

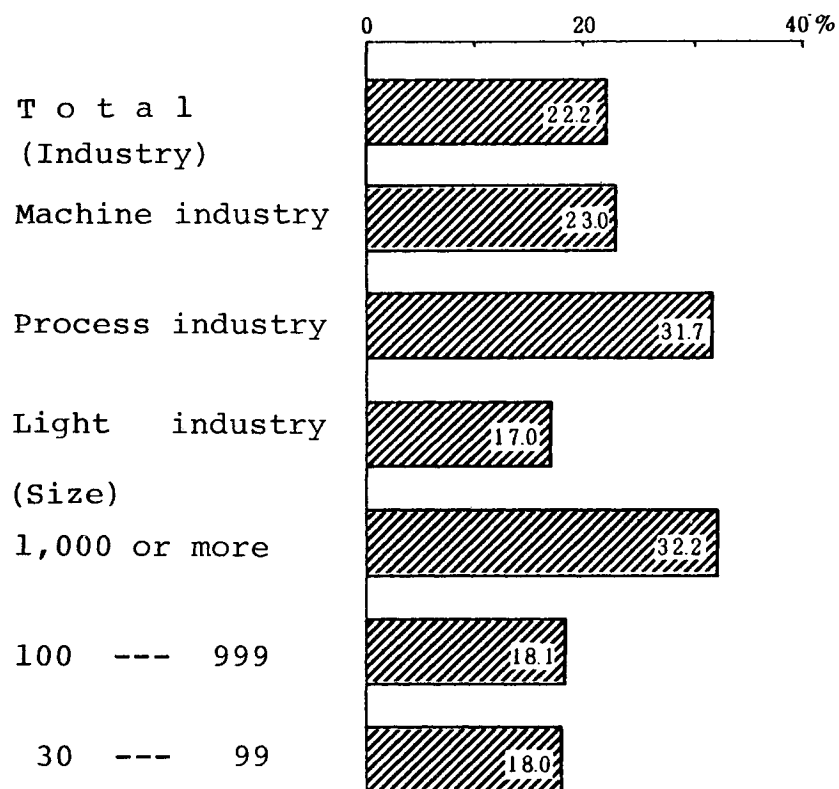
APPENDIX II  
TABLES AND FIGURES

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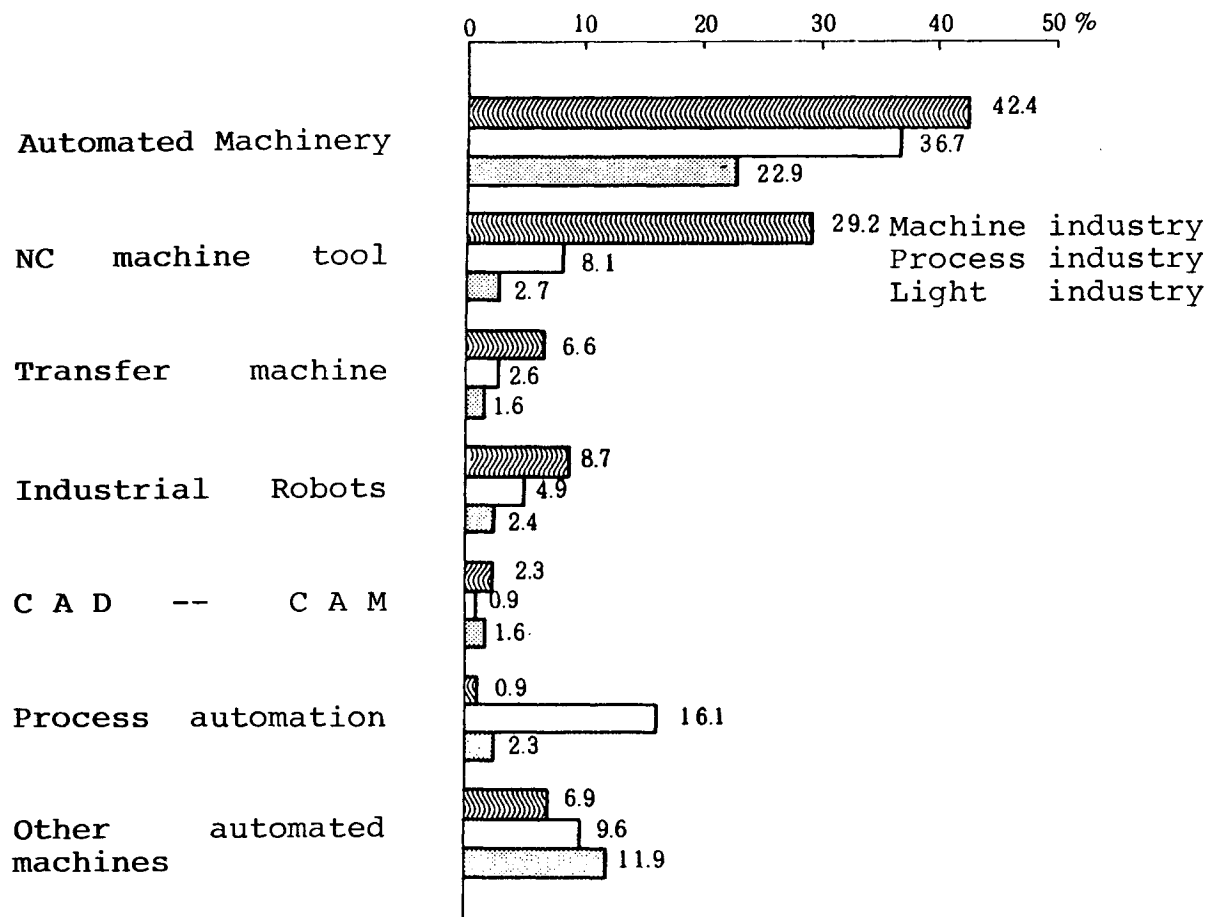
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Figure 1-1: Percentage of Skilled Workers Using Automated Machinery, by Industry and Size of Enterprise



(Source: Shokugyo Kunren Kenkyu Sentaa: "Gijutsu Kakushin, Chukoreika to Jinzai no Yukokatsuyo ni Kansuru Chosakekka Hokoku" (Research and Development Institute of Vocational Training (ed) "Survey Research Report on the Technological Progress, Ageing of the Workforce and the Effective Use of Human Resources") January 1983

Figure 1-2: Ratio of Installed Automated Machinery  
by Industry and Type of Equipment  
(Multiple responses)



(Source: As in Figure 1-1)

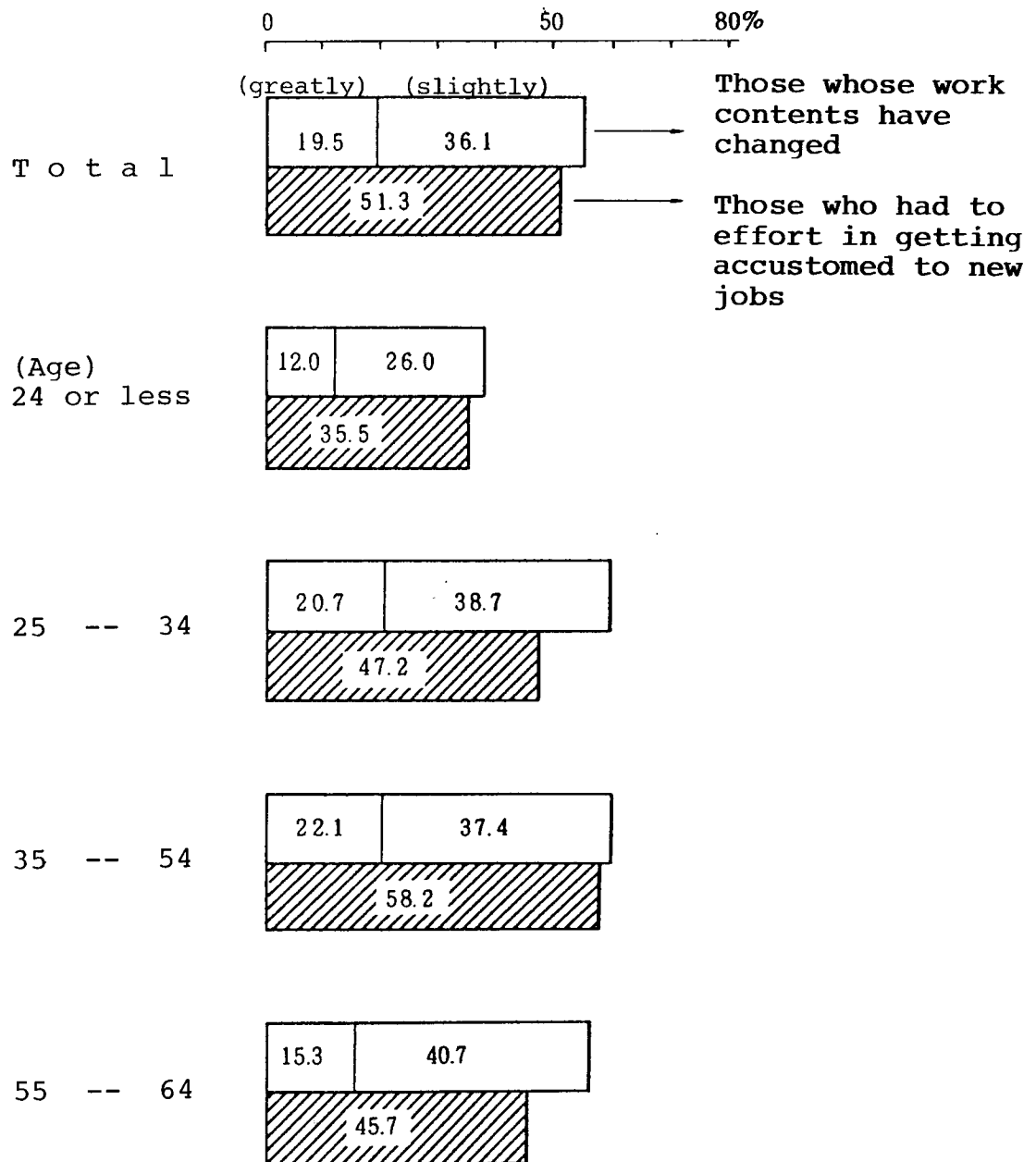
Table 1-1: Percentage of Workers Using OA-equipment by User Situation

	Total number of workers	OA-equipment users			Non users
		sub total	using one kind of OA- equip- ment	using two kinds or more	
T o t a l	100.0	51.4	(23.9)	(27.5)	48.6
M a l e	100.0	46.7	(21.1)	(25.6)	53.3
(By age)					
29 or less	100.0	58.5	(25.2)	(33.3)	41.5
30 -- 39	100.0	53.2	(22.6)	(30.6)	46.8
40 -- 49	100.0	34.0	(17.6)	(16.4)	66.0
50 and over	100.0	19.1	(12.3)	( 6.8)	80.9
F e m a l e	100.0	60.1	(29.2)	(30.9)	39.9
(By age)					
29 or less	100.0	65.4	(30.5)	(34.9)	34.6
30 -- 39	100.0	54.3	(29.5)	(24.8)	45.7
40 -- 49	100.0	35.0	(20.8)	(14.2)	65.0
50 and over	100.0	25.1	(17.6)	( 7.5)	74.9
(By size of enterprise)					
5,000 and over	100.0	67.7	(21.7)	(46.0)	32.3
1,000 -- 4,999	100.0	63.6	(22.9)	(40.7)	36.4
300 -- 999	100.0	50.6	(25.8)	(24.8)	49.4
100 -- 299	100.0	40.6	(24.5)	(16.1)	59.4
(By occupation)					
Manager	100.0	31.8	(16.6)	(15.2)	68.2
Specialist, engineer, researcher	100.0	39.4	(17.9)	(21.4)	60.6
Clerk	100.0	60.4	(29.1)	(31.3)	39.6
Sales-man	100.0	31.9	(15.9)	(16.0)	68.1
Data processing worker	100.0	92.2	(32.0)	(60.2)	7.8
Others	100.0	11.8	( 7.7)	( 4.1)	88.2

(Note: The percentage of OA-equipment users as of the total number of workers in offices and non-production departments at headoffices of private companies with more than 100 employees.)

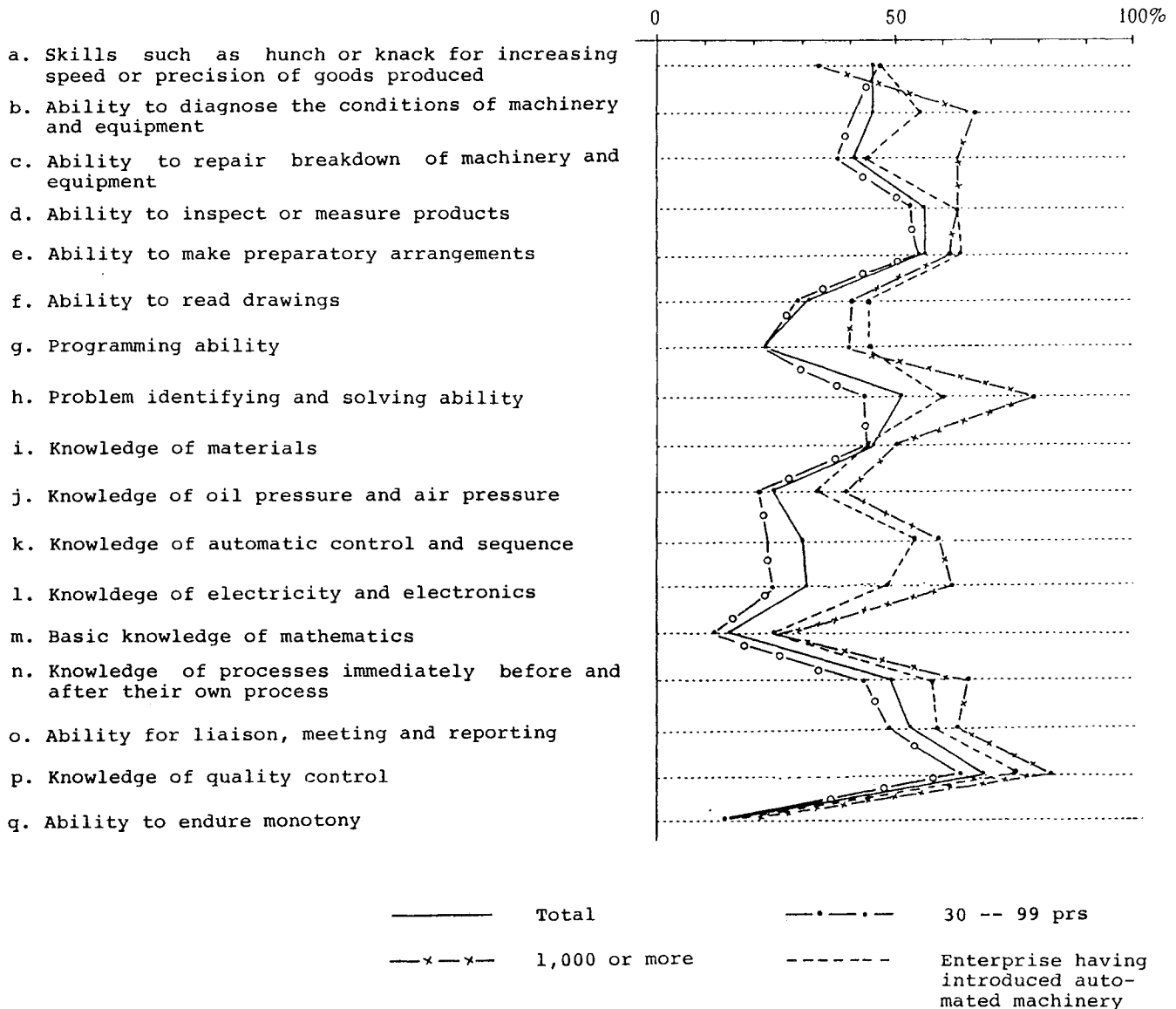
(Source: Rodosho: "Gijutsukakushin to Rodo ni Kansuru Chosa" (Ministry of Labour: Survey on the Technological Progress and Labour, October 1983)

Figure 1-3: Ratio of Skilled Workers Who, During the Past 5 Years have Experienced Change in the Contents of Their Work and Who Have Had to Take Efforts in Order to Adapt to These Changes.



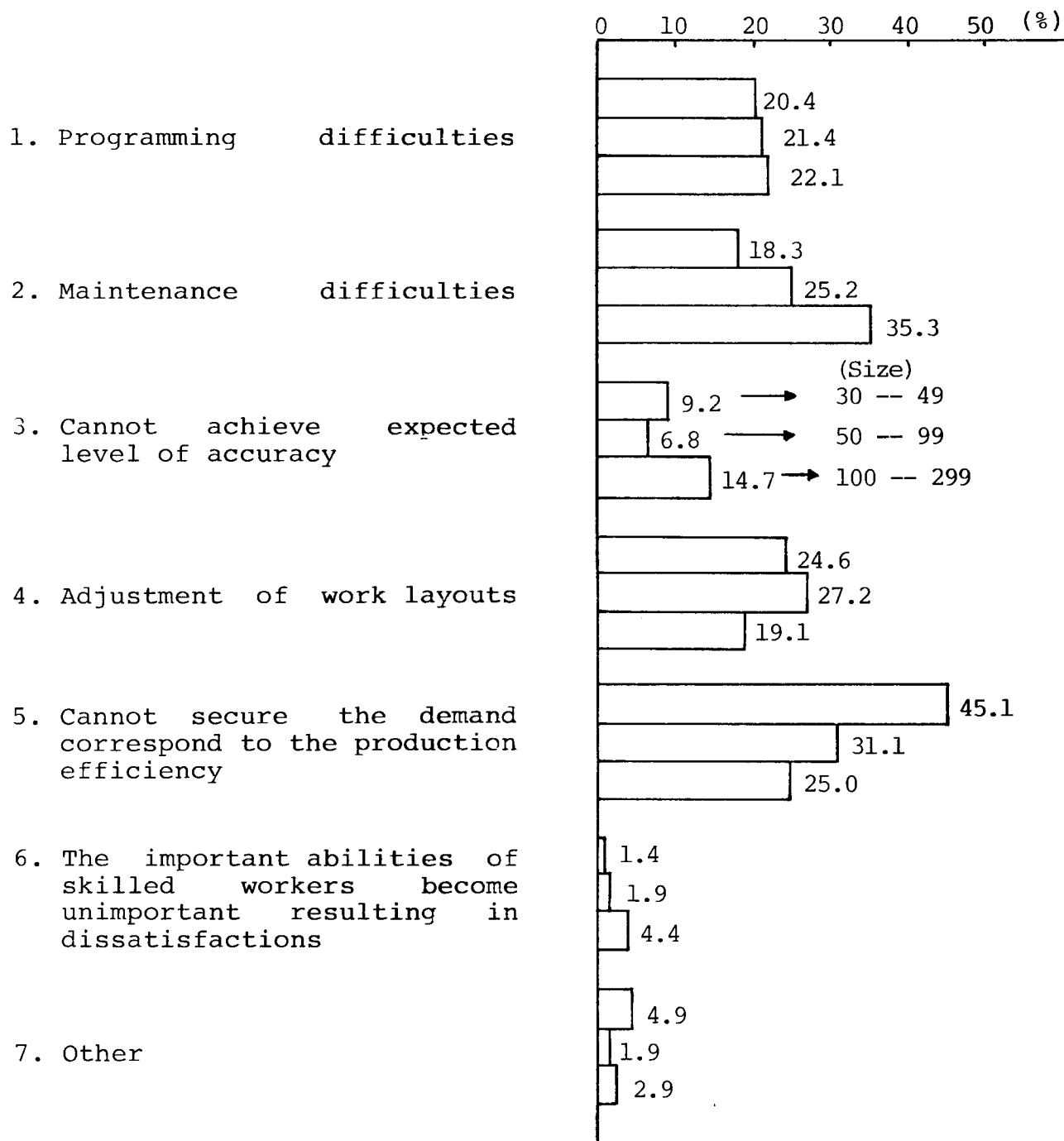
(Source: As in Figure 1-1)

Figure 1-4: What Types of Skills and Knowledge Do Companies Expect from Their Key Skilled Workers. Percentages of Establishments Where the Respective Skills Have Become Increasingly Important.



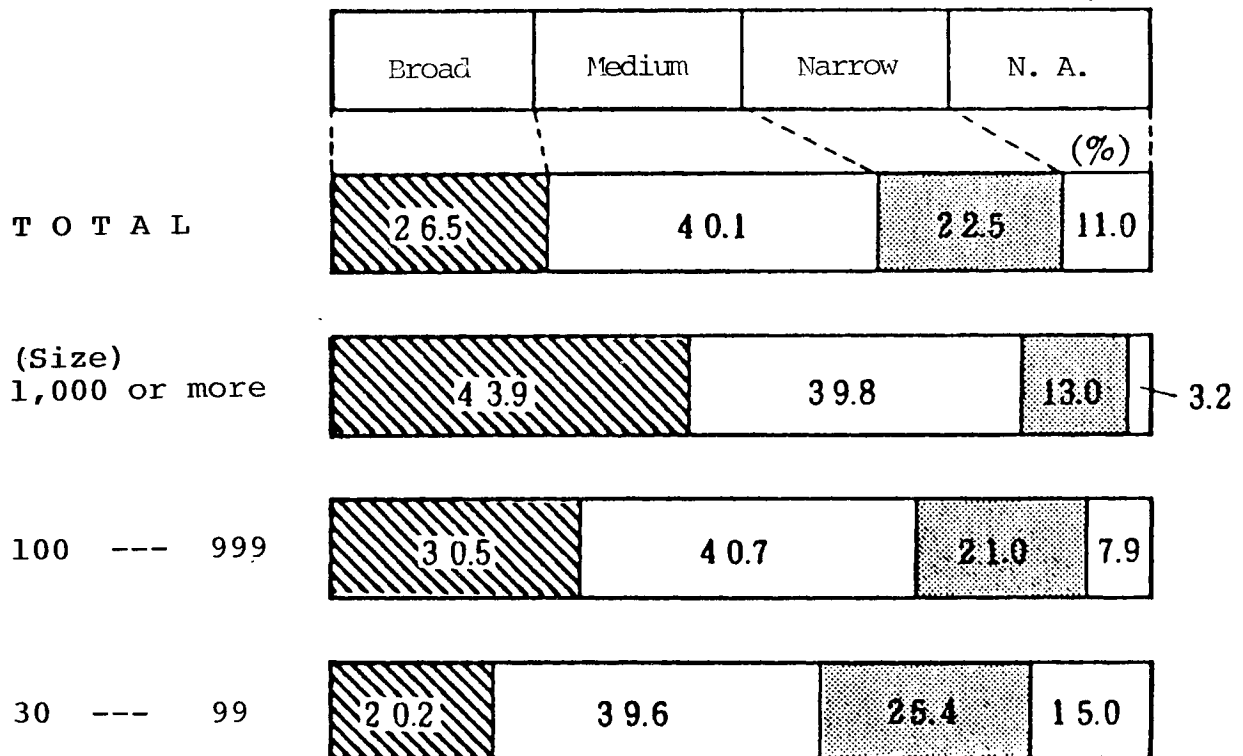
(Source: As in Figure 1-1)

Figure 1-5: Types of Troubles in Introducing Automated Equipment, by Size of Enterprise



(Source: Shokugyo Kunren Kenkyu Centaa: "Chushokigyo ni Okeru Gijutsukakushin no Shinten to Jinzai no Yukokatsuyo ni Kansuru Chosahokoku" (Research and Development Institute of Vocational Training: Survey Report on the Technological Progress and the Effective use of Human Resources in Small and Medium sized Enterprises) March 1984)

Figure 1-6: The Scope of NC-machine Tools -related Tasks Given to Skilled Workers, by Size of Enterprise



(Note: The respective items are: 1) starting, stopping, inspection; 2) measurements, surveys, record-keeping; 3) programming; 4) change of preparatory arrangements, adjustments; 5) preventive maintenance, diagnosis; 6) simple repair; 7) large repair work. If the skilled workers in question were assigned 5 or more of the above mentioned items, the scope of their tasks was defined as "broad", if 3 or 4 as "medium" and if 1 or 2 as "narrow".)

(Source: As in Figure 1-1)

Table 1-2: Types of Labour-related Problems Following the Introduction of OA-equipments, by Size of Enterprise

Companies which introduce OA-equipment	Companies which answered that there will be problems following the introduction of OA-equipments											Companies which has no specific problems
	Type of problem (Multiple response)											
	Utilization of older employees	Occupational training	ensure the new knowledge and technology	monotonous work	morale down	Adjustment of promotion, income increase, personnel	Adjustment of wage system	Completion of health control system	Other			
Sub total	100.0	44.9(100.0)	(17.3)	(22.6)	(76.7)	(20.9)	(3.3)	(4.7)	(3.3)	(29.7)	(0.5)	55.1
(Size)												
5,000 and more	100.0	62.7(100.0)	(19.3)	(27.3)	(71.7)	(14.2)	(-)	(2.0)	(2.0)	(43.3)	(-)	37.3
1,000 -- 4,999	100.0	62.7(100.0)	(25.4)	(22.3)	(72.9)	(17.8)	(3.6)	(4.0)	(2.3)	(29.1)	(0.5)	37.3
300 -- 999	100.0	52.4(100.0)	(19.9)	(24.1)	(76.8)	(22.5)	(3.8)	(5.6)	(2.1)	(26.3)	(0.2)	47.6
100 -- 299	100.0	40.0(100.0)	(14.8)	(21.8)	(77.5)	(21.0)	(3.1)	(4.4)	(4.0)	(30.9)	(0.7)	60.0

(Note: Choice of no more than two alternatives)  
 (Source: Rodosho: "Gijutsukakushin to Rodo ni Kansuru Chosa" (Ministry of Labour: Survey on the Technological Progress and Labour) October 1983)

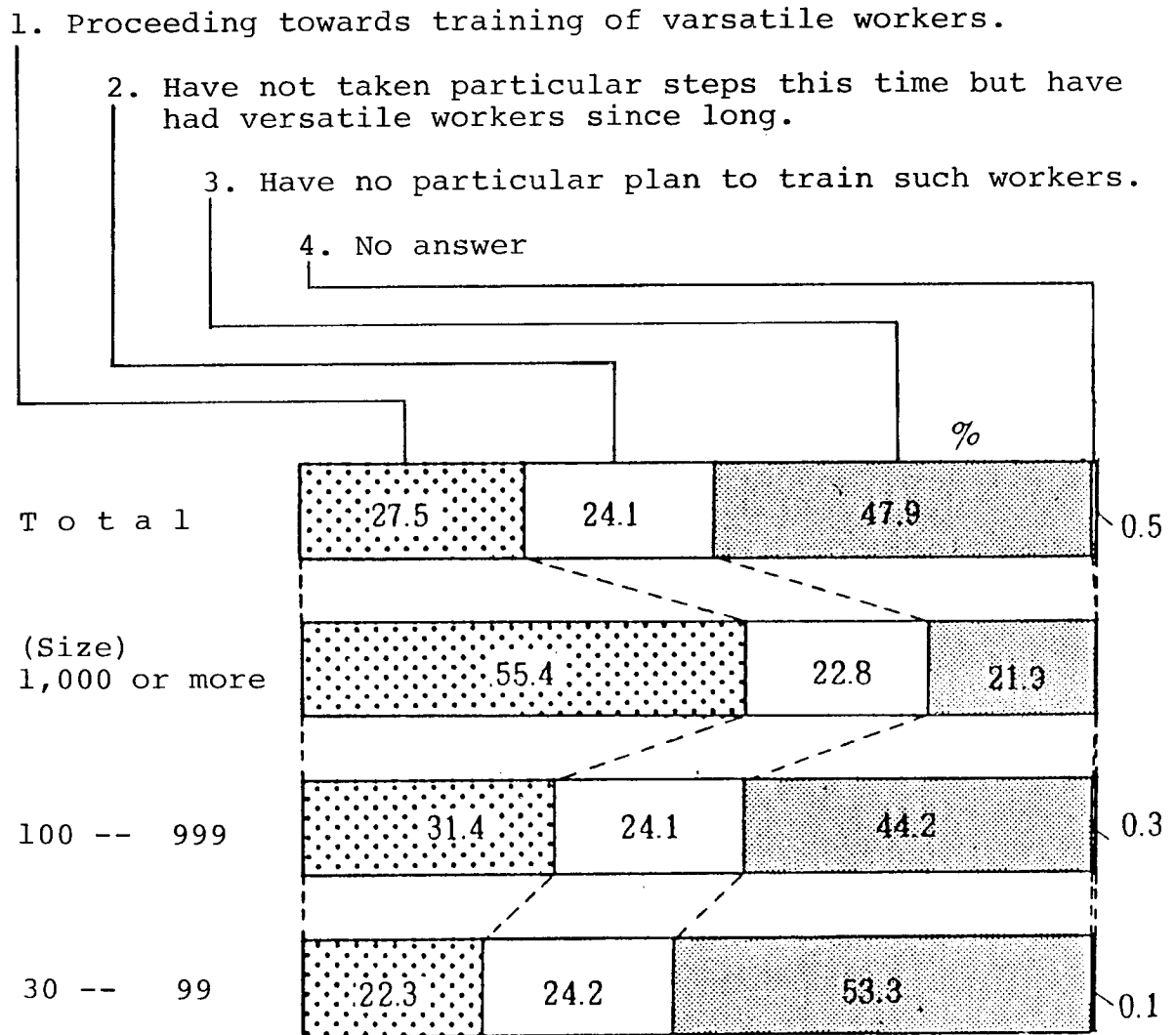
Table 1-3: Methods Used for Improving the Occupational Competency of Employees

Type of work	Total	Training at work (O. J. T.)			Only OJT completed with classroom training				Build an environment facilitating self-learning	N.A.
		sub total	superiors and seniors teach during work	Experience various jobs by rotation	sub total	within the company	use outside training and education seminar	use both in-company and outside seminar		
engineers	100.0	40.5	(32.6)	( 7.9)	37.2	( 8.1)	( 8.5)	(20.6)	4.6	17.6
office workers	100.0	68.2	(56.8)	(11.4)	23.6	( 8.9)	( 2.7)	(12.0)	3.3	4.9
Salesmen	100.0	48.6	(39.5)	( 9.1)	29.3	(13.4)	( 3.0)	(12.9)	4.0	18.1
Technicians (highly skilled)	100.0	28.0	(23.0)	( 5.0)	35.4	( 9.1)	( 8.2)	(18.1)	3.9	32.8
Skilled workers	100.0	50.5	(41.9)	( 8.6)	27.8	(11.5)	( 3.8)	(12.5)	3.5	18.1
Engineeres (by size of enterprise)										
Engineeres total	100.0	40.5	(32.6)	( 7.9)	37.2	( 8.1)	( 8.5)	(20.6)	4.6	17.6
30 --- 99	100.0	40.3	(30.2)	(10.1)	30.7	( 6.9)	( 9.0)	(14.8)	5.8	23.3
100 --- 299	100.0	38.1	(30.0)	( 8.1)	40.4	( 6.7)	( 9.9)	(23.8)	2.7	18.8
300 --- 499	100.0	41.7	(36.2)	( 5.5)	40.9	(10.2)	( 7.1)	(23.6)	5.5	11.8
500 --- 999	100.0	41.0	(35.5)	( 5.5)	41.0	( 5.5)	( 9.1)	(26.4)	6.4	11.8
1,000 or more	100.0	43.4	(33.6)	( 9.8)	40.9	(13.9)	( 5.7)	(21.3)	4.1	11.5

(Note: Among the training and education methods implemented the most important one was to be chosen)

(Source: Rodosho Shokugyokunrenkyoku: "Shokugyonoryoku no Kaihatsukojyo ni Kansuru Chosakekkahokoku" (Ministry of Labour, Vocational Training Bureau: "Survey Report on Occupational Competency Improvement) May 1980 )

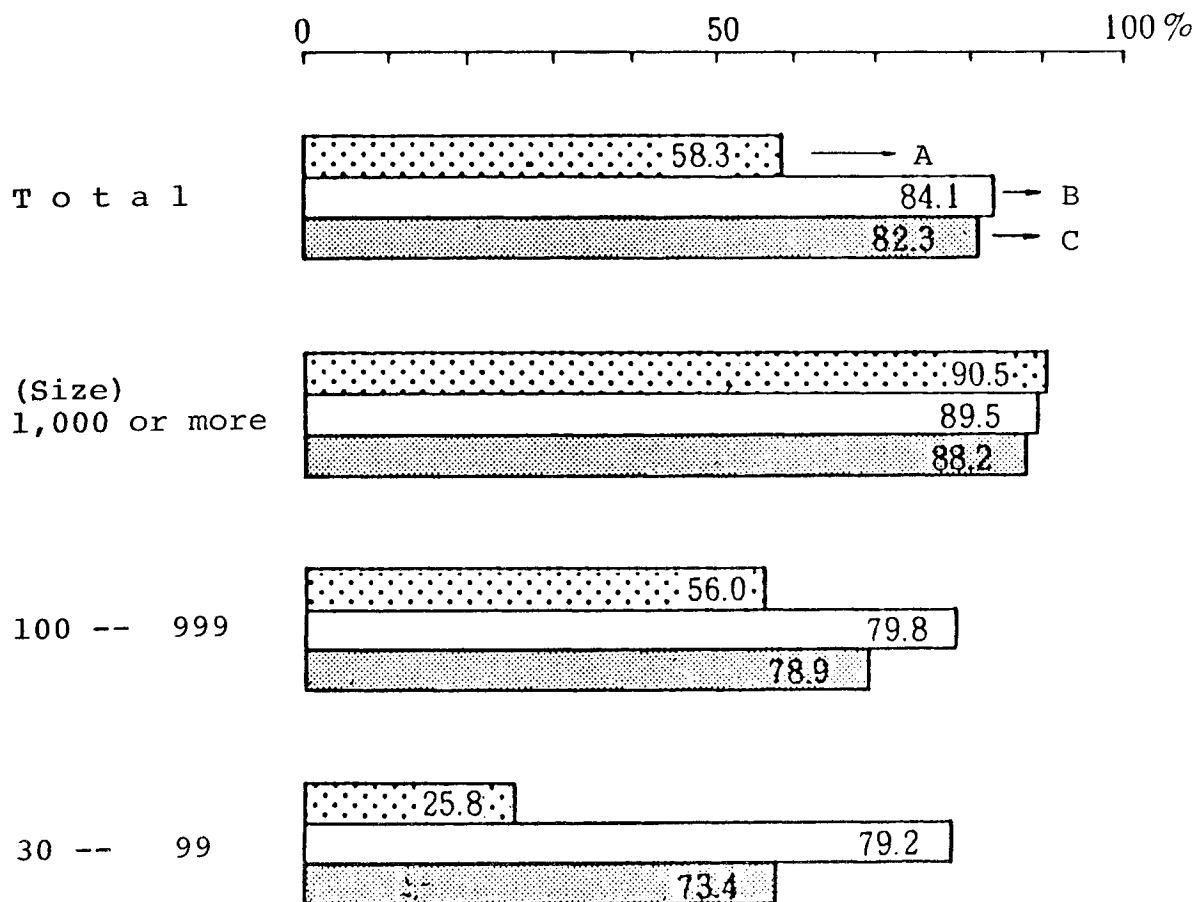
Figure 1-7: Percentage of Establishments where Versatility of Workers is Promoted, by Size of Enterprise



(Source: As in Figure 1-1)

Figure 1-8: Percentage of People in whose Worksite there are QC, ZD etc. -oriented Small Group Activities, Percentage of People Participating and People Approving these Activities by Size of Enterprise

- A. Percentage of people in whose worksite there are small groups, of total number of employees.
- B. Participation ratio in small groups, of total number of people in whose worksite there are small groups.
- C. Ratio of members approving the activity, of group members.



(Source: As in Figure 1-1)

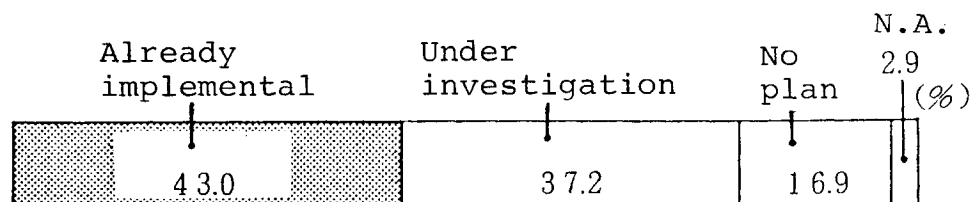
Table 1-4: Past Changes and Future Estimates of the Size of the Working Population, by Age

Age	Working Population (ten thousands)					
	1970	1975	1980	1985	1990	2000
T o t a l	5,153	5,323	5,650	5,816	6,137	6,413
15 -- 19	309	168	147	159	155	115
20 -- 24	809	650	552	569	630	611
25 -- 29	643	747	662	559	617	759
30 -- 44	1,830	1,945	2,169	2,203	2,133	1,934
45 -- 54	815	1,011	1,208	1,255	1,354	1,520
55 -- 59	303	314	385		552	617
60 -- 64	222	243	248		373	416
65 or more	231	245	279	281	323	441
45 -- 64	1,339	1,568	1,841	2,045	2,279	2,553

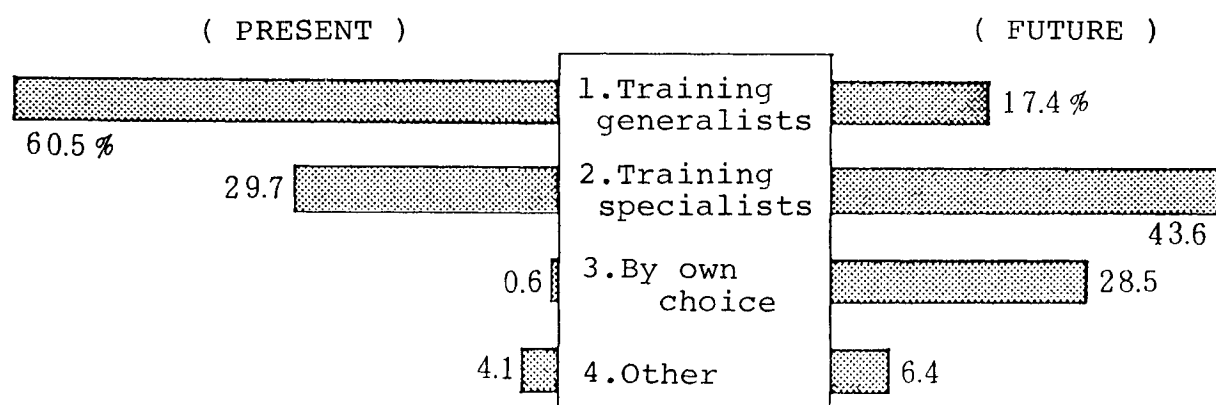
(Source: For the years from 1970 till 1980: Sorifu Tokeikyo-ku: "Rodoryoku Chosa" (Statistics Bureau, Prime Minister's Office: "Survey on the Labour Force). For the years 1985, 1990, 1995 estimate by Koyoseisaku Chosakenkyukai (Employment Survey Research Society)

Figure 1-9: The Current Situation of Implementation of the Personnel Management System for Treatment of Specialist Occupations and Methods of Career Formation

(1) Ratio of Implementation

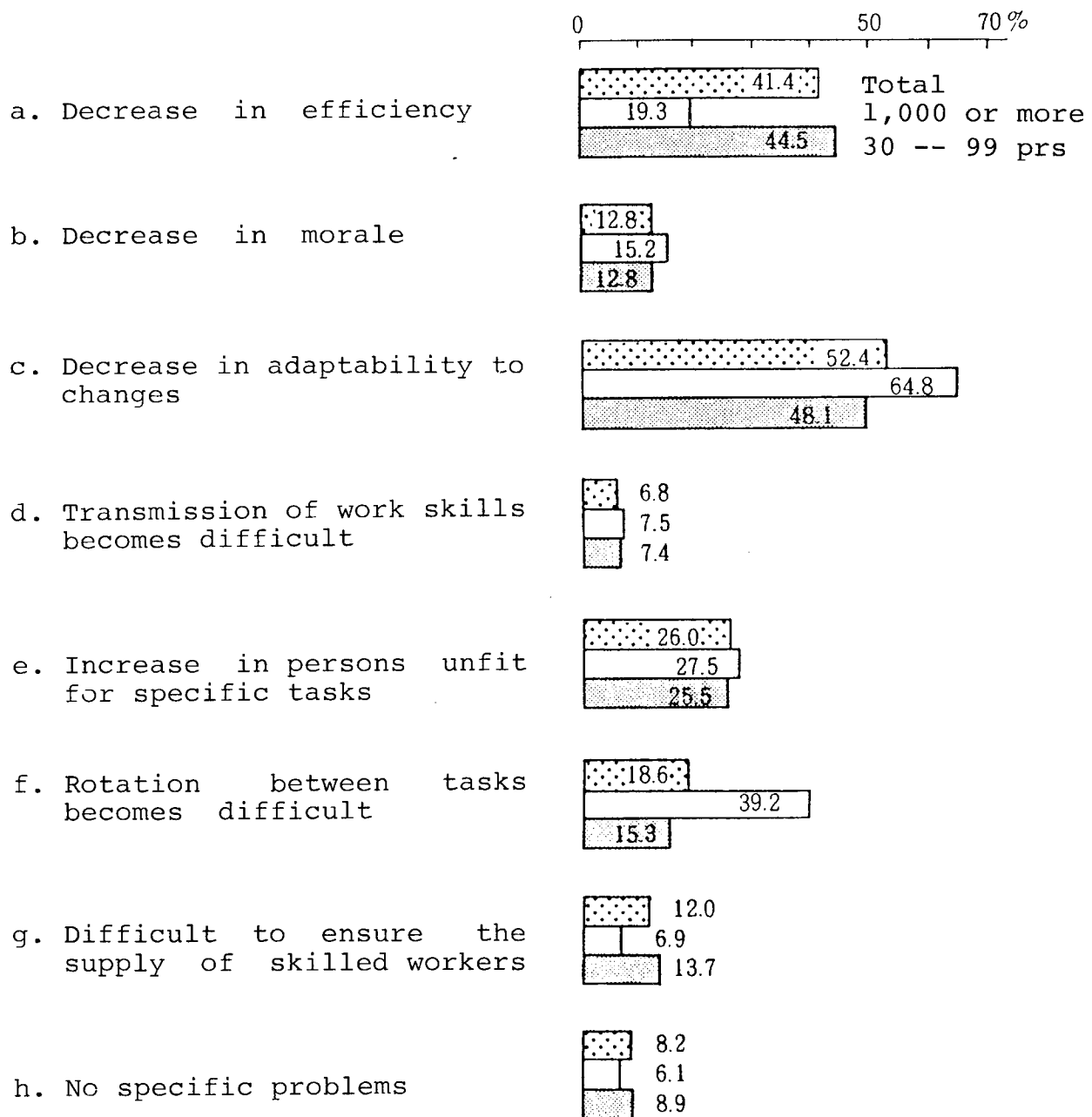


(2) Methods of Career Formation (%)



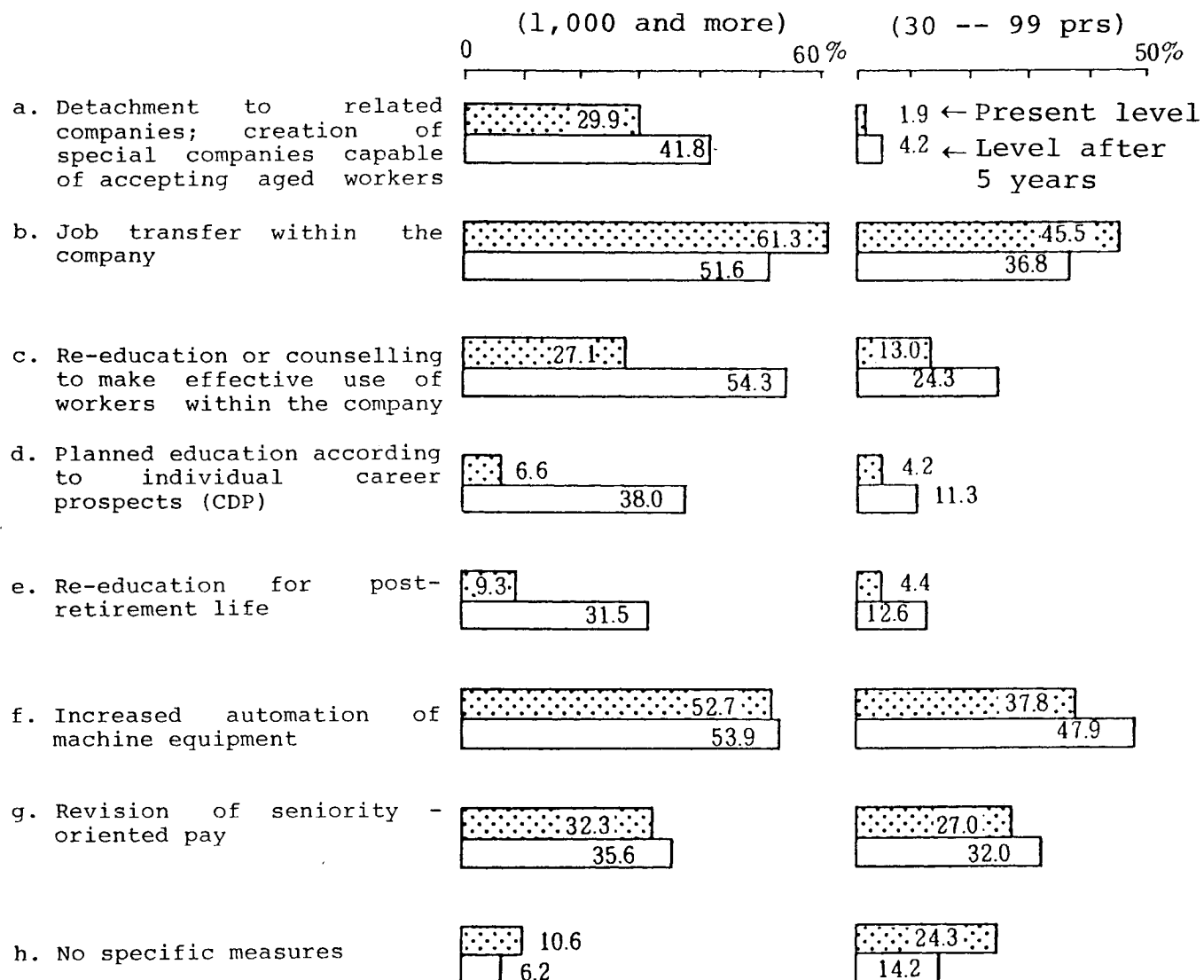
(Source: Kikai Shinko Kyokai Keizai Kenkyukai "Kigyo ni Okeru Noryokukaihatsu no Genjitsu to Shorai Hoko" (The Economic Research Institute of Machine Promotion Society: "The Present Situation and Future Prospects of HRD in Companies) March 1981)

Figure 1-10: Problems at Production Workshops Accompanying the Ageing of Skilled Workers, by Size of Enterprise (Multiple response)



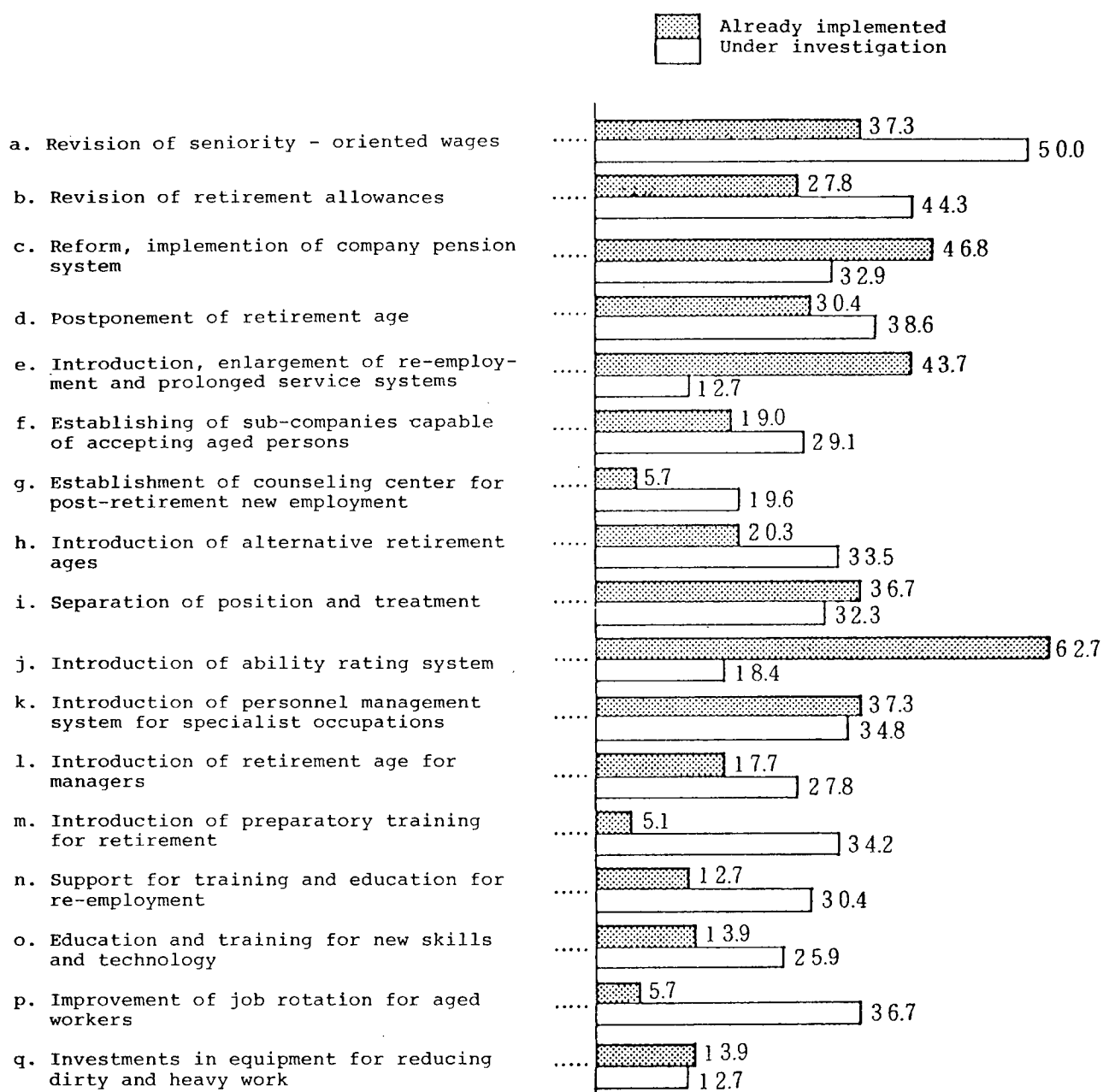
(Source: As in Figure 1-1)

Figure 1-11: Countermeasures for Ageing of Skilled Workers.  
Percentages by size of enterprise  
(Multiple response)



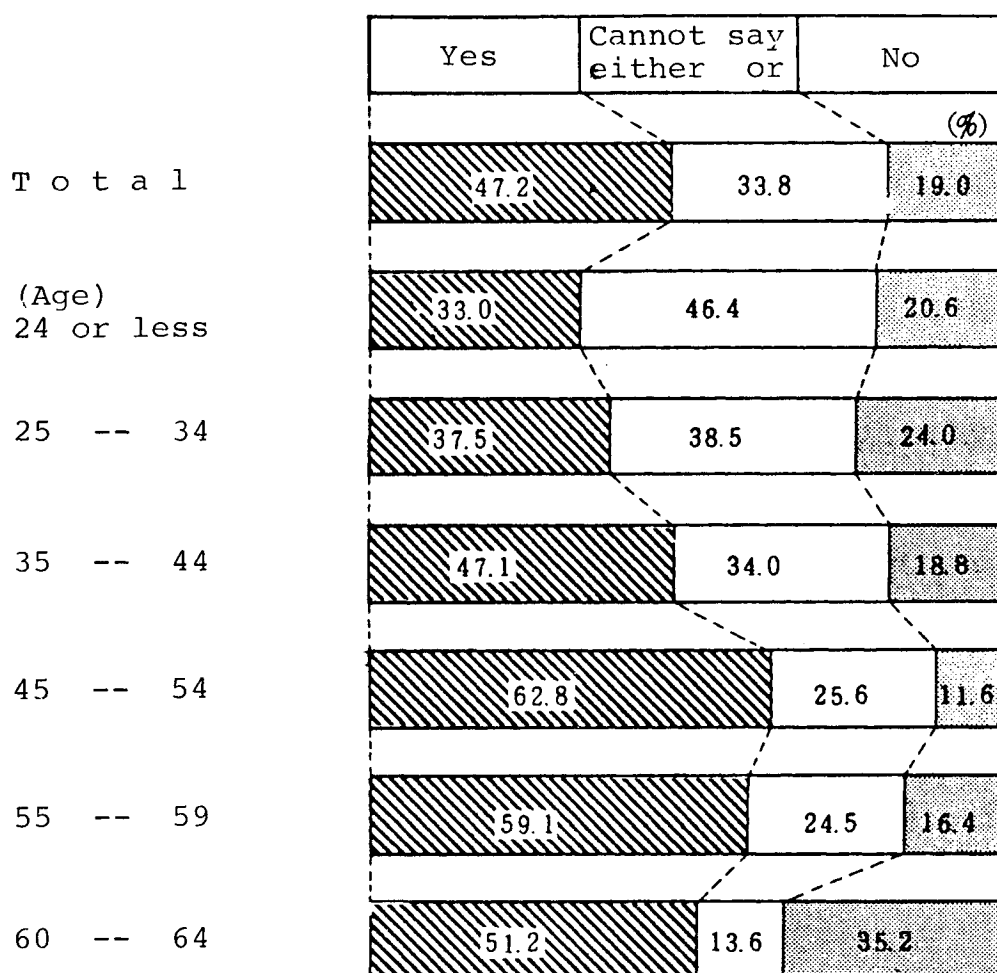
(Source: As in Figure 1-1)

Figure 1-12: Implemented and Investigated Reforms in Various Personnel Administration Systems



(Source: Kikai Shinko Kyokai Keizai Kenkyusho: "Kigyo ni okeru Noryokukaihatsu no Genjo to Shorai Hoko" (Economic Research Institute of Machine Promotion Society: Present Situation and Future Prospects of HRD in Companies) March 1981)

Figure 1-13: The Answers of Aged Skilled Workers to the Question: "Aged persons should also study new technology and not yield to youngsters"



(Source: As in Figure 1-1)

Figure 1-14: The Answers of Aged Skilled Workers to the Question "The number of aged persons who fear they will be left behind new technology has increased" Percentage of skilled workers by age

		No	Cannot say either or	Yes
		(%)		
(Age)				
24 or less		39.7	41.5	18.9
25 -- 34		41.0	35.1	23.9
35 -- 45		39.9	27.1	33.0
45 -- 54		45.1	21.3	33.6
55 -- 59		53.7	21.1	25.2
60 -- 64		28.0	36.5	35.4

(Source: As in Figure 1-1)

Figure 1-15: Changes Among Persons Engaged in Tertiary Industries by Type of Business from 1973 to 1981

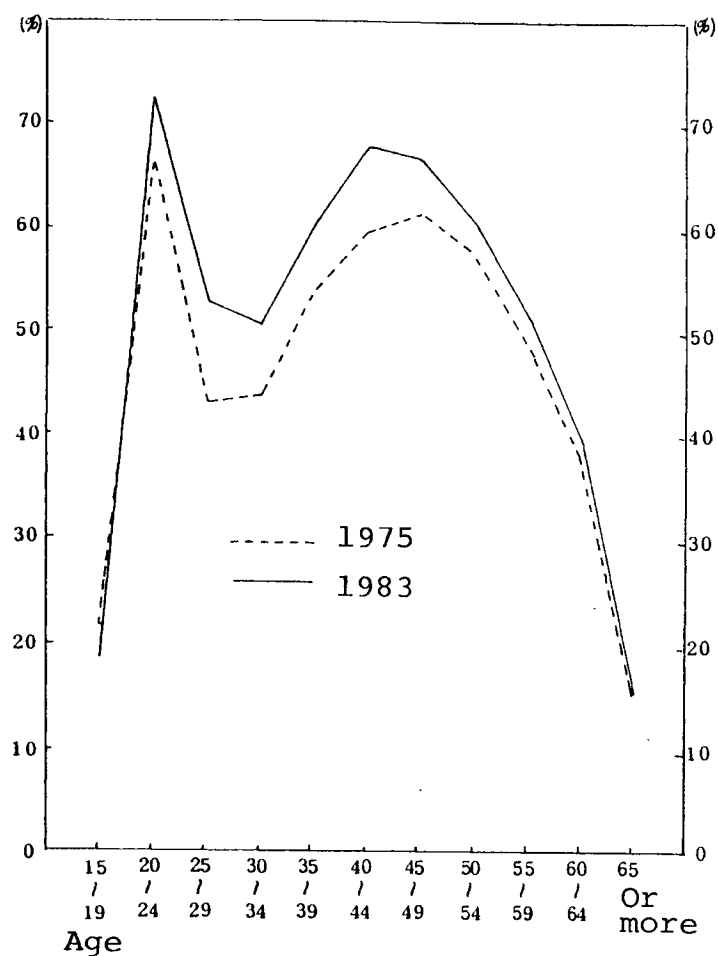
Number of changes	(1,000prs)	Ratio of changes (%)							
		100 - 199	80 - 99	60 - 79	40 - 59	20 - 39	10 - 19	0 - 9	minus
400-499				Medical					
300-399							Wholesale		
200-299			All types of retail business services; special service		Retail of food and beverages	Restaurant; other retail			
100-199	Social insurance; social security		Information services; advertising			Retail of automobile or bicycle; consumer housing finance service	Road transport		
50- 99						Real estate; service connected to transport; education	Banking, trust funding; insurance; hotel; lodging etc.		
0- 49					Other personal services; political, economical, cultural bodies	Securities; exchange of commodities; other repair business	Cooperative societies	Garment, clothing, everyday use; retail; road transport of passengers; laundry; barber; public bath; car repair business; packing; entertainment (except movies)	
minus									Furniture; fixtures;

(Source: Somucho Tokeikyoku: "Jigyoyo Tokei Chosa" (Statistics Bureau, Management and Coordination Agency: Statistical Survey on Business Establishments))

(Note: 1. Regular employees in private companies)

(Note: 2. Excluding the under one million new regular employees of 1981)

Figure 1-16: Percentage of Females Employed by Age



(Source: Somucho Tokeikyoku: "Rodoryoku Chosa" (Statistics Bureau, Management and Coordination Agency: "Survey on Labour Force"))

Table 2-1: Subjective Feelings About The Most Satisfying Occasions in Ordinary Daily Life by Age.  
(Multiple response, Unit: percent)

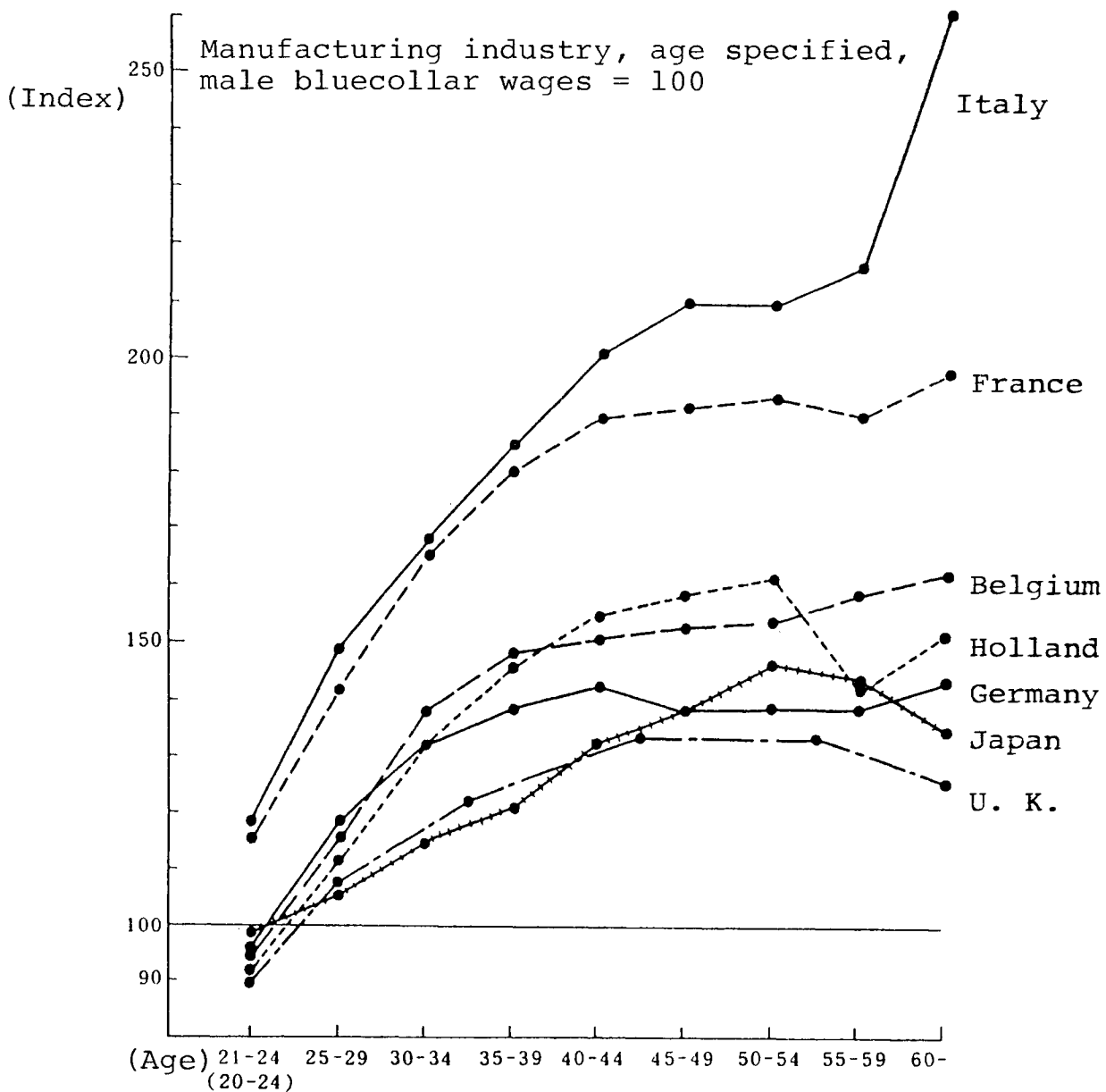
	When immer- sed in work	When concent- rated in studies	When engaged in hobbies and sports	Relax- ing without doing any- thing	When with family members	When associ- ating with friends	When parti- cipat- ing in social activi- ties	Other
T o t a l	42.8	4.9	25.7	22.9	28.3	17.9	3.8	7.8
(Age)								
20 -- 24	27.9	10.2	53.0	18.1	7.4	37.7	3.7	3.2
25 -- 29	38.6	7.5	40.0	22.5	25.4	22.9	1.1	3.9
30 -- 39	43.8	5.0	31.8	23.5	33.3	20.3	2.2	4.7
40 -- 49	52.0	4.1	23.6	23.1	31.6	13.5	2.7	6.0
50 -- 59	50.4	3.6	15.2	24.2	27.7	12.3	3.6	7.2
60 -- 69	38.1	4.5	16.5	22.6	27.7	17.7	8.1	11.2
70 or more	14.7	4.5	20.3	22.2	23.3	19.2	7.9	21.9

(Note: 1. According to Sorifu Kohoshitsu: "Kokumin Seikatsu ni Kansuru Yoron Chosa" (Prime Ministers Office, Public Relations Institute: Opinion Poll about Citizens' Daily Life) 1983)

(Note: 2. 10 year age cohorts were established by Economic Planning Agency)

(Note: 3. Excerpt from page 78 in "Showa 58 Nen Kokumin Seikatsu Hakusho" (White Paper of Daily Life 1983")

Figure 2-1: Wage Differences Between Labour and Management

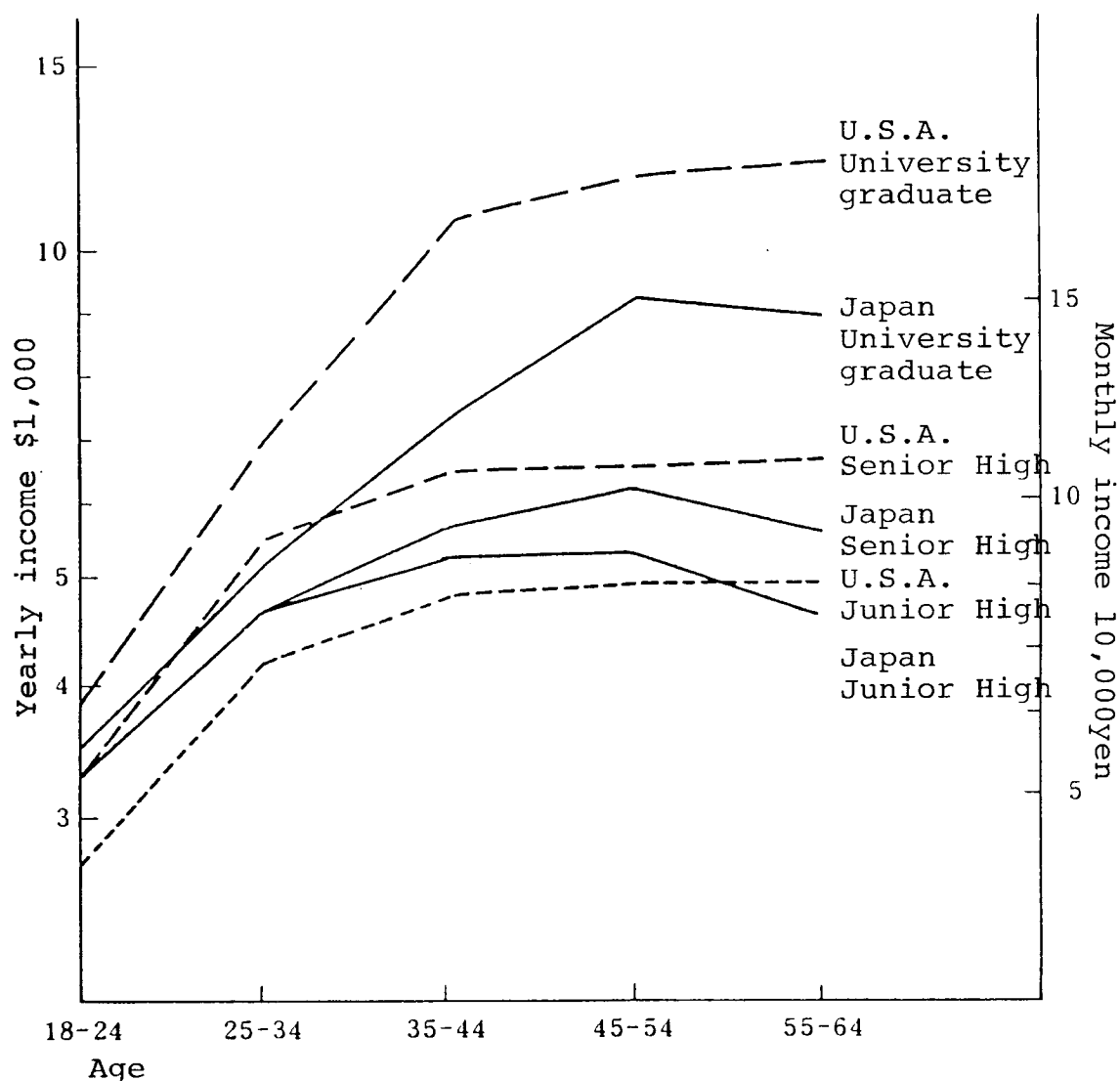


(Source: For Japan: "Showa 51 Nen Chingin Kozo Kihon Tokei Chosa" (1976 Basic Wage Structure Survey) EC: Structure of Earnings in Industry, 1972. For England: New Earnings Survey, 1975)

(Note: 1. Figures given as monthly earnings. For that purpose, for blue collars the average hourly income multiplied with average monthly working time. In England both categories are paid weekly, while in Japan both categories on a monthly basis.)

(Note: 2. Excerpt from "Sangyo to Koyo no Kozo Seisaku", Nihon Keizai Chosa Kyogikai (Policy Concerning Industry and Employment, Japan Economical Survey Committee) page 163. )

Figure 2-2: Comparison of Male Wage Levels between Japan and USA by Age and Educational Background



(Source: USA, Census of Population 1960, PC(2) 7B, Table 1  
Japan: "Showa 46 Nen Chingin Kozo Kihon Tokei Chosa" (1971 Statistical Survey on Basic Wage Structure))

(Note: 1. For Japan all industries included, For USA all occupations in 1959 were surveyed)

(Note: 2. Excerpt from "Sangyo to Koyo no Kozo Seisaku", Nihon Keizai Chosa Kyogikai (Policy Concerning Industry and Employment, Japan Economical Survey Committee) page 169)

Table 2-2: Percentage of Companies with different Wage System by Size of Enterprise

(%)

Total		Simple form system *1						Combined form system *2					
	Total	sub total	work earning type *3				Personal attribution type *4	General type *5	sub total	work earning and personal attribution	work earning and general	personal attribution and general	work earning, personal attribution, general
			sub total	on job evaluation	on job	on job evaluation and job							
Total	100.0	82.2	(13.3)	[ 1.8]	[ 2.2]	[ 9.2]	( 5.5)	(63.5)	17.8	( 5.8)	( 5.1)	( 5.1)	( 1.8)
(Size) 1,000 or more	100.0	51.5	( 6.3)	[ 0.2]	[ 3.5]	[ 2.7]	( 4.7)	(40.5)	48.5	(17.2)	(15.0)	( 9.9)	( 6.4)
100 - 999	100.0	74.0	( 9.4)	[ 1.5]	[ 1.8]	[ 6.1]	( 6.7)	(57.9)	26.0	( 7.9)	( 7.0)	( 8.3)	( 2.8)
30 - 99	100.0	86.5	(15.0)	[ 2.0]	[ 2.3]	[10.7]	( 5.0)	(66.4)	13.5	( 4.6)	( 4.0)	( 3.6)	( 1.2)

(Source: Rodosho: "Chingin Rodo Jikan Seido Sogo Chosa" (Ministry of Labour: General Survey on Wage and Worktime Systems))

(Note:\*1. A "Simple Form System" means that the item of basic wage is only one, or if there are more than two items they are of the same type (work earning type, personal attribution type, general earning type))

(Note:\*2. "Combined Form System" means that when there are more than two items determining basic wages they are of different types (work earning type - personal attribution type, work earning type - general type, position type - general type, work type - position type - general type))

(Note:\*3. "Work earning type" means that the basic part of income is determined by factors directly related to the contents of work and competency)

(Note:\*4. "Personal attribution type" means that the basic part of wages are determined on the basis of personal ascription, age or educational background.)

(Note:\*5. "General type" means that the basic wages are determined by both work and personal attribution related factors.)

Table 3-1: Problems Concerning Education and Training

(%)

	Total	Have some prob- lems	Problems (Multiple response)					No speci- fic prob- lems
			diffi- cult to secure time	lack of fund	lack of equip- ment and resour- ces	lack of know- how	lack of out- side semi- nar	
T o t a l	100.0	77.2	(82.3)	(22.0)	(24.4)	(42.1)	(24.2)	22.8
(Size) 1,000 or more	100.0	71.5	(81.4)	(32.8)	(33.6)	(71.2)	(36.2)	27.5
500 - 999	100.0	77.8	(88.3)	(23.1)	(21.6)	(63.3)	(29.3)	22.2
300 - 499	100.0	70.5	(85.5)	(20.6)	(24.7)	(45.5)	(20.0)	29.5
100 - 299	100.0	76.3	(86.0)	(24.9)	(36.6)	(48.4)	(26.6)	23.7
30 - 99	100.0	77.1	(91.6)	(33.4)	(33.8)	(41.0)	(21.4)	22.9

(Source: Rodosho Shokugyo Noryoku Kaihatsukyoku Shirabe  
(Ministry of Labour, Bureau of Human Resources Development,  
Studies) March 1983)

(Note: A specific problem is the percentage of "what ever  
specific problems"

Table 3-2: The Situation of Planned Education and Training

(%)

	Total	Planned education and training			Educate and train when it is necessary to do	
		sub total	make a plan and use it as a basis	no specific plans, but		
			sub total	planning stepwise, systematically	proceed systematically	
T o t a l	100.0	30.1	(12.8)	[ 7.2]	(17.3)	69.9
(Size)						
1,000 or more	100.0	85.2	(69.0)	[53.3]	(16.2)	14.8
300 --- 999	100.0	51.8	(41.6)	[25.6]	(20.2)	38.2
100 --- 299	100.0	41.6	(16.2)	[ 9.8]	(25.4)	58.4
30 --- 99	100.0	23.3	( 8.5)	[ 4.1]	(14.8)	76.7

(Source: Rodosho: "Jigyonai Kyoiku Kunren Jittai Chosa"  
(Ministry of Labour: Survey on the State of In-company  
Training))

(Note: 1. The one year situation in 1981)

(Note: 2. Percentage of among companies implementing education and training.)

Table 3-3: The Promotion organization for In-company Training by Type and Size of Enterprise

	Total	Special depart- ment or train- ing center at this level	Special section or train- ing center at this level	Special sub- section or work group	No Special organi- zation other units	Imple- menta- tion project	imple- menta- tion concent- rated to head office	N.A.
T o t a l	100.0	1.4	2.3	4.4	49.3	34.0	8.3	0.2
(Size) 1,000 or more	100.0	13.3	26.8	28.1	26.5	2.0	3.1	0.2
500 - 999	100.0	6.1	13.4	14.8	51.8	7.0	6.9	-
300 - 499	100.0	4.0	8.4	11.5	58.8	11.2	6.0	-
100 - 299	100.0	2.0	4.1	6.3	58.0	19.9	9.7	-
30 - 99	100.0	0.8	0.9	3.0	46.7	40.1	8.2	0.2

(Source: Rodosho: "Minkan Kyoikukunren Jittai Chosa" (Ministry of Labour: Survey on the State of Training and Education in Private Companies) June 1984)