0	41.7	64.6
Junior Sec	77.7	68.9	73.2	73.0	72.5	87.8	77.4	76.9
Senior Sec	84.1	81.3	84.7	83.8	72.3	86.7	88.6	81.3
Sec Special	91.9	87.8	86.1	89.0	90.9	100.0	100.0	97.2
College& above	91.1	87.7	96.0	91.7	100.0	90.5	100.0	94.7
Master	100.0	83.3	100.0	95.5				
PhD	100.0		100.0	75.0				
Income								
Below 100	80.2	78.2	77.4	78.5	64.6	62.5	69.0	65.6
100-200	85.1	79.6	89.0	85.0	70.1	90.0	85.9	78.5
200-300	90.9	81.3	87.8	87.0	71.7	86.0	59.1	74.4
300-400	97.2	85.7	94.0	92.7	87.0	85.0	90.0	86.8
400 & above	94.1	81.7	93.9	90.2	73.5	92.3	62.5	79.4
Occupation								
Self-employed	80.7	71.2	82.1	77.7	69.9	63.3	78.8	70.2
Peasant		100.0		100.0				
Worker	80.6	74.0	82.0	79.3	75.8		86.7	82.1
Administrator	90.5	92.6	87.7	89.9		100.0	100.0	100.0
Technician	92.9	85.8	89.2	89.4	78.6		85.7	83.3
Administrator & Technician	96.4	83.3	100.0	95.4		100.0	100.0	100.0
Other	100.0	84.6	100.0	78.6			100.0	88.6
Total	84.1	79.4	85.0	83.0	77.4	91.8	87.0	86.6

LT54

	Urban Residents				Migrants			
	Wuhan	Shenyang	Xian	Total	Wuhan	Shenyang	Xian	Total
Total	29.0	28.8	37.5	31.5	25.3	39.2	29.2	29.8
Sex								
M	29.3	29.4	36.7	31.6	25.7	25.7	29.7	30.6
F	28.8	28.3	38.3	31.5	25.1	25.1	27.9	28.7
Age Group								
16-20	48.0	25.0	40.0	38.2	11.1	47.1	30.0	37.7
21-30	31.3	37.5	35.8	34.3	28.7	38.8	41.1	34.8
31-40	32.0	28.5	39.7	33.1	25.4	40.5	20.3	26.2
41-50	28.5	27.0	39.3	31.1	20.0	22.2	33.3	23.0
51-60	22.5	28.2	33.6	28.2	14.3		16.7	13.6
Education								
Illiterate	12.5	33.3	26.7	21.6	16.7			13.3
Primary	16.1	25.0	27.5	21.4	21.9	20.0	33.3	22.9
Junior Sec	25.5	22.5	38.4	27.0	26.1	47.6	27.4	31.0
Senior Sec	29.9	35.5	37.0	33.9	29.8	43.3	31.4	33.9
Sec Special	33.3	35.4	34.2	34.2	18.2	31.8	33.3	27.8
College& above	37.4	34.5	42.9	38.3	50.0	38.1	22.2	36.8
Master	44.4	33.3	42.9	40.9				
PhD	100.0			25.0				
Income								
Below 100	26.7	23.4	38.7	29.0	20.8	43.8	24.1	25.8
100-200	32.1	33.7	40.3	35.5	25.5	40.0	29.7	29.9
200-300	32.0	32.8	37.4	33.9	29.3	42.0	18.2	31.7
300-400	29.6	26.8	42.0	32.2	30.4	50.0	40.0	39.6
400 & above	40.0	33.3	46.9	39.7	32.4	34.6	37.5	33.8
Occupation								
Self-employed	32.5	25.8	33.3	30.3	26.6	36.7	27.3	27.7
Peasant		100.0		100.0				
Worker	26.7	28.2	37.4	30.5	33.3		26.7	29.5
Administrator	36.2	34.0	44.9	39.1		50.0	100.0	100.0
Technician	35.4	30.8	35.1	33.8	33.3		42.9	38.9
Administrator & Technician	39.3	27.8	39.0	36.8				0.0
Other	42.9	30.8	60.0	33.6			100.0	36.8
Total	29.9	29.8	38.6	32.7	28.6	41.1	30.4	35.1

LT55

	Urban Residents			Migrants				
	Wuhan	Shenyang	Xian	Total	Wuhan	Shenyang		
Total	40.2	40.4	41.2	40.6	35.3	54.1	40.3	41.3
Sex								
M	42.5	40.5	40.2	41.2	36.3	47.9	42.3	40.9
F	38.1	40.4	42.1	40.0	33.9	60.7	34.9	41.3
Age Group								
16-20	52.0	50.0	30.0	47.3	44.4	61.8	50.0	56.6
21-30	52.8	52.9	49.1	51.7	35.2	62.2	42.9	46.4
31-40	39.5	50.2	40.1	43.2	36.8	32.4	37.5	36.4
41-50	37.8	31.3	42.1	37.1	30.0	33.3	33.3	31.1
51-60	35.9	35.9	38.1	36.7	14.3	33.3	41.7	31.8
Education								
Illiterate	12.5		20.0	13.5	25.0			20.0
Primary	30.6	16.7	22.5	25.4	25.0	20.0	8.3	21.9
Junior Sec	34.4	30.7	29.5	31.8	38.4	52.4	42.9	42.4
Senior Sec	40.8	48.8	43.3	43.3	38.3	56.7	48.6	46.4
Sec Special	45.0	43.9	51.9	46.7	45.5	86.4	33.3	69.4
College& above	53.2	61.4	54.8	56.3	50.0	61.9	66.7	60.5
Master	77.8	66.7	28.6	59.1				
PhD	100.0			25.0				
Income								
Below 100	37.2	35.5	32.3	35.0	35.4	56.3	27.6	36.6
100-200	42.4	40.8	45.6	43.1	32.1	68.3	45.3	43.7
200-300	45.1	47.8	49.6	47.3	26.1	46.0	36.4	33.5
300-400	47.9	50.0	44.0	47.5	56.5	30.0	50.0	45.3
400 & above	62.4	55.0	46.9	56.2	50.0	46.2	50.0	48.5
Occupation								
Self-employed	36.1	43.9	28.2	37.2	34.5	30.0	45.5	35.3
Peasant		100.0		100.0				
Worker	38.6	34.8	38.3	37.5	54.5		40.0	46.2
Administrator	52.6	51.1	50.0	51.1		100.0	100.0	100.0
Technician	51.2	64.2	49.5	55.0	11.1		71.4	44.4
Administrator & Technician	60.7	44.4	63.4	58.6		100.0		0.0
Other	28.6	61.5	40.0	36.4			100.0	53.7
Total	42.6	43.5	43.2	43.0	41.7	59.6	44.9	51.2

## Question 6

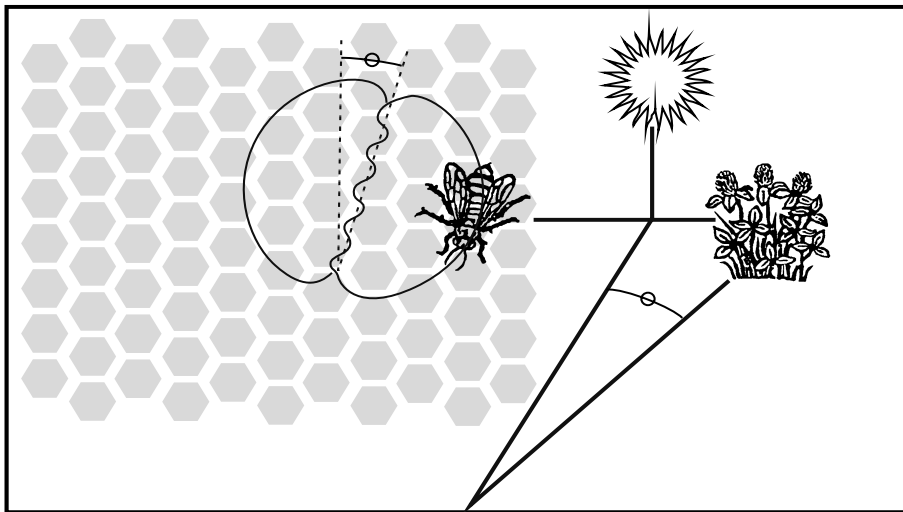
### 蜜蜂

下面所提供的资料是来自一本关于蜜蜂的小册子。回答下列问题，请参考课文中的资料。

#### 采集花蜜

蜜蜂酿蜜以维持生活。蜂蜜是它们赖以生存的唯一食品。如果在一个蜂巢中有60,000只蜜蜂，大约三分之一是从事采花蜜工作的。采来的花蜜由蜂巢中的工蜂制成蜂蜜。一小部分蜜蜂担任外出寻找花蜜的工作。它们发现花蜜以后，就回到蜂巢，向其他蜜蜂报告花蜜的所在处。

外出找蜜的蜜蜂向其他蜜蜂传达花蜜所在处的信息时，是用一种舞蹈方式来指示方向和距离的。在舞蹈动作中，蜜蜂向左右震颤它的腹部，同时也循一个“8”字形的路线绕行。它的舞蹈方式可以从下面的图解中表示出来。



上面的图解是一个蜂巢的正面俯视图。图中显示一只蜜蜂正在一个蜂房中跳舞。如果“8”字形的中间线是直上直下的，就表示蜜蜂们可以向着太阳方向找到食物。如果“8”字形的中间线是斜向右侧的，食物的所在地就是在太阳的右侧。

食物的所在地和蜂房的距离是由蜜蜂震颤腹部的时间长短而表示的。如果食物所在地距离蜂房很近，蜜蜂震颤腹部的时间就很短。如果距离很远，它震颤腹部的时间就很长。

## 酿蜜过程

蜜蜂采集花蜜归来后，把花蜜交给制蜜的工蜂。制蜜工蜂以下颚搅动花蜜，使之与蜂巢中的温暖干燥的空气接触。刚采集来的花蜜含有糖分和矿物质，混于约占百分之八十的水中。搅动约十分到二十分钟，在大部分水分都蒸发后，酿蜜工蜂把花蜜移入蜂巢的蜂室中；这时，水分蒸发仍在进行中。三天以后，蜂室中的蜜只含有百分之二十的水分了。在此阶段蜜蜂将蜂室用蜂蜡封口。

在一个固定时间内，一个蜂房内的蜜蜂都采集同一类花的花蜜，而又都来自同一地区。花蜜的主要来源是果树、三叶草和开花的树木。

**词汇：** 工蜂 在蜂巢里做工的蜜蜂。 下颚 嘴的下部。

### 1. 蜜蜂为什么要跳舞？

- A. 庆贺酿蜜的成功。
- B. 指明蜜蜂找到的花蜜类别。
- C. 庆贺蜂后的生日。
- D. 指示寻蜜蜜蜂发现食物的所在。

Understanding the main idea of a self-contained section of a text.

### 2. 写出花蜜的三个主要来源。

- 1.
- 2.
- 3.

Literal match, no distracting information

### 3. 花蜜和蜂蜜有什么区别？

- A. 在于其水分含有量的不同。
- B. 在于其中糖分和矿物质含量比例之不同。
- C. 是因为原料来自不同树木而有异。
- D. 是因担任酿蜜的蜂种不同而有别。

*Inferring relationship between a sequence of facts*

### 4. 参看本文中的图解。

在蜜蜂的舞蹈过程中，“8”字形的中间线所倾斜的角度代表什么意思？



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Gathering information expressed in text and diagram.

**5. 蜜蜂使用何种动作来表示食物距蜂房的距离？**

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Finding explicit information in a text

**6. 读了短文之后，你觉得应该给这篇文字拟一个什么题目才最恰当？**

- A. 筑造一个蜂房。**
- B. 昆虫的舞蹈。**
- C. 蜜蜂的生命周期。**
- D. 从花蜜到蜂蜜。**

Recognizing the main idea of a text, when ideas are contained in sub-headings.

LT61

	Urban Residents				Migrants			
	Wuhan	Shenyang	Xian	Total	Wuhan	Shenyang	Xian	Total
Total	63.4	56.3	50.0	57.2	44.4	74.6	62.3	56.2
Sex								
M	66.1	56.6	50.9	58.6	49.2	77.1	61.3	59.6
F	60.8	56.2	49.1	55.8	39.9	72.6	65.1	52.3
Age Group								
16-20	60.0	50.0	50.0	54.5	11.1	76.5	80.0	66.0
21-30	71.8	73.1	63.2	69.7	47.5	80.6	71.4	64.1
31-40	67.0	61.4	52.1	60.6	45.9	62.2	62.5	51.7
41-50	63.6	48.9	49.4	55.1	40.0	55.6	41.7	42.6
51-60	52.8	54.5	43.0	49.9	14.3	66.7	25.0	27.3
Education								
Illiterate	37.5	33.3	33.3	35.1	58.3			46.7
Primary	43.5	41.7	27.5	38.1	34.4	45.0	66.7	40.6
Junior Sec	55.6	44.5	44.6	48.6	40.8	74.4	58.3	52.0
Senior Sec	64.5	68.1	51.5	59.8	63.8	86.7	77.1	74.1
Sec Special	73.0	58.5	58.2	64.3	72.7	86.4	33.3	77.8
College& above	79.3	76.6	58.2	71.7	50.0	85.7	77.8	76.3
Master	100.0	83.3	28.6	72.7				
PhD	100.0		100.0	75.0				
Income								
Below 100	60.5	61.3	51.6	58.1	41.7	81.3	48.3	50.5
100-200	66.0	55.6	51.7	58.0	46.7	68.3	64.1	55.9
200-300	76.6	68.7	59.5	69.1	40.2	78.0	72.7	56.1
300-400	84.5	66.1	56.0	70.6	43.5	75.0	80.0	62.3
400 & above	82.4	65.0	51.0	69.1	52.9	73.1	75.0	63.2
Occupation								
Self-employed	65.1	56.1	59.0	60.6	42.4	56.7	57.6	45.5
Peasant		100.0		100.0				
Worker	61.1	52.6	49.1	55.1	54.5		64.4	60.3
Administrator	80.2	71.3	48.6	65.2			100.0	100.0
Technician	75.6	75.8	54.1	69.0	11.1	50.0	85.7	44.4
Administrator & Technician	75.0	72.2	75.6	74.7				0.0
Other	57.1	30.8	40.0	48.6		100.0	100.0	72.1
Total	65.9	60.0	50.5	59.1	47.6	79.5	65.2	67.2

LT62

	Urban Residents				Migrants			
	Wuhan	Shenyang	Xian	Total	Wuhan	Shenyang	Xian	Total
Total	62.6	54.7	69.0	62.1	52.9	69.1	69.5	60.7
Sex								
M	64.4	56.6	70.7	63.9	50.8	71.9	66.7	60.6
F	60.8	53.1	67.4	60.4	55.2	66.7	76.7	61.3
Age Group								
16-20	76.0	50.0	60.0	63.6	55.6	64.7	90.0	67.9
21-30	77.3	76.0	84.0	78.8	56.6	76.5	71.4	66.7
31-40	68.0	62.5	74.4	68.1	55.1	59.5	67.2	58.4
41-50	58.1	46.3	67.3	57.1	27.5	44.4	58.3	36.1
51-60	52.8	48.8	59.8	54.1	71.4	66.7	66.7	68.2
Education								
Illiterate	37.5	16.7	53.3	40.5	58.3	65.0		46.7
Primary	46.8	33.3	52.5	46.0	40.6	69.5	66.7	49.0
Junior Sec	52.8	44.5	61.2	51.1	54.5	73.3	65.5	60.2
Senior Sec	60.3	62.0	69.0	64.2	63.8	72.7	85.7	73.2
Sec Special	79.3	65.9	69.6	72.4	63.6	71.4	66.7	69.4
College& above	79.3	71.9	82.5	78.0	62.5		100.0	76.3
Master	100.0	83.3	100.0	95.5				
PhD	100.0		100.0	75.0				
Income								
Below 100	60.5	52.4	65.6	58.7	56.3	68.8	55.2	58.1
100-200	63.7	53.6	77.2	65.9	48.9	71.7	70.3	59.4
200-300	78.9	68.7	77.1	75.2	46.7	76.0	68.2	58.5
300-400	84.5	71.4	72.0	76.8	78.3	50.0	80.0	67.9
400 & above	80.0	66.7	79.6	75.8	55.9	76.9	87.5	67.6
Occupation								
Self-employed	57.8	45.5	79.5	58.0	51.5	63.3	60.6	53.8
Peasant		100.0		100.0				
Worker	60.4	53.4	65.7	60.2	72.7		80.0	76.9
Administrator	78.4	73.4	77.5	76.7			100.0	100.0
Technician	77.2	70.8	74.8	74.3	22.2	50.0	85.7	50.0
Administrator & Technician	75.0	66.7	85.4	78.2			100.0	100.0
Other	85.7	61.5	80.0	52.9		100.0	100.0	68.7
Total	65.2	59.5	70.0	65.1	58.3	71.2	81.2	69.9

LT63

	Urban Residents				Migrants			
	Wuhan	Shenyang	Xian	Total	Wuhan	Shenyang	Xian	Total
Total	34.4	36.2	35.9	35.4	22.3	27.6	29.2	25.2
Sex								
M	36.0	36.3	35.6	35.9	24.0	32.3	29.7	27.7
F	32.9	36.2	36.2	34.9	20.8	22.6	27.9	22.3
Age Group								
16-20	28.0	35.0	20.0	29.1	11.1	23.5		17.0
21-30	46.0	47.1	40.6	44.8	20.5	29.6	26.8	25.0
31-40	36.1	39.3	45.0	39.9	25.4	29.7	34.4	28.0
41-50	32.1	32.8	31.1	32.0	17.5	11.1	33.3	19.7
51-60	29.4	32.5	31.6	31.1	14.3	33.3	33.3	27.3
Education								
Illiterate	18.8	16.7	20.0	18.9	50.0	20.0		40.0
Primary	25.8	29.2	15.0	23.0	18.8	30.5	25.0	19.8
Junior Sec	25.5	27.7	29.0	27.2	18.0	30.0	25.0	22.3
Senior Sec	33.5	38.6	32.9	34.2	31.9	18.2	40.0	33.9
Sec Special	45.0	35.4	43.0	41.5	36.4	38.1		22.2
College& above	50.2	54.4	52.0	52.1	50.0		44.4	42.1
Master	77.8	83.3	85.7	81.8				
PhD	100.0		50.0	50.0				
Income								
Below 100	32.6	33.9	34.4	33.7	18.8	25.0	6.9	16.1
100-200	34.7	31.1	39.2	35.4	23.4	28.3	31.3	26.4
200-300	43.4	45.5	38.2	42.5	18.5	36.0	45.5	27.4
300-400	56.3	55.4	42.0	52.0	34.8	15.0	40.0	28.3
400 & above	54.1	46.7	57.1	52.6	23.5	30.8	25.0	26.5
Occupation								
Self-employed	28.9	33.3	28.2	30.3	21.8	16.7	27.3	21.9
Peasant		100.0		100.0				
Worker	32.8	31.8	34.8	33.2	15.2		28.9	23.1
Administrator	56.0	43.6	41.3	46.8				0.0
Technician	43.3	52.5	46.8	47.5	11.1		71.4	33.3
Administrator & Technician	46.4	50.0	48.8	48.3				0.0
Other	28.6	46.2		30.0				29.4
Total	37.5	38.2	38.0	37.9	20.2	30.8	30.4	27.8

LT64

	Urban Residents				Migrants			
	Wuhan	Shenyang	Xian	Total	Wuhan	Shenyang	Xian	Total
Total	34.0	25.6	28.9	29.9	17.6	20.4	20.1	18.9
Sex								
M	33.2	27.2	26.4	29.3	19.6	18.8	19.8	19.4
F	34.8	24.2	31.3	30.4	15.8	22.6	20.9	18.4
Age Group								
16-20	32.0	10.0	20.0	21.8	44.4	20.6	20.0	24.5
21-30	50.9	43.3	46.2	47.5	18.9	24.5	23.2	21.7
31-40	31.0	31.1	28.9	30.4	17.8	10.8	18.8	17.1
41-50	32.3	18.7	25.2	26.2	10.0	11.1	16.7	11.5
51-60	29.4	23.0	26.6	26.5		33.3	16.7	13.6
Education								
Illiterate	18.8	16.7	6.7	13.5	25.0			20.0
Primary	21.0	20.8	17.5	19.8	4.7	30.0		9.4
Junior Sec	27.0	18.0	22.8	22.3	18.5	14.6	17.9	17.5
Senior Sec	30.7	28.9	24.1	27.7	27.7	20.0	31.4	26.8
Sec Special	46.8	32.9	32.9	38.6	18.2	27.3		22.2
College& above	50.2	40.9	48.0	46.6	37.5	28.6	44.4	34.2
Master	77.8	50.0	57.1	63.6				
PhD	100.0		50.0	50.0				
Income								
Below 100	33.7	21.0	22.6	25.1	16.7	18.8	13.8	16.1
100-200	34.0	21.4	34.2	30.7	13.9	21.7	17.2	16.5
200-300	39.4	35.1	33.6	36.4	18.5	24.0	18.2	20.1
300-400	47.9	26.8	40.0	39.0	17.4	10.0	40.0	18.9
400 & above	57.6	33.3	38.8	45.4	23.5	23.1	37.5	25.0
Occupation								
Self-employed	34.9	16.7	20.5	25.5	15.7	16.7	21.2	16.4
Peasant				0.0				
Worker	33.2	21.9	26.6	28.1	27.3		22.2	24.4
Administrator	44.0	35.1	35.5	38.2				0.0
Technician	42.5	37.5	34.2	38.3	11.1		28.6	16.7
Administrator & Technician	53.6	50.0	53.7	52.9				0.0
Other	14.3	15.4	40.0	20.7		50.0	100.0	23.4
Total	35.9	27.7	30.3	31.7	23.8	21.2	26.1	23.1

LT65-1

	Urban Residents				Migrants			
	Wuhan	Shenyang	Xian	Total	Wuhan	Shenyang	Xian	Total
Total	13.9	9.4	14.0	12.5	8.8	10.5	11.7	9.9
Sex								
M	14.1	10.2	17.3	13.9	7.8	12.5	13.5	10.6
F	13.7	8.7	10.9	11.3	9.8	8.3	7.0	9.0
Age Group								
16-20	8.0	5.0	20.0	9.1	11.1	8.8		7.5
21-30	14.7	11.5	15.1	13.9	12.3	12.2	7.1	11.2
31-40	20.1	10.9	11.6	14.4	7.6	10.8	14.1	9.4
41-50	11.4	8.6	17.9	12.4	5.0		8.3	4.9
51-60	11.3	8.1	10.7	10.1			33.3	18.2
Education								
Illiterate		16.7	6.7	5.4				0.0
Primary	8.1		7.5	6.3	3.1	10.0	8.3	5.2
Junior Sec	10.2	9.1	12.1	10.1	11.8	9.8	9.5	10.9
Senior Sec	12.8	12.0	14.2	13.3	6.4	10.0	17.1	10.7
Sec Special	20.7	8.5	6.3	12.9	9.1	4.5	33.3	8.3
College& above	23.2	9.4	19.8	17.8	12.5	19.0	11.1	15.8
Master	33.3	33.3	14.3	27.3				
PhD			50.0	25.0				
Income								
Below 100	7.0	11.3	12.9	10.6	10.4	25.0	6.9	11.8
100-200	15.3	9.7	18.3	14.8	5.1	8.3	10.9	7.3
200-300	20.0	11.9	13.0	15.5	12.0	12.0	18.2	12.8
300-400	22.5	12.5	18.0	18.1	8.7	5.0		5.7
400 & above	28.2	6.7	14.3	18.0	11.8	11.5	12.5	11.8
Occupation								
Self-employed	10.8	9.1	15.4	11.2	10.0	6.7	6.1	9.2
Peasant		100.0		100.0				
Worker	13.6	9.6	10.5	11.6	9.1		11.1	10.3
Administrator	17.2	10.6	21.0	17.0			100.0	100.0
Technician	25.2	8.3	18.9	17.6	11.1			5.6
Administrator & Technician	32.1	22.2	22.0	25.3			100.0	100.0
Other		7.7		5.7				11.4
Total	16.0	9.5	14.2	13.5	9.5	11.0	14.5	11.4

LT65-2

	Urban Residents				Migrants			
	Wuhan	Shenyang	Xian	Total	Wuhan	Shenyang	Xian	Total
Total	36.8	35.9	38.4	37.0	23.7	44.2	39.6	32.5
Sex								
M	39.2	35.6	37.3	37.6	24.0	43.8	39.6	33.4
F	34.3	36.2	39.4	36.4	23.5	45.2	39.5	31.6
Age Group								
16-20	48.0	45.0	10.0	40.0	33.3	35.3	60.0	39.6
21-30	55.8	51.9	53.8	54.2	27.9	54.1	46.4	40.9
31-40	32.3	43.4	48.3	40.8	23.2	29.7	39.1	27.6
41-50	35.7	27.6	28.9	31.3	15.0	33.3	25.0	19.7
51-60	29.9	31.1	35.2	32.2		33.3	8.3	9.1
Education								
Illiterate	25.0		13.3	16.2	50.0			40.0
Primary	22.6	29.2	22.5	23.8	17.2	30.0	25.0	20.8
Junior Sec	32.8	25.0	35.7	30.1	20.9	36.6	35.7	27.6
Senior Sec	35.2	42.2	32.6	35.4	38.3	46.7	48.6	43.8
Sec Special	49.5	37.8	54.4	47.4	27.3	77.3	33.3	58.3
College & above	44.8	55.0	51.4	50.1	37.5	61.9	88.9	63.2
Master	55.6	50.0	85.7	63.6				
PhD	100.0			25.0				
Income								
Below 100	37.2	30.6	29.0	32.0	27.1	31.3	34.5	30.1
100-200	39.3	30.6	40.3	37.3	21.2	46.7	35.9	30.7
200-300	46.9	46.3	50.4	47.7	20.7	40.0	50.0	30.5
300-400	54.9	48.2	50.0	51.4	17.4	55.0	50.0	37.7
400 & above	43.5	60.0	53.1	51.0	35.3	38.5	37.5	36.8
Occupation								
Self-employed	34.9	31.8	33.3	33.5	20.5	33.3	39.4	24.0
Peasant				0.0				
Worker	36.1	32.3	38.3	35.8	42.4		51.1	47.4
Administrator	45.7	46.8	39.9	43.7				0.0
Technician	40.9	55.8	44.1	46.9	11.1	100.0	71.4	44.4
Administrator & Technician	39.3	44.4	56.1	48.3				0.0
Other	14.3	30.8	80.0	28.6		100.0	100.0	41.8
Total	37.5	39.1	39.8	38.7	29.8	47.9	49.3	43.1

LT66

	Urban Residents				Migrants			
	Wuhan	Shenyang	Xian	Total	Wuhan	Shenyang	Xian	Total
Total	41.4	40.6	36.0	39.5	25.6	51.9	47.4	37.2
Sex								
M	43.7	41.4	36.0	40.7	26.3	46.9	48.6	37.8
F	39.2	40.0	36.0	38.5	25.1	58.3	44.2	36.8
Age Group								
16-20	36.0	40.0	10.0	32.7	11.1	41.2	60.0	39.6
21-30	49.1	58.7	50.0	52.0	32.0	62.2	60.7	48.6
31-40	48.0	49.4	38.8	45.7	23.8	40.5	42.2	30.1
41-50	39.1	31.0	33.3	35.0	22.5	33.3	33.3	26.2
51-60	32.9	36.4	31.6	33.5		33.3	16.7	13.6
Education								
Illiterate	25.0	33.3	13.3	21.6	33.3			26.7
Primary	25.8	20.8	25.0	24.6	18.8	20.0	25.0	19.8
Junior Sec	34.9	28.9	29.9	31.3	24.6	45.1	50.0	34.7
Senior Sec	40.5	45.8	35.1	39.3	31.9	66.7	57.1	49.1
Sec Special	53.2	50.0	45.6	50.0	36.4	72.7	33.3	58.3
College& above	53.7	60.8	44.6	53.0	50.0	76.2	55.6	65.8
Master	66.7	83.3	42.9	63.6				
PhD	100.0		50.0	50.0				
Income								
Below 100	40.7	41.9	30.1	38.0	25.0	56.3	34.5	33.3
100-200	41.2	36.2	41.1	39.8	21.2	51.7	50.0	35.2
200-300	50.9	52.2	41.2	48.4	29.3	50.0	59.1	39.6
300-400	57.7	57.1	50.0	55.4	30.4	40.0	30.0	34.0
400 & above	62.4	51.7	32.7	51.5	32.4	57.7	50.0	44.1
Occupation								
Self-employed	41.0	22.7	38.5	34.0	24.5	43.3	54.5	29.8
Peasant				0.0				
Worker	37.2	37.0	33.9	36.1	30.3		55.6	44.9
Administrator	47.4	51.1	39.1	45.1				0.0
Technician	52.8	58.3	38.7	50.3	22.2	100.0	71.4	50.0
Administrator & Technician	60.7	61.1	51.2	56.3				0.0
Other	28.6	38.5	20.0	36.4		100.0	100.0	48.8
Total	41.5	43.9	36.1	40.4	28.6	54.8	55.1	47.5



## **Appendix 2**

### **The China Urban Labor Survey (CULS)**

#### **Collaboration with Local Offices of the State Statistical Bureau.**

The CULS was administered from November 2001 to January 2002 in five large Chinese cities: Shanghai, Shenyang, Wuhan, Xian and Fuzhou. The survey was administered by the Institute for Population Studies at the Chinese Academy of Social Sciences (CASS-IPS), in collaboration with local offices of the National Statistical Bureau in each of the five cities. In four of the cities the surveys were conducted by the urban survey unit of the provincial statistical bureau (the *cheng diao dui*) and in Shenyang by the enterprise survey unit..

#### **Survey Teams, Supervisors and Monitoring.**

All local enumerators, supervisors and monitors participated in an intensive week-long training program including lectures and discussion of interview methods, questionnaire content, data quality checks, survey protocol, mock interviews, and a certification test. Survey manuals developed specifically for the CULS were provided to all enumerators, supervisors and monitors. Each supervisor coordinated ten enumerators, and each enumerator was responsible for surveying ten households. Enumerators and supervisors were provided financial incentives (bonuses) if they achieved low error rates. Enumerators were dismissed without pay and supervisor remuneration was withheld if any returned survey instruments contained falsified information or if enumerators failed to enumerate each adult member of an assigned household. If any of enumerator questionnaires were falsified, the entire set of households assigned to the enumerator was resurveyed. Monitors were hired from among graduate students in the local city and were trained in the instruments along with enumerators and monitors. Other than this contact, monitors were from different work-units and had no contact or relationship with enumerators and supervisors of the survey. Ten percent of all households were randomly resurveyed and short interviews were conducted by monitors, who were then provided bonuses for finding falsified interviews. In addition, monitors assisted in the first pass of reviewing survey instruments for inconsistencies and obvious problems. Upon discovering logical errors or inconsistencies, households were re-interviewed by phone for small problems, and through follow-up visits for larger problems.

#### **The Role of the Neighborhood Committee (originally known as the *Juweihui*, recently reformed and called *She Qu*).**

The neighborhood committee is the lowest administrative unit in urban China and keeps updated records of all residents in their geographically defined neighborhood. Since China maintains a strict household registration system, these form a reliable record of households classified as urban residents and migrants with legal temporary residence. Neighborhood committee members are familiar with members of the community, and refusal rates were kept low by using them to facilitate introductions to heads of households scheduled for interviews. The neighborhood committee also has

knowledge about basic features of the population in the neighborhood, and the neighborhood committee is responsible for distributing the minimum living allowance to eligible households. For this reason, we also asked a member of the committee to fill out a short questionnaire.

### **The Urban Household Sample Frame.**

Within each city we used a proportional population sampling approach to sample an average of 15 households in each of 70 neighborhood clusters, using the 2000 population census as an aid to sampling clusters and households. An average of 10 households would be interviewed in each community, and an additional 5 would be available for interview if households could not be found, had moved, or refused to be interviewed. The local NSB assisted in developing sample frames and in coordinating local enumerators and supervisors, and the research team chose the actual sample.

### **The Migrant Sample Frame.**

In order to get a separate representative sample of migrants, we used the 2000 Population Census to first sample 60 communities. The 2000 Census asked a question about household registration that allowed us to determine the distribution of migrants across cities. While the same migrants may not be living in the same location as they had one year earlier, we assumed that the distribution of migrants across communities would remain the roughly the same. Once a neighborhood was selected for the migrant sample, the administrative records of the neighborhood committee were used to constructing a sample frame of all registered migrants within the neighborhood. Some migrants working at large units such as hotels or construction teams are registered by their work units directly with the local urban district police station (*paichusuo*). These migrants were also included in the sampling frame. Unregistered migrants are not contained in the sample frame; thus, we do not survey short-term migrants who fail to register for legal temporary residence.

### **The China Urban Adult Cognitive Ability Survey.**

A follow-up survey covering recent work experience, pension plan participation, and testing adult cognitive ability was administered in both Urban and Migrant households during September-November 2002. The recontact rate was above 90 percent in each city.