

01-49

A Preliminary Study for the DB Construction of  
Vocational Training Agencies and Training Programs

**DB**

01-49

A Preliminary Study for the DB Construction of  
Vocational Training Agencies and Training Programs

**DB**

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:

가  
가  
DB  
HRD-Net

가  
DB  
DB가

가

가

【           】

1.

DB  
DB  
DB  
DB

2.

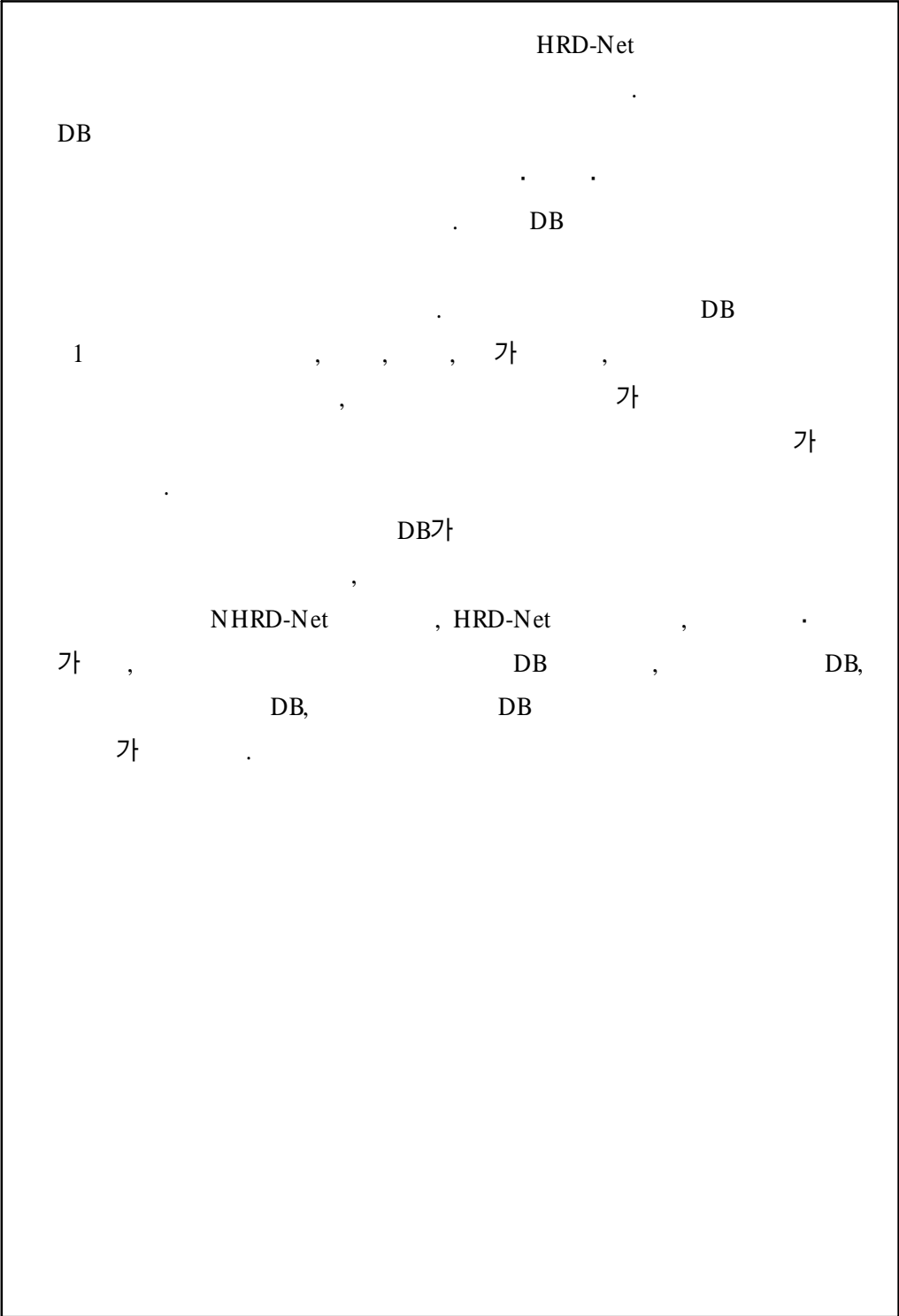
가  
가  
가  
가



3.

DB

DB 가 (NHRD-  
 Net) (DB) “  
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3.	.....	4
4.	.....	5
·	<b>DB</b> .....	7
1.	.....	7
2.	.....	8
3.	· <b>DB</b> .....	10
·	.....	27
1.	.....	27
2.	.....	34
3.	.....	39
4.	.....	43
5.	.....	45
6.	.....	48
7.	가 .....	52
8.	가 .....	55
9.	.....	59
10.	DB .....	60
·	· <b>DB</b> .....	67
1.	·    DB .....	67
2.	·    DB .....	75



3. DB	.....	90
4.	.....	96
•	.....	101
1.	.....	101
2. DB	.....	102
	.....	105
<b>ABSTRACT</b>	.....	107
[ ]	.....	113
[ 1] ( )	.....	229
[ 2] ( )	.....	245

< -1>	.....	7
< -2> HRD-Net	.....	11
< -3> HRD-Net	.....	11
< -4>	( ) .....	12
< -5>	( ) .....	13
< -6>	( ) .....	13
< -7>	- ( ) .....	14
< -8>	- ( ) .....	15
< -9>	( ) .....	16
< -10> ALX	.....	20
< -11> ALX	.....	22
< -1>	. .....	28
< -2>	.....	30
< -3>	.....	31
< -4>	.....	32
< -5>	.....	33
< -6>	.....	34
< -7>	.....	35
< -8>	.....	36
< -9>	(HRD-Net) .....	37
< -10> HRD-Net	.....	37
< -11> HRD-Net	.....	38
< -12>	.....	39
< -13>	.....	40
< -14>	HRD-Net .....	41
< -15>	.....	43

< -16>	.....	44
< -17>	.....	45
< -18>	.....	46
< -19>	.....	48
< -20>	.....	49
< -21>	, ,	50
< -22>	가	52
< -23>	가	53
< -24>	가	54
< -25>	가	56
< -26>	가	57
< -27>	가 가	58
< -28>	.....	60
< -29>	.....	63
< -1> NHRD-Net	.....	68
< -2> NHRD-Net	.....	69
< -3>	.....	76
< -4>	.....	76
< -5> 가	.....	79
< -6 >	.....	80
< -7> 가 가	.....	81
< -8> 가 가	.....	82
< -9> 가 가	.....	83
< -10> 가 가	.....	84
< -11 >	가	86
< -12> 가	.....	87
< -13> 가	.....	88
< -14 >	.....	89
< -15> . DB	.....	94

[ -1]	.....	42
[ -2]	.....	47
[ -3]	.....	51
[ -4]	가	..... 55
[ -5]	가	..... 59
[ -1] NHRD-Net	· DB	..... 67
[ -2]	· DB	..... 73
[ -3]	· DB	..... 78
[ -4]	· DB	..... 96
[ -5]	· DB	..... 98

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1.

(Drucker, P., 1993; Rifkin, J., 1994; Toffler, A, 1980).

가 . 가

가 , 가

1997

가 ,

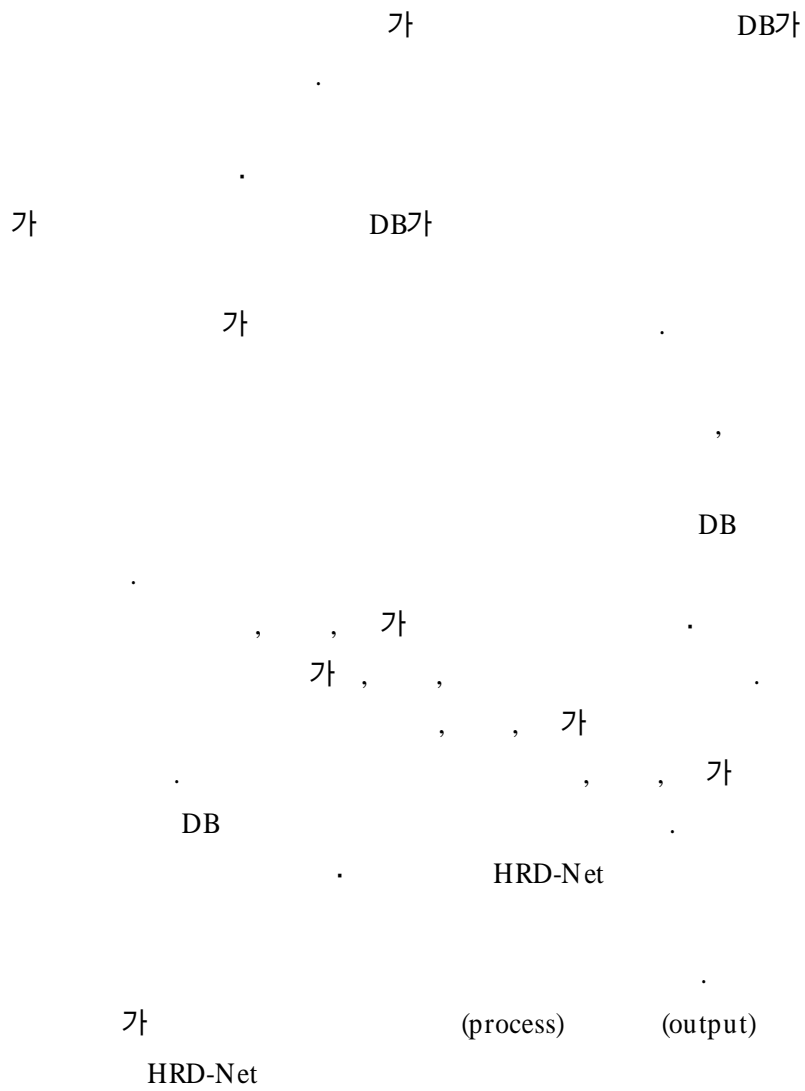
가 (NHRD-Net)

DB

가 .

DB NHRD

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2.

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DB

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 52 , 2,540  
 43 , 586

< -1 >

			95					3,126			
'99		3,221	21	21	8	2	43	77	44	501	2,504
			52					2,540			
'00		2,592	22	21	8	-	1	84	24	278	2,154

- : 1) 1999 「 」 36 , 7
- 2) 1999 , 2000
- 3) (支院)
- 4) '00
- 5) 가
- : (2001), 「職業能力開發事業現況」, p.82.

2001 5  
(HRD-Net) 2001 10 . 5,308

2.

가.

DB

(2001)

가

/

(2000)

(2001)

가

(2001)

DB

DB

(1999)

DB

가

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가

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가

가

**DB**

(1999)

DB

DB (multi-user, multi-data source), (data mining), OLAP(On-line Analytical Processing) (Data Warehouse) DB, DB

**3. DB 1)**

**가. DB**

**1) (HRD-Net)**

HRD-Net  
 가 가  
 1997 12  
 1998 6 (Work-Net)  
 , 1999 12 (JT-Net)  
 . JT-Net 2000 10 4 6  
 2001 5 HRD-Net

---

1) HRD-Net (2001) (2001)

HRD-Net DB  
 2001 5 10 5,308

HRD-Net

( -2 ).

< -2> HRD-Net


HRD-Net DB 1 WEB  
 2 ( -3 ).

< -3> HRD-Net

SUN450	<ul style="list-style-type: none"> <li>· CPU : 400MHz * 4</li> <li>· Memory : 128MB * 8, 256MB * 8</li> <li>· Disk : 225GB</li> <li>· S/ W : Oracle 8i</li> </ul>	DB	1
Compaq PLT 5500	<ul style="list-style-type: none"> <li>· CPU : Pentium III 500/ 512K * 4</li> <li>· Memory : 512MB * 4</li> <li>· Disk : 27G</li> <li>· S/ W : Window2000</li> </ul>	WEB	2

HRD-Net , ,  
 ID , , .  
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 가 가 가 . , ,  
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 가 ,  
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5794	( )	02-2636-3114	2가 36-6

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 가 , 가  
 .



< -5>

( )


	( )
	(02)2636-3114
	150-092
	2가 36-6

가 CAD/ CAM

, CAD/ CAM/ CNC/ PLC/  
MCT

( )

.....

(HRD-Net

가 )

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1000381061			2002/ 01/ 21	2002/ 03/ 04 ~ 2002/ 08/ 3

가

가

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1 , . , , 가 , , , , , , , , , , .

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▶	( )		
			2002/ 01/ 21
	05-01-006		
	2002/ 03/ 04		2002/ 08/ 31
	129		516
<b>1</b>	4	,	09:00 13:00
	30	가	0.7
	2		1
	50,000		0
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	가		

▶	( )		
( )			
	14-02-004		
	2002/ 01/ 28	2002/ 02/ 01	08:00 20:00
/			
	5	1	9
	40		9
	40		1
	1. (Excel) 2. (Auto-CAD) 3. / 가 4. 5. 6. 7. 8.		
	* :		
	* : OHP 1 , 1 , TV 1 , 1 , 1		
	1 : 2002.1.7 ~ 2002.1.11 2 : 2002.1.14 ~ 2002.1.18 3 : 2002.1.21 ~ 2002.1.25 4 : 2002.1.28 ~ 2002.2.1		
<b>1</b>	524,400		
	44,800		
	가	3,805	
		152,260	
		167,480	
		0	
( )			
	(02)2127-9088		

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가  
가

< -9> ( )

646	( )	2002/ 03/ 30 ~ 2002/ 10/ 04	30	031)469-5100
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HRD-Net

DB 가

, HRD-Net

가 가

DB

가

가 가

가 , DB  
가

2) (KEDUNET)<sup>2)</sup>  
(KEDUNET; Knowledge Education Network) 가  
2001 4 25

(KISTI) 2000  
9 , DB  
가 4  
3).

2001 10  
213 4),

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2) <http://www.kedunet.org>

3) DB 7 3

4) 80 , / 7 , / / 31 , 25 32 , / 35 ,

2,227

가		475	,	46	,	50	,
1,014			,			64	.
가	630	,	54	,	95		779
(仲介)			,				

가 가 가 (2,000 )

2004 4

Inno-Net

3) (Work-Net)<sup>5)</sup>

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6),

가

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가 가

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5) [http:// www.work.go.kr](http://www.work.go.kr)  
6)

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E-campus .

**4)**

'99

8) . '99 5 '99 23  
10 302 9) .  
2001 (Q-net) .  
10) 21  
( ) .

**DB**

**1) ALX(American Learning Exchange)<sup>11)</sup>**

1999 ALX( ) 21

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7)

8) <http://ovt.sads.or.kr>

9) (38 ), (62 ),  
(56 ), CD-Rom(21 ), (125 ) .

10) <http://www.kmanet.or.kr>

11) <http://www.alx.org>

ALX

< -10> ALX

offerings( )	, / , 가
providers( )	가 ALX
Consumer Information ( )	, (web sources)
Specialty Databases ( )	가
Developer Tools ( )	, (delivery tools)
Newsletters( )	"ALXconnects"

ALX . (1)

. (2) ,

(interface) . (3) , ,

ALX

, - . (4) 가 ,

. (5) 3 5

가 . (6) ,

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ALMIS . (8) 가  
ALX consortium  
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가 .  
(10) 가 . (11)  
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가 ,  
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가 .  
ALX , , ,  
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6,000  
350,000 , ,

ALX American Association of Community Colleges, ACT, Inc., American Society for Training and Development, The Career College Association, Community Learning and Information Network, The Council for Excellence in Government, DoD's Advanced Distributed Learning initiative, Industry Training Credit Approval Process Program, Instructional Management System, National Guard Bureau Distributive Training Technology Program, The National Institute for Literacy, The National Skills Standards Board, PBS Adult Learning Service, The Alfred P. Sloan Foundation .

ALX courses, programs, seminars, providers, accreditation, certification 가 가 ,  
(Search Type) 가 ,

(State)

ALX

< -11> ALX

Search ALX	, , , (certifications) (accreditations) DB
Employability Checkup	가
Employer Locator	, ,
Job Description Writer	
Financial Aid Advisor	( , , , , )
Career Exploration	America's Career Kit <sup>1)</sup>
Tools of Trade	가
Environmental Career Center	
Federal Learning eXchange	
Customized Training Centre	(community colleges) (shared)
Apprenticeship	
Free Demos	
WIA Training Providers	

2) 가 (National Grid for Learning:NGfL)<sup>12)</sup>

가 (NGfL) 1997 10 가 “  
(Connecting the Learning Society)”

12) [http:// www.ngfl.gov.uk](http://www.ngfl.gov.uk)

(portal) . 1998 , 2001 9

5,000 30

가 .

(Learning Resource Index)

NGfL 10 . (1)Schools, (2)Further Education, (3)Higher Education, (4)Lifelong Learning, (5)Career Development, (6)Libraries & Archives, (7)Museums & Galleries, (8)Community Grids, (9)International Networks, (10)Government & Agencies

가

가

(Quick Links)

. NGfL 가 가 1)NGfL

가 (portal) , 2) ( 6, 7 )

가 , 3) (8 )

, 4)

- **Schools** : Computer for Teachers, Governor Centre<sup>13)</sup>, GridClub<sup>14)</sup>, Inclusion<sup>15)</sup>, Independent ICT Procurement Advisory Service<sup>16)</sup>, Managed Services, Maths for 2000, National Curriculum, Northern Ireland Network for Education(nine), Parents' Centre, Parents' Online, Science Year 2001, Scottish Virtual Teachers' Centre, The Standard Site, TeacherNet, Teachers Online Project, Virtual Teacher Centre, VTC Cymru

- **Further Education** : Further Education Hub, Further Education Resources for Learning<sup>17)</sup>, Inclusion, Learndirect<sup>18)</sup>, Managed Service, National Learning

13) School Governor .

14) 7 11 (fun learning experience)

15) ,

16)

17) (ILT; Information Learning Technology)

18) (learning opportunities) DB, Learndirect centres (http:// www.learndirect.co.uk).

Network<sup>19)</sup>

- **Higher Education** : Guardian Higher Education<sup>20)</sup>, Hero<sup>21)</sup>, Higher Education Staff Development Agency, Higher Education Student Support, History in Focus, Map of UK Universities, Resource Discovery Network, Universities and Colleges Admissions Service

- **Lifelong Education** : Adult Learners' Gateway<sup>22)</sup>, Community Education Development Centre, History in Focus, Inclusion, learndirect, Lifelong Learning<sup>23)</sup>, Money to Learn<sup>24)</sup>, NIACE: The National Organization for Adult Learning, Resource Discovery Network<sup>25)</sup>, Second Chances<sup>26)</sup>, trAce Online Writing Centre, Universities and Colleges Admissions Service (Ucas): Access to Higher Education, Worktrain<sup>27)</sup>.

- **Career Development** : Career Development, Connexions, Employment Service<sup>28)</sup>, learndirect, New deal<sup>29)</sup>, Worktrain.

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19) (skill)  
20) (career) (job listings)  
21) Hero Higher Education and Research Opportunities  
22) (Department for Education and Skills)  
NIACE  
23) (career development loans), learn-  
direct ( )  
24) (19 )  
25) , Virtual Training Suites  
26) 가 , basic skills  
postgraduate level 가  
27) , 가  
28) (Job hunting) , CVs,  
가  
([http:// md6.employmentservice.gov.uk](http://md6.employmentservice.gov.uk)).  
29) , 가 가

- **Libraries & Archives** : Archives in Education, Archives Hub, Bodleian Library, British Film Institute, British Library, Cambridgeshire Libraries & Information Services, Charles Booth Online Archive, Earl, Public record office, etc..

- **Museums & Galleries** : 24 Hour Museum, AccessArt, Artworks, etc..

- **Community Grids** : East Midlands, East of England, London, etc.

- **International Networks** : Canada Schoolnet, Commonwealth Institute, Education Network Australia, European Schoolnet, LinguaNet, Montage, ScoilNet

- **Government & Agencies** : Links to information and educational resources from Government department and agencies

### 3) ability-garden<sup>30)</sup>

ability-garden (Ministry of Health, Labour and Welfare)  
(Employment and Human Resources Development Organization of Japan)

### 4)

(ALX)

One-

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30) <http://www.ab-garden.ehdo.go.jp>

Stop Service Portal , DB

ALX

, NGfL Becta(British Education Communication and Technology Agency) 가

가 ,

가 가 .

ALX 가 가

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가 가

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가 ,

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HRD-Net

ALX DB

DB가 가 ( , 2001:74-76).

DB

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DB .

31)

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가.

DB

2000 7 2001 6

32).

2001

11 26 12 15 3

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2001

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31)

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32)

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6

가

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	30	30 99	100 299	300	
	34 (13.6%)	23 (9.2%)	11 (4.4%)	7 (2.8%)	75 (30.0%)
	22 (8.8%)	15 (6%)	8 (3.2%)	5 (2%)	50 (20.0%)
	18 (7.2%)	12 (4.8%)	6 (2.4%)	4 (1.6%)	40 (16.0%)
	26 (10.4%)	17 (6.8%)	9 (3.6%)	6 (2.4%)	58 (23.2%)
	7 (2.8%)	4 (1.6%)	2 (0.8%)	2 (0.8%)	15 (6.0%)
	5 (2.0%)	4 (1.6%)	2 (0.8%)	1 (0.4%)	12.0 (4.8%)
	112 (44.8%)	75 (30.0%)	38 (15.2%)	25 (10.0%)	250 (100.0%)

- : 1)
- 2)
- 3)

HRD-Net

6



4, 4, 2  
10, 5, 2  
15, ( ) 5, 3  
가  
(convenient sampling)

±5 가 15  
750 가 250  
257, 750

30 100 36.3% 가 100 300  
16.4%, 300 10.9% . 32.3% 가  
/ 22.6%, / 19.5%, / 15.2%, /  
5.8%, / 4.7% . 가 37.4% 가  
가 19.1%, 8.9%,  
6.6%, 6.6%, 5.8%, /  
5.8% . 15 30 30.0% 가  
5 10 , 10 15 19.5% .  
가 28.8% .  
53.5%, 46.5%  
, 20 (58.9%) 30 (25.9%), 40 (14.7%)  
. 49.3%, 47.1%, 3.4%  
. 가 117 15.6%, (  
)가 633 84.4% .

< -2>

( : , %)

	30	93	36.3
	30 100	93	36.3
	100 300	42	16.4
	300	28	10.9
		83	32.3
	/	58	22.6
	/	50	19.5
	/	39	15.2
	/	12	4.7
	/	15	5.8
		3	1.2
		15	5.8
		17	6.6
	가	49	19.1
	/가 /	9	3.5
	/	15	5.8
		11	4.3
		23	8.9
		17	6.6
	/	96	37.4
		2	.8
	5	44	17.1
	5 10	50	19.5
	10 15	50	19.5
	15 30	77	30.0
	30	36	14.0
		74	28.8
		183	71.2
		257	100.0

< -3>

( : , %)

		401	53.5
		349	46.5
	20	442	58.9
	30	194	25.9
	40	103	13.7
		11	1.5
		26	3.4
		353	47.1
		370	49.3
		1	0.1
		117	15.6
	( + )	633	84.4
		750	100.0

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( < -4>, < -5> ).



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		(Work-Net HRD-Net )
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	HRD-Net	- , ( , , ), .
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	가	- : ,
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		- : ,

2.

가.

가 45.5%, 가 28.4%, 가 32.7%, 가 28.4%, 가 46.3%, 가 32.6%, 가 31.2%, 가 31.2%

< -6 >

( : %)

	28.4	31.2	32.8	30.9
	10.1	31.2	23.3	32.6
( , )	45.5	21.5	6.0	24.3
( )	6.2	4.8	3.4	5.0
	46.3	30.7	33.6	30.1
	8.2	23.6	33.6	21.8
	8.2	18.3	24.1	17.2
	32.7	32.6	31.9	32.6
	5.8	1.6	7.8	0.5
(N)	100.0 (257)	100.0 (750)	100.0 (116)	100.0 (634)

:

< -7>

( : %)

	88.7	93.2	89.7	93.8
	90.3	95.5	92.2	96.1
	90.3	95.7	93.1	96.2
	89.9	96.1	94.0	96.5
	89.5	96.1	94.0	96.5
	89.9	96.0	94.0	96.4
	89.5	95.5	93.1	95.9
	91.1	95.5	93.1	95.9
(N)	89.9 (257)	95.5 (750)	92.9 (116)	95.9 (634)

'(91.1%) 가 , '(90.3%), '  
 '(90.3%) , '(96.1%) '  
 '(96.1%), '(96.0%), '(95.7%)

< -8 >

( : %)

	83.7	92.0	89.7	92.4
	83.7	91.9	89.7	92.3
	86.0	93.2	89.7	93.8
	86.8	93.9	90.5	94.5
	84.0	93.3	90.5	93.8
	80.2	90.0	87.9	90.4
	80.2	90.8	87.1	91.5
(N)	83.5 (257)	92.16 (750)	89.3 (116)	92.7 (634)

'(86.8%), ' '(86.0%), ' '(84.0%)  
, ' '(80.2%) ' '(80.2%)  
'(93.3%), ' '(93.2%), ' '(92.0%)  
, ' '(90.0%) ' '(90.8%)

90%

(HRD-Net)  
77.0%가  
68.7%가 (HRD-Net)



< -9>

(HRD-Net)

( : %)

	23.0	31.3	17.3	33.9
	77.0	68.7	82.7	66.1
(N)	100.0 (257)	100.9 (750)	100.0 (116)	100.0 (634)

< -10> HRD-Net

( : %)

	26.9	14.2	5.0	15.1
	21.8	22.4	35.0	21.2
	18.5	19.4	15.0	19.8
	11.6	22.4	25.0	22.2
	6.0	8.6	10.0	8.5
	-	4.3	10.0	3.8
	4.6	8.2	-	9.0
	3.7	0.4	-	0.5
(N)	100.0 (216)	100.0 (232)	100.0 (20)	100.0 (212)

HRD-Net

HRD-Net

'(26.9%) 가

'(21.8%), '

'(18.5%)

'(22.4%), '

'(22.4%) , '  
'(19.4%) '(14.2%)

< -11> HRD-Net

( : %)

	79.8	83.2	87.4	82.3
가	9.6	9.7	7.4	10.2
가	-	1.8	2.1	1.7
가	2.0	2.4	1.1	2.7
가	4.5	2.8	2.1	2.9
/	4.0	0.2	-	0.2
	100.0	100.0	100.0	100.0
(N)	(198)	(507)	(95)	(412)

HRD-Net

'(79.8%) 가  
'(9.6%), ' 가  
'(4.5%)  
'(83.2%) 가 HRD-Net 가

3.

가.

5.60  
31.58

< -12 >

( : )

	8.11	31.83	39.90	30.42
	11.21	38.48	46.26	37.11
	6.68	38.08	38.89	37.93
	4.11	27.25	27.06	27.29
	3.04	28.40	33.03	27.58
	2.60	28.89	34.40	27.91
	4.13	32.80	37.50	31.96
	4.91	26.92	42.59	24.14
	5.60	31.58	37.45	30.54
(N)	(234)	(721)	(109)	(612)

: 1) ' =100, ' '=100  
2) ' ' ' ' .

'(11.21 )

'(8.11 ), '(6.68 )  
'(38.48 ) '(38.08 )가  
'(32.80 )

' (31.83 )  
 42.59 , 24.14

(6.99 ) (28.45 )가

< -13>

( : )

	5.58	29.90	42.79	42.62
	4.65	28.78	43.27	42.98
	14.71	31.16	38.46	45.28
	13.23	29.02	39.05	45.98
	8.56	27.97	36.19	38.91
	1.46	22.55	29.41	42.42
	.73	29.78	45.05	43.88
	6.99	28.45	39.17	43.15
(N)	(223)	(721)	(109)	(612)

: 1) ' =100, ' '=100  
 2) ' ' ' '=100

' (14.71 ), ' (13.23 )  
 '(31.16 ), ' (29.90 ), '  
 '(29.78 )  
 가 29.41 42.42  
 가

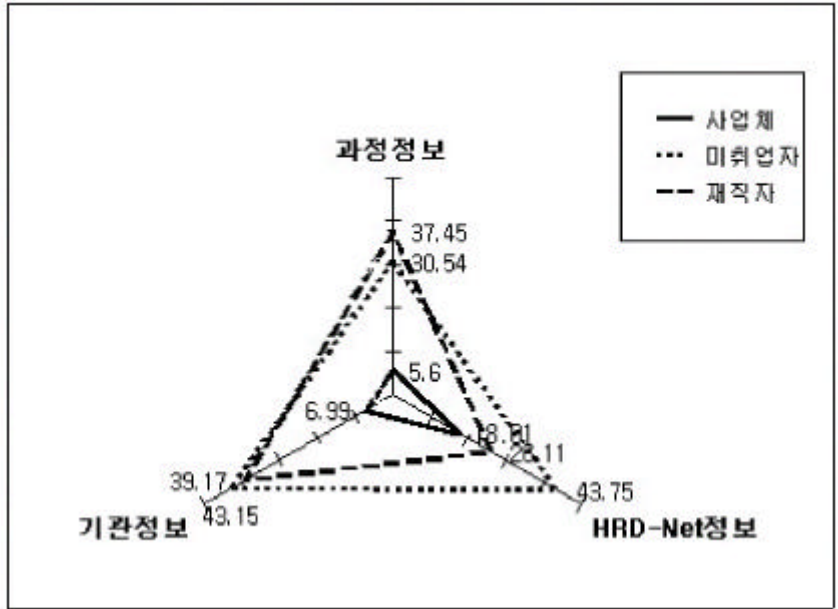
**. HRD-Net**

HRD-Net  
 (18.01 ) (27.61 )가  
 HRD-Net  
 가

< -14> HRD-Net ( : )

	22.88	31.70	45.00	30.47
	20.34	27.66	45.00	26.05
	16.95	25.11	37.50	23.95
	11.86	25.96	47.50	23.95
	18.01	27.61	43.75	26.11
(N)	(59)	(235)	(20)	(215)

- 1) '=100, ' '=100
- 2) ' '=100, ' '=100



[ -1]

가 , 'HRD-Net  
 가 ,  
 가 , 'HRD-Net  
 가 ,

4.

가.

, ' (78.87 )  
, ' (59.15 ), ' (53.52  
, ' (48.24 )  
가  
' (79.92 ) , ' (71.45 ) '  
' (69.38 ), ' (65.05 ) 가  
(70.69 ) (59.88 )  
가

< -15>

( : )

	78.87	79.92	70.93	81.15
	9.51	69.38	59.88	70.69
	28.87	65.05	65.70	64.96
	53.52	54.50	47.67	55.44
	59.15	71.45	62.79	72.64
	48.24	53.09	56.40	52.64
	43.62	50.77	48.84	51.04
	42.91	49.93	49.42	50.00
	45.59	61.76	57.70	62.32
(N)	(142)	(712)	(86)	(626)

: 1) ' '=100, '  
2) , '=-100

가  
(70.42 ), '(59.51 ), '  
'(55.99 )  
가  
'(82.61 ) , '(73.45 ), '  
'(71.13 ) 가  
(73.40 ) (54.65 )

< -16 >

( : )

	39.79	40.42	49.42	39.18
( )	22.89	31.97	43.60	30.37
	59.51	73.45	72.09	73.64
	70.42	82.61	84.88	82.29
( , )	29.58	71.13	54.65	73.40
( )	55.99	63.68	61.05	64.04
	52.11	53.80	56.40	53.45
(N)	47.18	59.58	60.30	59.48
	(142)	(710)	(86)	(624)

: 1) '=100, '= -100  
2)



5.

가.

(39.33 ) (55.58 )

'(59.92 )가 가 ,

'(55.84 ), '(51.75 ), '

'(49.61 ) 가 .

가 '(70.47 )

,'(67.53 ), '(63.93

), '(63.80 ) .

< -17>

( : )

	59.92	70.47	66.81	71.14
	55.84	67.53	62.50	68.45
	51.75	63.93	59.48	64.75
	49.61	63.80	53.45	65.69
	2.53	28.10	34.91	26.86
	16.34	39.67	36.21	40.30
	39.33	55.58	52.23	56.20
(N)	(257)	(750)	(116)	(634)

: 1) ' '=100, ' '=100 .

2) .

(58.91)  
 ) (66.97 )  
 '(69.84 )가 가 '(68.48 ),  
 '(68.09 ), '(57.20 )  
 가  
 '(79.73 ), '(78.87 ),  
 '(73.97 ), '(58.93 )

< -18>

( : )

	30.93	43.38	46.98	42.72
	57.20	58.93	56.47	59.38
	69.84	79.73	71.55	81.23
( , , )	68.48	78.87	76.29	79.34
	68.09	73.93	68.97	74.84
	58.91	66.97	64.05	67.50
(N)	(257)	(750)	(116)	(634)

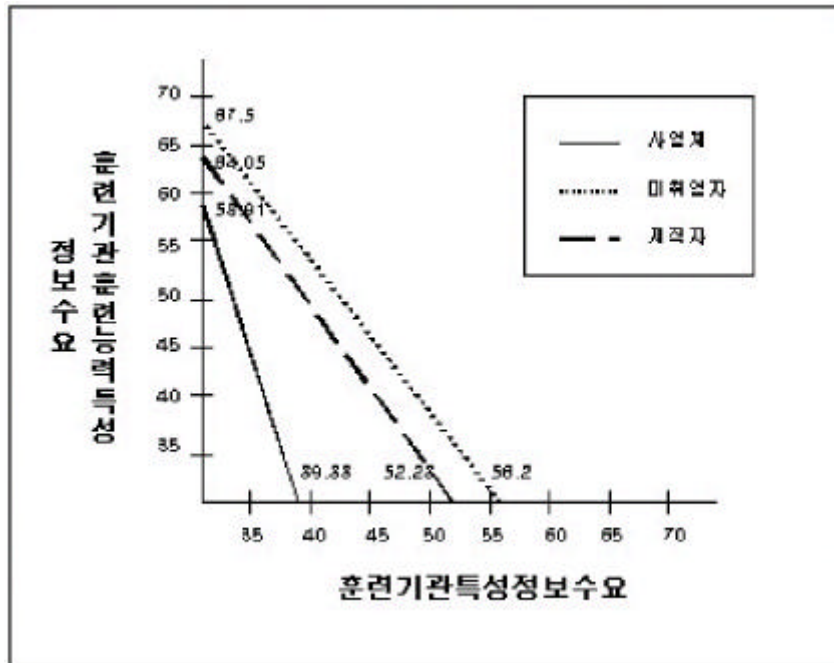
: 1) '=100, '=100  
 2)

가

가

가

가



[ -2]

6.

가.

(59.40 ) , (69.44 )  
 (72.37 ) 가 , ' (69.07 ) , '  
 '(68.87 )  
 '(79.73 ) , ' '(79.00 ) , '  
 (75.93 )

가

< -19>

( : )

( )	68.87	79.00	71.55	80.36
	69.07	75.93	63.36	78.23
	72.37	79.93	68.97	81.94
	39.84	55.47	53.88	55.76
	50.78	59.33	56.03	59.94
	55.45	67.00	59.05	68.45
(N)	59.40 (257)	69.44 (750)	62.14 (116)	70.78 (634)

: 1) ' '=100, ' '=100  
 2)

가  
 (56.64 ) (66.66 )  
 '(65.95 ) 가  
 '(61.48 ), '(60.12 )  
 '(80.51 ),  
 '(68.33 ), '(67.47 )

< -20>

( : )

	65.95	80.51	69.40	82.54
	60.12	68.33	63.79	69.16
	61.48	67.47	60.34	68.77
	53.71	61.20	52.59	62.78
	50.19	63.67	54.31	65.38
	51.56	64.00	55.17	65.62
	53.50	61.47	57.33	62.22
(N)	56.64 (257)	66.66 (750)	58.99 (116)	68.07 (634)

: 1) '=100, '=100  
 2)

(57.68 ) (67.55 )

'(73.93 )가  
'(68.87 ), '(64.59 ), '(61.28 )  
'(81.73 ) '(77.40  
)', '(76.60 ), '(74.73 )

< -21>

( : )

	68.87	74.73	63.79	76.74
	73.93	77.40	70.26	78.71
	45.72	58.68	65.09	57.50
	61.28	76.60	66.81	78.39
	64.59	81.73	63.79	85.02
	43.97	53.88	50.43	54.52
	45.33	53.81	52.59	54.03
	57.78	63.55	57.76	64.61
	57.68	67.55	61.31	68.69
(N)	(257)	(750)	(116)	(634)

: 1) '=100, '=100

2)



7. 가

가. 가

가

(52.50

) (64.37 )

(66.93 ) 가

(59.92 ), '

'(55.84 )

'(76.73 )

, ' .

'(72.93 ), ' .

'(67.47 ), ' 가 '(65.67 )

< -22>

가

( : )

가 ( )	59.92	65.67	63.36	66.09
1	21.21	43.93	45.69	43.61
	66.93	76.73	69.83	78.00
	58.17	72.93	71.12	73.26
	51.36	67.47	65.52	67.82
	55.84	64.60	62.50	64.98
	54.09	59.27	59.48	59.23
(N)	52.50 (257)	64.37 (750)	62.50 (116)	64.71 (634)

: 1) ' =100, ' =-100 .

2)



가

가

(42.90 )

(59.19 )

'(57.39 )

가

'(55.06 ), '

'(50.78 )

'(73.50 )

'(70.63 ), '

'(69.56 )

가

< -23>

가

( : )

	36.96	53.33	55.17	53.00
	38.72	56.00	52.59	56.62
	18.48	32.11	38.79	30.88
	50.78	70.63	66.38	71.41
	55.06	73.50	67.67	74.57
	57.39	69.56	68.53	69.75
	42.90	59.19	58.19	59.37
(N)	(257)	(750)	(116)	(634)

: 1)

2)

'=100, '

'=-100

가

가

(55.52 ) (69.27 )

가 (60.70 )

가 (59.14 )

(56.61 ) 가 (74.87 )

(68.20 ) 가 (70.33 )

(61.64 )

(77.29 )가

< -24 >

가

( : )

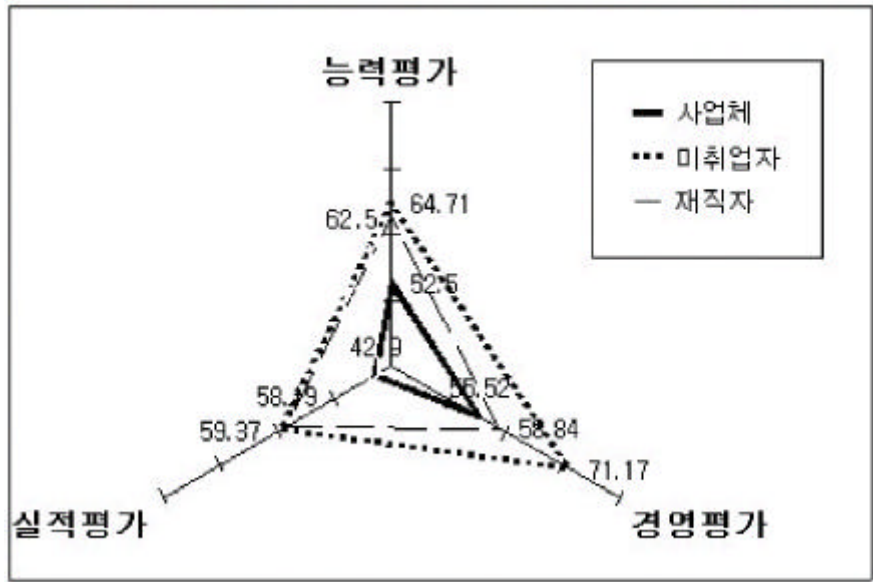
	56.61	70.33	61.21	72.00
	53.70	( )*	( )*	( )*
	47.47	74.87	61.64	77.29
	59.14	68.20	56.90	70.27
	60.70	63.67	55.60	65.14
	55.52	69.27	58.84	71.17
(N)	(257)	(750)	(116)	(634)

: 1) ' =100, ' =-100

2)

3) \*

가  
가  
가  
가  
가  
가



[ 4] 가

8. 가

가 가

가 가

(47.76 ) (62.85 )  
 가 , ' (62.84 ) '  
 '(61.28 ) , '  
 '(53.50 ) .  
 '(81.73 ) , '  
 '(72.73 ) ' '(71.67 )  
 가 .

< -25> 가 ( : )

	45.33	59.93	53.88	61.04
	46.11	62.87	56.47	64.04
	17.51	34.13	37.07	33.60
	53.50	72.73	62.07	74.68
	61.28	75.77	62.93	78.12
	62.84	71.67	62.07	73.42
(N)	47.76 (257)	62.85 (750)	55.75 (116)	64.15 (634)

: 1) ' =100, ' =-100 .  
 2) .

가

가

가

,

(50.05 ) (62.97 )

가 ' (58.95 ) '

'(58.75 )

'(52.72 )

' (72.30 )

'(70.40 ) ' '(62.07 )

가

< -26>

가

( : )

	52.72	57.20	53.02	57.97
	58.75	70.40	63.79	71.61
	58.95	72.30	65.09	73.62
	46.50	61.73	52.16	63.49
1	39.49	56.07	55.17	56.24
	45.72	62.07	60.78	62.30
	48.25	61.00	58.19	61.51
	50.05	62.97	58.31	63.82
(N)	(257)	(750)	(116)	(634)

: 1) ' '=100, ' '=100

2)

가 가

가

가

가

(62.26 )

(70.65 )

가 가 ' (72.18 )  
 , ' (67.70 ) '  
 '(58.56 )  
 ' (80.27 )  
 , ' '(75.07 ) ' '(65.13 )  
 가

< -27>

가 가

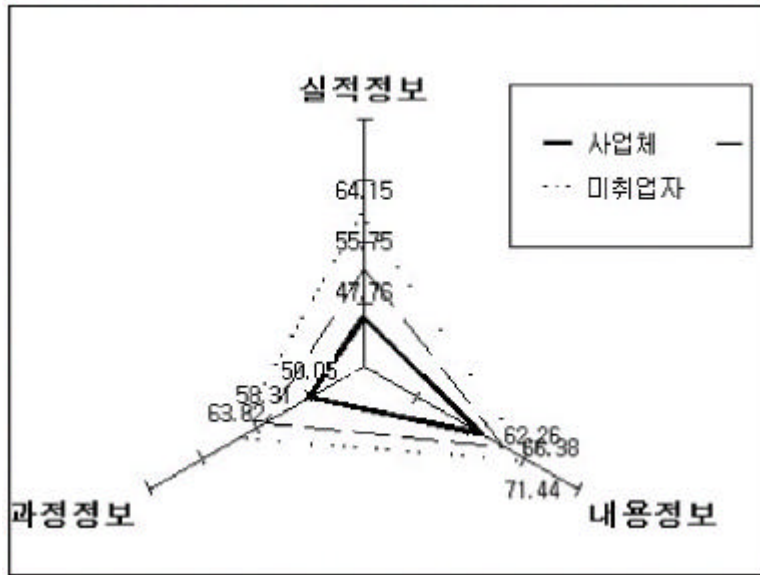
( : )

	67.70	75.07	66.38	76.66
	72.18	80.27	77.59	80.76
가	50.58	62.13	54.74	63.49
	58.56	65.13	66.81	64.83
(N)	62.26 (257)	70.65 (750)	66.38 (116)	71.44 (634)

: 1) ' '=100, ' '=100  
 2)

가

가 가 ; 가 가 ;  
 ' 가 가 ; 가 가 ;  
 가 가 가 ;  
 가



[ -5] 가

9.

(65.10 ) (63.56 )

(73.35 )가 (73.54 )

(79.53 ) (70.04 )

(75.87 ) (75.40 )

가

< -28 >

( : )

가	55.06	53.80	50.86	54.34
	51.95	49.00	43.97	49.92
	66.15	69.53	60.34	71.21
	54.86	52.60	49.57	53.16
	70.04	75.40	68.10	76.74
	73.54	75.87	67.24	77.44
	73.35	79.53	71.55	80.99
(N)	63.56 (257)	65.10 (750)	58.80 (116)	66.26 (634)

: 1) ' =100, ' =-100  
 2)

**10. DB**

가.

(46.3%)> (45.5%)> (32.7%)  
 (32.6%)>  
 (31.2%)> (30.7%)>  
 가



가 가 가 .

가

,

. HRD-Net

. HRD-Net 가

(23.0%) (31.3%) ( 79.8%, 83.2%)

가

,

, HRD-Net

가

,

가

.

가 DB

.

가

(78.9 ) > (59.2 ) > (53.5 ) > (48.2 ) ,

가 (79.9 ) > (71.5 ) >

(69.4 ) > (65.1 )」 .  
가 ,  
. 「 .  
(70.4 ) > (59.5 ) > (56.0 ) >  
(52.1 )」, 「 . (82.6 ) >  
(73.5 ) > (71.1 ) > (63.7 )」

. DB ' ,  
, , , , , 가  
' ,

. 가 , , 가  
가 < -29>

( : )

	( )	39.3	55.6	52.2	56.2
		58.9	67.0	64.1	67.5
		(49.1)	(61.3)	(58.2)	(61.9)
/ /	( )	59.4	69.4	62.1	70.8
		56.6	66.7	59.0	68.1
		57.7	67.5	61.3	68.7
		(57.9)	(67.87)	(60.8)	(69.2)
가	( 가 )	52.5	64.4	62.5	64.7
		42.9	59.2	58.2	59.4
		55.5	69.3	58.8	71.2
		(50.3)	(64.3)	(59.8)	(65.1)
가	( 가 )	47.8	62.9	55.7	64.2
		50.1	63.0	58.3	63.8
		62.3	70.7	66.4	71.4
		(53.4)	(65.5)	(60.1)	(66.47)
		63.6	65.1	58.8	71.4
(N)		53.9	65.1	59.8	66.5
		(257)	(750)	(116)	(634)

: 1) ' '=100, ' '=100

2)

( ) 가  
 , 가  
 , 가  
 (16.3 ), 가 (16.3 ),  
 가 (15.1 ), (13.8  
 ), 가 (12.9 )

가 ,  
, .  
가 , 가  
' 가 > 가 >  
가 ' 가 > 가 >  
가 > 가 ' .

(63.6 ) > (59.9 ) >  
가 (53.4 ) > 가 (50.3 ) >  
(49.1 ) , (67.9 ) >  
가 (65.5 ) > (65.1 ) > 가  
(64.3 ) > (61.3 ) ,  
가

.  
,  
가  
, > 가  
가 > > >  
, , >  
, 가 가  
> > >  
, , > >  
가 .  
DB  
가  
가,  
, ,  
. 가



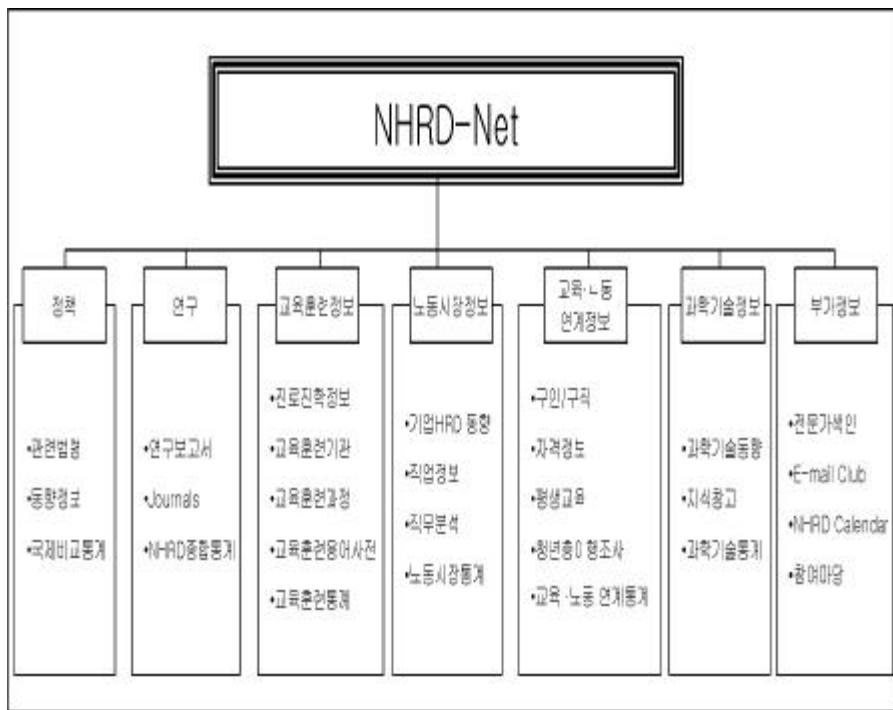


DB

1. DB

가. DB

DB 가 (NHRD-Net)  
(Sub DB)  
가  
, 가 , DB



[ -1] NHRD-Net DB

가 NHRD-Net  
 Home, NHRD , NHRD , , .  
 , 가 ,  
 NHRD Calendar, E-mail club 가 . NHRD-Net  
 < -1>  
 < -2> .

< -1> NHRD-Net

<b>HOME</b>	NHRD-Net , ,
<b>NHRD</b>	NHRD 가 , , , .
<b>NHRD</b>	가 , , / .
	(supply side)
	HRD , , , , DB .
	(transition) /
	, , , , , , 가
<b>가</b>	6 가 가



< -2> NHRD-Net

<b>HOME</b>	<ul style="list-style-type: none"> <li>●NHRD : 가 (NHRD)</li> <li>● Poll :</li> <li>● : NHRD-Net</li> </ul>
<b>NHRD</b>	<ul style="list-style-type: none"> <li>● : , ,</li> <li>● : HRD , , ,</li> <li>● : , , , 가</li> </ul>
<b>NHRD</b>	<ul style="list-style-type: none"> <li>● : HRD .</li> <li>●Journals : .</li> <li>●NHRD : , , , , .</li> </ul>
	<ul style="list-style-type: none"> <li>● : .</li> <li>● : 3,500</li> <li>● : , , ,</li> <li>● :</li> <li>● :</li> </ul>
	<ul style="list-style-type: none"> <li>● HRD : HRD ( ).</li> <li>● : , , , ,</li> <li>● : PDF(Adobe Acrobat)</li> <li>● : 2002 ( )</li> </ul>
	<ul style="list-style-type: none"> <li>● / : , , , /</li> <li>● : 가</li> <li>● : ,</li> <li>● : / , , / ,</li> <li>● : 2002 ( )</li> </ul>
	<ul style="list-style-type: none"> <li>● :</li> <li>● : ,</li> <li>● : R&amp;D , OECD ,</li> </ul>
<b>가</b>	<ul style="list-style-type: none"> <li>● 가 : NHRD 가 ●E-mail</li> <li>Club: E-mail NHRD</li> <li>●NHRD Calendar:NHRD , , , , ,</li> <li>● : 가 ( )</li> </ul>

DB

DB

가

DB

“ 가

가

가

가

**DB**

DB

가 ,

가

(NHRD-Net)

DB

가

DB

HRD-Net

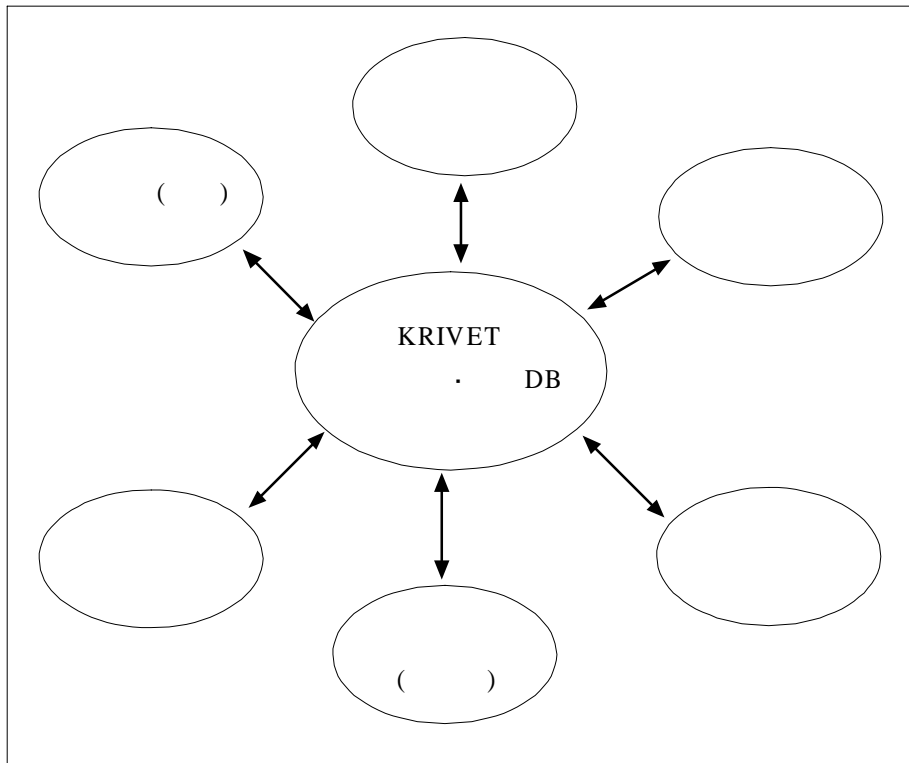
가 DB가  
 (uniqueness) (HRD-Net)  
 , NHRD-Net  
 DB NHRD-  
 Net DB (HRD-Net)  
 NHRD-Net DB  
 가 가 가 DB  
 (integration) DB NHRD-Net  
 DB DB NHRD-Net  
 integration) DB (organic  
 (inclusiveness) DB  
 가 DB  
 DB  
 (parsimony) DB  
 DB  
 (flexibility) DB  
 가

, (client first) . DB  
 . DB  
 ( )  
 .  
 , 가 (comparability) . DB  
 가  
 . DB 가  
 가 .  
 , (cooperation) .  
 . DB . DB가 ,  
 ,  
 가 .  
 , (consulting service) 가  
 . DB  
 .  
 ,  
 . DB  
 가  
 , DB  
 . ,  
 , 가 .  
 DB . 가  
 . DB  
 .

DB

DB

( )



[ -2]

DB

DB가

( , , , 가 )

( )

DB가

가

DB

)

DB

가

가

가

2. DB

가. DB

DB  
가

, 가  
가

DB

-3> < -4>  
DB 가

<

DB

DB

< -3>

		가 44 , 1, 8
		가 7 :
		가( )가 가 36
		가 .
( )		.
		( ) , ( ),
		, , .

< -4>

		21
		(2 ) 21
		(4 ) 1
		.
		1 가

. DB

, , , , ,  
( ) , ,



DB

DB

DB

33).

가

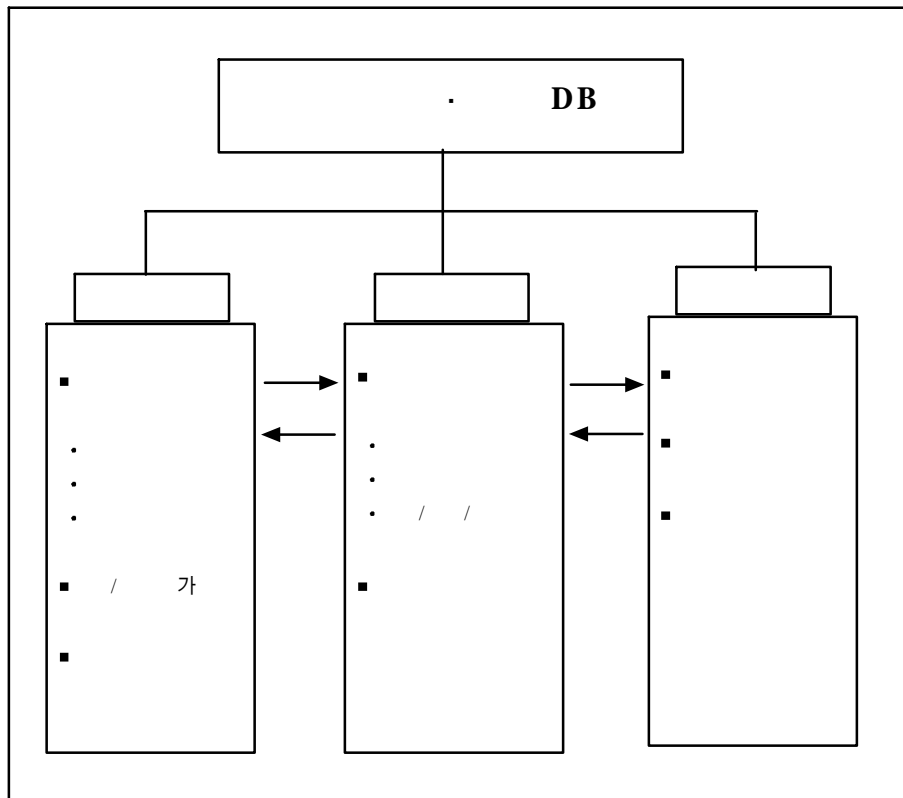
가

( -3

).

33) DB

HRD-Net  
가



[ -3] . DB

. . DB

1)

HRD-Net

, , , , , 가

가 50

( )

· , , ( -  
· , · , , ,  
).

< -5> 가

( : )

			59.92		70.47
			55.84		67.53
			51.75		63.93
		( )	(49.61)		63.80
		·	69.84	·	79.73
		·	68.48	·	78.87
			68.09		73.93
			57.20		58.93

HRD-Net

· < -6> .

가 ,

·



< -7>

가

가

( : )

가	가	가 ( )	66.93	가 ( )	76.73
			59.92		72.93
			58.17		67.47
			55.84		65.67
			54.09		64.60
			51.36		59.27
			57.39		73.50
	가	가	55.06	( )	70.63
			50.78		69.56
			(38.72)		56.00
			(36.96)		53.33
	가	( )	60.70	( )	74.87
			59.14		70.33
			56.61		68.20
53.70			63.67		
(47.47)					

: 1) ' =100, ' =-100 .  
2) .

가 가 50 ( )

, , , , , , , , , , , , , , , ,

, , 가  
( -8 ).

< -8> 가 가 ( : )

			62.84		75.77
			61.28		72.73
			53.50		71.67
			46.11		62.87
			45.33		59.93
가			58.95		72.30
			58.75		70.40
			52.72		62.07
		( )	(48.25)		61.73
		( )	(46.50)		61.00
		( )	(45.72)		57.20
	( 1 )	(39.49)	1		56.07
	가		72.18		80.27
			67.70		75.07
		가	58.56		65.13
		가	50.58	가	62.13

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A.	1. 1
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	4. 가
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C.	1.
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D.	1.
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E.	1.
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F.	1.
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가		2 ( / )	

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		73.54	79.53
		73.35	75.87
		70.04	75.40
		66.15	69.53
		55.06	53.80
		54.86	52.60
	가	51.95	가 49.00

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4)

HRD-Net

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< -13> 가 ( : )

			72.37		79.93
			69.07	( )	79.00
	( )		68.87		75.93
	.		55.45	.	67.00
			50.78		59.33
			(39.8)		55.47
			65.95		80.51
			61.48		68.33
			60.12		67.47
			53.71		64.00
	.		53.50		63.67
			51.56	.	61.47
			50.19		61.20
			73.93		81.73
			68.87		74.73
			64.59		77.40
			61.28		76.60
/ /			57.78		63.55
	( )		(43.97)		58.68
	( )		(45.33)		53.88
	( )		(45.72)		53.81

HRD-Net

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가 50 ( )

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2 ( )	<ul style="list-style-type: none"> <li>■</li> <li>■ DB 가</li> <li>■</li> <li>■</li> <li>■ 가</li> </ul>	5 ( '02. 5 9 )
3 ( 가 . )	<ul style="list-style-type: none"> <li>■</li> <li>■</li> <li>■ DB .</li> <li>■ 가 가</li> <li>■</li> </ul>	3 ( '02. 10 12 )
4 ( . )	<ul style="list-style-type: none"> <li>■</li> <li>■</li> <li>■</li> </ul>	'03. 1

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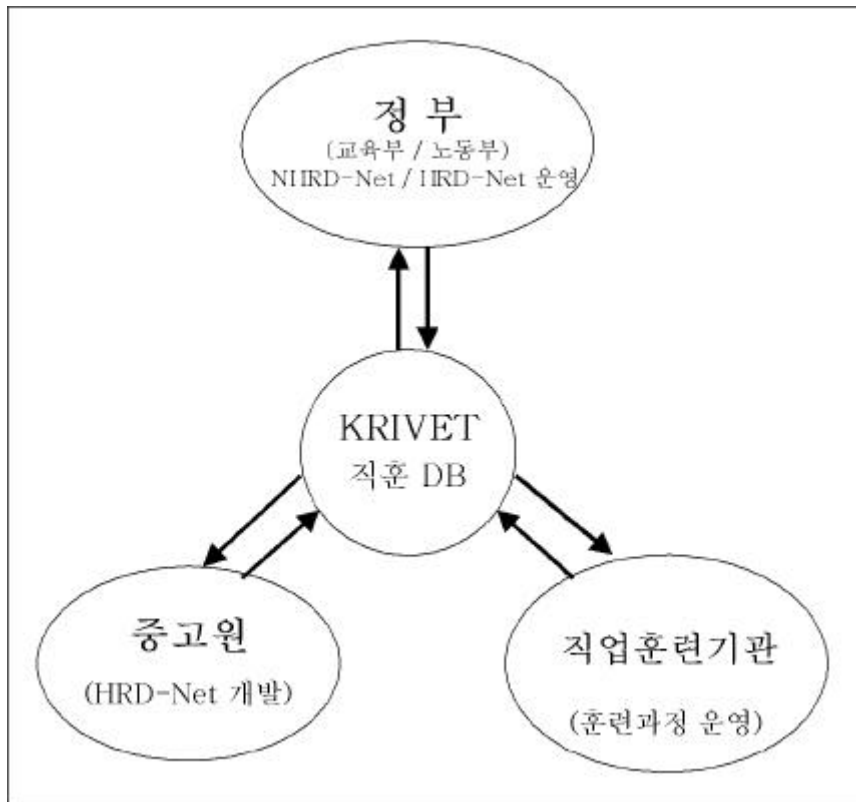
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NHRD-Net

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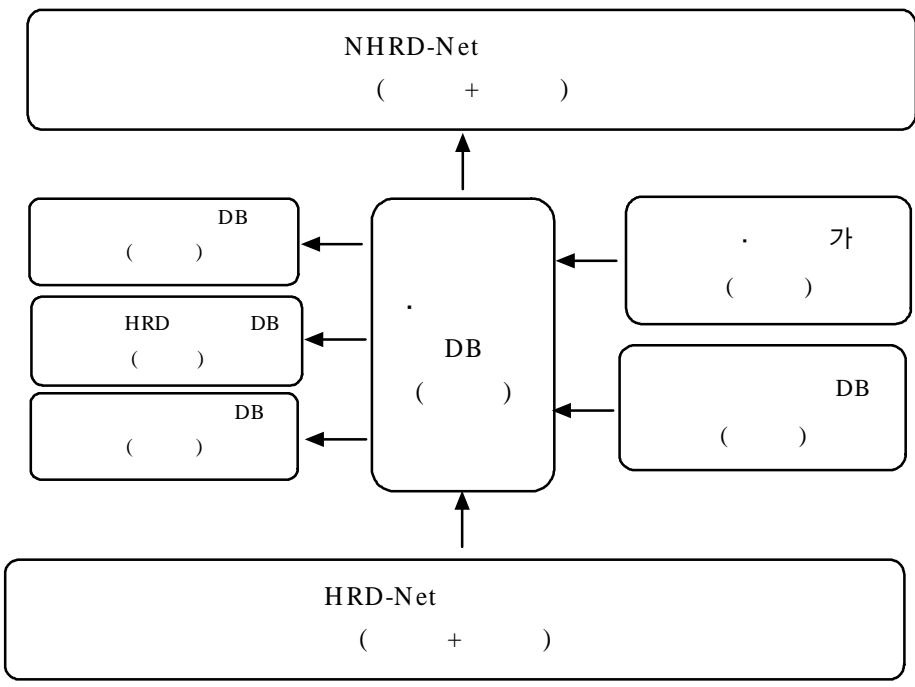
HRD-Net



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- <http://ovt.sads.or.kr>
- <http://www.alx.org>
- <http://www.hgfl.gov.uk> 가
- <http://www.ab-garden.ehdo.jp>

## **ABSTRACT**

# **A Preliminary Study for the DB Construction of Vocational Training Agencies and Training Programs**

**Korea Research Institute for Vocational Education and Training**

Hong-Geun Chang

Young-Hoon Oh

Dong-Im Lee

## **1. Introduction**

This study examines the use experiences and the demand for the information of vocational training agencies and training programs, with a view to planning more appropriate database construction. We reviewed domestic and foreign information systems and databases, and conducted a survey to find out the actual usage and the demand of users for the training information. The users of training information that we have surveyed consist of the staff members of companies being in charge of education and training, and the vocational trainees(both employed and unemployed) being enrolled in the programs of training agencies. On the basis of survey results, this study evokes the purpose to which the database of vocational training information serves, and depicts provisional designs for database structure and composition of contents. This study also proposes executive plans for the database construction process, from data collection to maintenance and control of the database system, and four-staged working plans.

## **2. Results of Survey on the Usage and Demand for Vocational Training Information**

The findings from the survey of the access behavior to information reveal that companies tend toward the 'agency-dependent type' which relies highly on training or labor-related agencies to obtain information, while trainees tend toward the 'active information-seeking type' which relies heavily on one's own vigorous effort.

The survey results of the use experiences and the degree of satisfaction indicate that both companies and workers, who are the primary demanders for vocational training information, mark extremely high rates in the use experience of information, but low ones in the degree of satisfaction. It suggests that the vocational training information need not only enlargement in size but also quality enhancement.

When companies and trainees make choice of training programs, they consider the specialties and the training methods of those programs most important. As far as training agencies are concerned, they give priority to the qualification of training instructors, and facilities and equipment.

According to the survey on the need for the vocational training information, trainees are generally on a higher level of demand for vocational training information than companies, and among trainees the unemployed exceed the employed in the level of demand. This kind of pattern carries through all the surveyed categories of vocational training information.

The level of demand for sub-categorized information of vocational training is as follows. With respect to the 'information about training agencies' (ITA), the information on 'training capability of agencies' has higher rate than the information on 'specialties of training agencies'. In terms of the 'information about training programs'(ITP), the demand levels are alike among the sub-categories of information on 'specialties of programs',



'training methods' and 'expenses, effects, enrollment'. In terms of 'the assessment information on training agencies'(AITA), the highest rating is given to the information about 'assessment of management and trainee supervision', which are followed by 'assessment of training capability of programs' and 'assessment of training records and outcome'. In the 'assessment information on training programs'(AITP), the information on the 'assessment of training contents and learning process' is followed by 'assessment of program development and management' and 'assessment of records and outcome of programs'. (The items within the 'agency inspection results information'(AIRI) were not sub-categorized in this survey.)

The sub-categories of vocational training information which were indicated as most highly demanded has been analysed in terms of information users. The results of the analysis show that companies prefer above all the information about (1) agency inspection results information (AIRI), (2) assessment of training contents and learning process of the AITP, (3) specialties of training programs of the ITP, (4) training capability of agencies of ITA, (5) 'expenses, effects, enrollment' of the ITP (6) training methods of the ITP, in priority order. Trainees prefer the information about (1) assessment of training contents and learning process of AITP, (2) specialties of programs of ITP, (3) assessment of management and trainee supervision of AITA, (4) expenses, effects, enrollment of ITP, (5) training capability of agencies of ITA, (6) training methods of ITP, to any other information.

The analysis of demand for vocational training information suggests the following implications. First, the distinct structure of workers' demand for information need to be discerned, because they are major users demanding a lot of information. Second, the database of vocational training information should provide more detail, accurate and unbiased information on the topics for which users show high level of demand, such as 'agency

inspection results', 'assessment of training contents', 'specialties of training programs', 'training capability of agencies', 'expenses, effects, enrollment' of training programs.

To be specific, because the established network system of vocational training information has insufficiently provided the ITA and has totally failed to provide the AITA and the AITP, those sorts of information need to be supplemented.

### **3. The Strategies for the DB Construction**

The database of vocational training agencies and training programs is one of the sub-databases of the NHRD-Net(National Human Resources Development Net). The objectives of the database are "1) to compile, classify, and process systematically the information on training agencies and training programs for vocational competence development, 2) to provide the information for a variety of users, such as business firms, employed or unemployed workers, government, research institutes, 3) eventually, to make a contribution to the healthy operation of training market, the development of human resources, and the well-balanced supply and demand of manpower at national level."

In designing the database of vocational training agencies and training programs, the first consideration should be given to the clients, the concrete users who demand training information. A variety of information provided by the database should be satisfactory in the sense of comprehensiveness and briefness as well. It is important to make sure that the comparison among various training agencies and among training programs are possible. The database system need to be so flexible that linking with other network systems is available, and so practical that it can be used for the purposes of consultation and counseling services for

training. Furthermore, its efficient connection to the other related projects should be taken into account.

The database of vocational training agencies and training programs can provide workers with the training information for the enhancement of job competence, employers with the information on customized training for leveling up employee's skill, researchers with basic statistical data and raw material of training, training agencies with the opportunity for advertising their own institutions and programs. By promoting the circulation of objective and precise training information, it will contribute to well operation of training market in the long run.

The database of vocational training agencies and training programs is going to cover all the training institutions or facilities, which are undertaking the vocational competence development project, and their training programs. However, the training facilities within companies are excepted from the extent. The formation of database consists of three large spheres, such as the 'information about training agencies', the 'information about training programs', and the 'information about trainees'. The 'information about training agencies' contains the information on topics, such as 'specialties of training agencies', 'training capability of agencies', 'establishment process', 'assessment results of training agencies', and 'inspection results of training agencies'. The 'information about training programs' contains the sub-categorized information on 'specialties of training programs', 'training methods', 'the expenses, effects, enrollment', 'assessment results of programs'. In the 'information about trainees', the sub-categories of information on 'personal records', 'training history', 'job career' are included. More detailed items are supposed to be determined by referring to the items of information which HRD-net have suggested and the results of our survey.

The following elements are essential to make sure of the successful construction and stable operation of the database system. First, it is

necessary to make specific plans for the efficient collection of information, the continuous update of data, and the maintenance and supplement of database system. The organization and the budget to support those plans are also to be secured. Second, the analysis of the database should be paralleled with more systematic classification and codification of training agencies and training programs to produce basic statistics and data of training. Third, it is recommendable that the database construction process be accomplished in more or less than one year, through four stages of (1) the planning stage, (2) the construction stage, (3) the assesment and supplement stage, (4) the maintenance and control stage. The executive tasking force and the professional group from outside are supposed to cooperate each other to check up the proceeding on every stage and to find out and amend the problems.

Finally, it is important to propel the project forward in cooperation with the authorities concerned, such as the Ministry of Education and Human Resources Development, the Ministry of Labor, and the Korea Manpower Agency Work Information Center. It is also necessary to have an efficient connection to other resources, not only the related projects of NHRD-Net construction, reconstruction of HRD-Net, assessment on training agencies and programs, but also the relevant databases of the demand survey on training, the tracing survey on workers who finished up training programs, and the survey on the degree of satisfaction with training.

[      ]

1.

1)

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( : %)

	30	30 99	100 299	300	
/	31.2	30.1	26.2	17.9	28.5
	10.8	12.9	7.1	3.6	10.2
	39.8	48.4	59.5	32.1	45.3
	5.4	8.6	4.8	3.6	6.3
	44.1	41.9	54.8	57.1	46.5
	9.7	7.5	9.5	3.6	8.2
	3.2	5.4	9.5	32.1	8.2
	33.3	33.3	26.2	35.7	32.4
	6.5	5.4	.0	14.3	5.9
	36.3	36.3	16.4	10.9	100.0
(N)	(93)	(93)	(42)	(28)	(256)

: . ( < 1-11 > )

< 1-2 >

( : %)

/	33.3	17.3	28.2
	10.3	9.9	10.2
	42.5	51.9	45.5
	6.9	4.9	6.3
	44.3	51.9	46.7
	9.2	6.2	8.2
	5.2	14.8	8.2
	32.8	30.9	32.2
	6.3	4.9	5.9
(N)	68.2 (174)	31.8 (81)	100.0 (255)

< 1-3 >

( : %)

/	23.0	30.6	28.4
	8.1	10.9	10.1
	40.5	47.5	45.5
	1.4	8.2	6.2
	52.7	43.7	46.3
	4.1	9.8	8.2
	17.6	4.4	8.2
	37.8	30.6	32.7
	9.5	4.4	5.8
(N)	28.8 (74)	71.2 (183)	100.0 (257)

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	2000 /			
	(1.39 % )	(0.06% 1.39% )	(0.06% )	
/	35.7	47.6	16.7	26.4
	31.3	43.8	25.0	10.1
	15.2	49.4	35.4	49.7
	.0	66.7	33.3	3.8
	18.4	55.3	26.3	26.4
	20.0	60.0	20.0	6.3
	42.9	50.0	7.1	8.8
	32.7	45.5	21.8	34.6
	28.6	42.9	28.6	4.4
	23.8	49.7	26.4	100.0
(N)	(38)	(79)	(42)	(159)

$\chi^2=22.337$   $p=.133$

2)

< 1-5 >

( :%)

/	29.9	32.7	31.2
	28.9	33.8	31.2
	19.0	24.4	21.5
	5.0	4.6	4.8
	35.7	24.9	30.7
	27.9	18.6	23.6
	18.0	18.6	18.3
	29.9	35.5	32.5
	2.2	.9	1.6
(N)	100.0 (401)	100.0 (349)	100.0 (750)

< 1-6 >

( :%)

	10	20	30	40	
/	32.5	32.6	28.9	31.1	31.4
	12.5	27.1	39.7	45.6	31.4
	7.5	19.3	29.4	23.3	21.2
	5.0	2.5	7.7	6.8	4.7
	40.0	25.4	32.0	39.8	30.7
	50.0	23.2	16.0	18.4	23.5
	27.5	18.0	18.6	11.7	18.3
	20.0	45.3	23.2	14.6	32.5
	2.5	1.1	1.5	2.9	1.6
(N)	100.0 (80)	100.0 (362)	100.0 (194)	100.0 (103)	100.0 (739)



< 1-7 >

( : %)

			2		
/	38.5	30.0	32.3	31.6	31.2
	50.0	37.4	34.8	16.3	31.2
	26.9	19.3	25.8	20.9	21.4
	23.1	4.8	3.2	3.7	4.8
	30.8	35.7	23.2	27.4	30.6
	23.1	28.6	14.2	22.3	23.6
	3.8	18.4	17.4	20.5	18.3
	3.8	19.3	41.9	51.2	32.6
		1.1	.6	3.3	1.6
(N)	100.0 (26)	100.0 (353)	100.0 (155)	100.0 (215)	100.0 (749)

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( : %)

/	20.5	24.8	33.7	47.4	31.2
	22.7	38.8	24.8	33.0	31.2
	9.1	33.3	17.8	3.1	21.5
	2.3	5.4	4.8	4.1	4.8
	40.9	28.9	31.4	28.9	30.7
	25.0	13.9	30.2	30.9	23.6
	31.8	18.4	17.8	13.4	18.3
	29.5	32.3	32.4	35.1	32.5
	15.9		1.3	1.0	1.6
(N)	100.0 (44)	100.0 (294)	100.0 (315)	100.0 (97)	100.0 (750)

< 1-9 >

( : %)

	/	/ /	/		
/	26.0	21.0	36.2	51.2	31.2
	39.0	32.0	34.1	17.4	31.2
	23.0	21.0	27.9	9.1	21.5
	10.0	4.0	5.2	1.7	4.8
	40.0	33.3	26.6	24.0	30.7
	29.0	25.7	16.6	27.3	23.6
	16.0	17.0	20.5	19.0	18.3
	15.0	38.0	25.3	47.1	32.5
	1.0	2.0	1.3	1.7	1.6
(N)	100.0 (100)	100.0 (300)	100.0 (229)	100.0 (121)	100.0 (750)

< 1-10 >

( : %)

/	39.3	21.1	33.6	31.5	33.8	31.2
	18.0	45.8	37.1	47.9	3.7	31.2
	19.7	27.4	23.6	20.5	11.8	21.5
	3.3	7.4	4.4	9.6	.7	4.8
	32.8	29.5	32.3	39.7	22.8	30.7
	35.2	21.1	22.7	12.3	24.3	23.6
	19.7	15.3	15.7	11.0	29.4	18.3
	26.2	26.3	24.9	23.3	64.7	32.5
	.8	1.1	.4		5.9	1.6
(N)	100.0 (122)	100.0 (190)	100.0 (229)	100.0 (73)	100.0 (136)	100.0 (750)

< 1-11 > PC /

( : %)

/	32.3	24.5	31.2
	26.7	61.2	31.2
	21.5	20.4	21.4
	4.9	4.1	4.8
	29.0	40.8	30.6
	23.0	27.6	23.6
	18.9	14.3	18.3
	37.0	3.1	32.6
	1.8		.6
(N)	100.0 (651)	100.0 (98)	100.0 (749)

## 2. HRD-Net

1)

< 2-1 >

HRD-Net

( : %)

	30	30 99	100 299	300	
	1.1	5.4	4.8	10.7	4.3
가	19.4	14.0	23.8	25.0	18.8
	23.7	34.4	21.4	35.7	28.5
	55.9	46.2	50.0	28.6	48.4
(N)	100.0 (93)	100.0 (93)	100.0 (42)	100.0 (28)	100.0 (256)

$\chi^2=14.128$   $p=.118$

: =100, 가 =50, =-50, =-100

< 2-2 >

HRD-Net

( : %)

	4.6	3.7	4.3
가	16.7	22.2	18.4
	32.2	21.0	28.6
	46.6	53.1	48.6
(N)	100.0 (174)	100.0 (81)	100.0 (255)

$\chi^2=3.934$   $p=.269$

< 2-3 >

HRD-Net

( : %)

	9.5	2.2	4.3
가	27.0	15.3	18.7
	32.4	26.8	28.4
	31.1	55.7	48.6
(N)	100.0 (74)	100.0 (183)	100.0 (257)

$\chi^2=17.573$   $p=.001$

< 2-4 > / HRD-Net

( : %)

	2000 /			
	(1.39 % )	(0.06% 1.39% )	(0.06% )	
	5.3	2.5	4.8	3.8
가	23.7	26.6	19.0	23.9
	28.9	29.1	16.7	25.8
	42.1	41.8	59.5	46.5
(N)	100.0 (38)	100.0 (79)	100.0 (42)	100.0 (159)

$\chi^2=5.216$   $p=.516$

2)

< 2-5 > HRD-Net

( : %)

	4.2	2.9	3.6
가	27.4	28.1	27.7
	18.5	22.3	20.3
	49.9	46.7	48.4
(N)	100.0 (401)	100.0 (349)	100.0 (750)

$\chi^2=2.792$   $p=.425$

< 2-6 > HRD-Net

( : %)

	10	20	30	40	
	2.5	3.6	3.6	4.9	3.7
가	21.3	29.0	28.9	26.2	27.7
	26.3	22.7	14.4	18.4	20.3
	50.0	44.8	53.1	50.5	48.3
(N)	100.0 (80)	100.0 (362)	100.0 (194)	100.0 (103)	100.0 (739)

$\chi^2=10.164$   $p=.337$

< 2-7 > HRD-Net

( : %)

			2		
	7.7	2.5	5.8	3.3	3.6
가	30.8	26.6	33.5	25.1	27.8
	7.7	21.8	19.4	20.0	20.3
	53.8	49.0	41.3	51.6	48.3
(N)	100.0 (26)	100.0 (353)	100.0 (155)	100.0 (215)	100.0 (749)

$\chi^2=11.894$   $p=.219$

< 2-8 >

HRD-Net

( : %)

	2.3	4.4	3.2	3.1	3.6
가	13.6	34.7	26.7	16.5	27.7
	6.8	17.7	24.4	20.6	20.3
	77.3	43.2	45.7	59.8	48.4
(N)	100.0 (44)	100.0 (294)	100.0 (315)	100.0 (97)	100.0 (750)

$\chi^2=33.735$   $p=.000$

< 2-9 >

HRD-Net

( : %)

	/	/ /	/		
	2.0	3.7	3.5	5.0%	3.6
가	25.0	33.0	26.6	19.0	27.7
	19.0	18.0	18.8	29.8	20.3
	54.0	45.3	51.1	46.3	48.4
(N)	100.0 (100)	100.0 (300)	100.0 (229)	100.0 (121)	100.0 (750)

$\chi^2=16.181$   $p=.063$

< 2-10 >

HRD-Net

( : %)

	6.6	2.1	3.1	2.7	4.4	3.6
가	30.3	31.1	27.5	23.3	23.5	27.7
	27.0	20.0	20.1	19.2	15.4	20.3
	36.1	46.8	49.3	54.8	56.6	48.4
(N)	100.0 (122)	100.0 (190)	100.0 (229)	100.0 (73)	100.0 (136)	100.0 (750)

$\chi^2=18.043$  p=.114

< 2-11 > PC /

HRD-Net

( : %)

	PC /		
	3.8	2.0	3.6
가	29.5	16.3	27.8
	20.3	20.4	20.3
	46.4	61.2	48.3
(N)	100.0 (651)	100.0 (98)	100.0 (74.9)

$\chi^2=9.961$  p=.019



### 3. HRD-Net

1)

< 3-1 >

HRD-Net

( : %)

	30	30 99	100 299	300	
	31.6	27.8	25.0	10.0	25.4
	10.5	16.7	33.3	10.0	16.9
	36.8	22.2	33.3	80.0	39.0
	5.3	11.1	-	-	5.1
	15.8	16.7	-	-	10.2
	-	5.6	-	-	1.7
	-	-	8.3	-	1.7
	100	100	100	100	100
(N)	(19)	(18)	(12)	(10)	(59)

$\chi^2=21.816$   $p=.240$

< 3-2 >

HRD-Net

( : %)

	32.4	9.5	24.1
	16.2	19.0	17.2
	35.1	47.6	39.7
	5.4	4.8	5.2
	8.1	14.3	10.3
	2.7	-	1.7
	37	4.8	1.7
	100	100	100
(N)	(27)	(21)	(58)

$\chi^2=6.336$   $p=.387$

< 3-3 >

HRD-Net

( : %)

	29.6	21.9	25.4
	18.5	15.6	16.9
	44.4	34.4	39.0
	-	9.4	5.1
	3.7	15.6	10.2
	3.7	-	1.7
	-	3.1	1.7
	100	100	100
(N)	(27)	(32)	(59)

$\chi^2=7.406$   $p=.285$

< 3-4 > /

HRD-Net

( : %)

	2000 /			
	(1.39 % )	(0.06% 1.39% )	(0.06% )	
	36.4	26.1	30.0	29.5
	9.1	17.4	20.0	15.9
	54.5	39.1	10.0	36.4
	-	-	20.0	4.5
	-	13.0	10.0	9.1
	-	4.3	-	2.3
	-	-	10.0	2.3
	100.0	100.0	100.0	100.0
(N)	(11)	(23)	(10)	(44)

$\chi^2=16.202$   $p= .182$

2)

< 3-5 > HRD-Net

( : %)

	13.4	14.8	14.0
	22.8	21.3	22.1
	15.7	23.1	19.1
	20.5	24.1	22.1
	8.7	8.3	8.5
	5.5	2.8	4.3
	11.0	4.6	8.1
	-	.9	4
/	2.4	-	1.3
(N)	100.0 (127)	100.0 (108)	100.0 (235)

$\chi^2=9.870$   $p=.274$

< 3-6 > HRD-Net

( : %)

	10	20	30	40	
	15.8	16.9	12.7	6.3	14.2
	21.1	18.6	19.0	40.6	22.0
	10.5	17.8	27.0	12.5	19.0
	21.1	24.6	20.6	18.8	22.4
	5.3	6.8	9.5	12.5	8.2
	-	4.2	4.8	6.3	4.3
	21.1	8.5	6.3	3.1	8.2
	-	.8	-	-	4
/	5.3	1.7	-	-	1.3
(N)	100.0 (19)	100.0 (118)	100.0 (63)	100.0 (32)	100.0 (232)

$\chi^2= 24.525$   $p=.432$

< 3-7 > HRD-Net

( : %)

			2		
	10.0	10.7	14.8	19.7	14.0
	50.0	26.2	16.4	16.4	22.1
	10.0	18.4	19.7	21.3	19.1
	10.0	22.3	21.3	24.6	22.1
	10.0	7.8	11.5	6.6	8.5
	-	3.9	4.9	4.9	4.3
	10.0	9.7	9.8	3.3	8.1
	-	-	-	1.6	.4
/	-	1.0%	1.6	1.6	1.3
(N)	100.0 (10)	100.0 (103)	100.0 (61)	100.0 (61)	100.0 (235)

$\chi^2 = 17.037$   $p = .847$

< 3-8 > HRD-Net

( : %)

	-	15.7	9.6	31.6	14.0
	42.9	20.9	22.3	21.1	22.1
	14.3	16.5	25.5	5.3	19.1
	14.3	27.8	14.9	26.3	22.1
	14.3	9.6	8.5	-	8.5
	14.3	2.6	5.3	5.3	4.3
	-	5.2	11.7	10.5	8.1
	-	.9	-	-	.4
/	-	.9	2.1	-	1.3
(N)	100.0 (7)	100.0 (115)	100.0 (94)	100.0 (19)	100.0 (235)

$\chi^2 = 26.995$   $p = .305$

< 3-9 >

HRD-Net

( : %)

	/	/	/		
	14.8	15.5	13.0	10.3	14.0
	22.2	18.2	30.4	17.2	22.1
	7.4	14.5	27.5	27.6	19.1
	22.2	23.6	17.4	27.6	22.1
	14.8	10.0	4.3	6.9	8.5
	3.7	5.5	4.3	-	4.3
	11.1	10.9	1.4	10.3	8.1
	-	-	1.4	-	.4
/	3.7	1.8	-	-	1.3
(N)	100.0 (27)	100.0 (110)	100.0 (69)	100.0 (29)	100.0 (235)

$\chi^2 = 26.871$   $p = .311$

< 3-10 >

HRD-Net

( : %)

	13.3	14.3	8.6	21.1	21.1	14.0
	8.9	19.0	32.9	21.1	23.7	22.1
	17.8	20.6	14.3	31.6	21.1	19.1
	31.1	22.2	20.0	15.8	18.4	22.1
	13.3	9.5	7.1	5.3	5.3	8.5
	4.4	1.6	8.6	5.3	-	4.3
	6.7	11.1	8.6	-	7.9	8.1
	2.2	-	-	-		.4
/	2.2	1.6	-	-	2.6	1.3
(N)	100.0 (45)	100.0 (63)	100.0 (70)	100.0 (19)	100.0 (38)	100.0 (235)

$\chi^2 = 32.587$   $p = .438$

< 3-11 > PC /

HRD-Net

( : %)

	PC /		
	14.7	5.6	14.0
	19.8	50.0	22.1
	20.3	5.6	19.1
	23.5	5.6	22.1
	7.8	16.7	8.5
	4.1	5.6	4.3
	8.3	5.6	8.1
	.5	-	.4
/	.9	5.6	1.3
	100.0	100.0	100.0
(N)	(217)	(18)	(235)

$\chi^2 = 16.778$   $p = .033$

#### 4. HRD-Net

1)

< 4-1 >

HRD-Net

( : %)

	30	30 99	100 299	300	
HRD-Net	87.8	73.3	83.3	66.7	79.7
HRD-Net 가	9.5	9.3	6.7	16.7	9.6
HRD-Net 가	-	4.0	-	5.6	2.0
HRD-Net 가	-	8.0	6.7	5.6	4.6
	-	1.3	-	-	.5
/	2.7	4.0	3.3	5.6	3.6
(N)	100 (74)	100 (75)	100 (30)	100 (18)	100 (197)

$\chi^2=14.950$   $p=.455$



< 4-2 >

HRD-Net

( : %)

HRD-Net		80.3	80.0
HRD-Net	가	10.2	8.3
HRD-Net	가	2.2	1.7
HRD-Net	가	2.9	8.3
		.7	-
	/	3.6	1.7
		100.0	100
(N)		(137)	(60)
			100
			(197)

$\chi^2=3.846$  p=.569

< 4-3 >

HRD-Net

( : %)

HRD-Net		68.1	83.4
HRD-Net	가	17.0	7.3
HRD-Net	가	4.3	1.3
HRD-Net	가	4.3	4.6
		2.1	-
	/	4.3	3.3
		100	100
(N)		(47)	(151)
			100
			(198)

$\chi^2=9.439$  p=.093

< 4-4 > / HRD-Net

( : %)

	2000 /			
	(1.39 % )	(0.06% 1.39% )	(0.06% )	
HRD-Net	81.5	83.9	78.1	81.7
HRD-Net 가	7.4	7.1	6.3	7.0
HRD-Net 가	7.4	1.8	-	2.6
HRD-Net 가	3.7	3.6	9.4	5.2
/	-	3.6	6.3	3.5
	100.0	100.0	100.0	100.0
(N)	27	56	32	115

$\chi^2=6.598$  p=.581

2)

< 4-5 > HRD-Net

( : %)

HRD-Net	85.0	78.4	81.9
HRD-Net 가	7.3	12.0	9.5
HRD-Net 가	2.2	1.2	1.7
HRD-Net 가	1.5	3.3	2.3
HRD-Net 가	2.2	3.3	2.7%
	-	.4	.2
/	1.8	1.2	1.6
	100.0	100.0	100.0
(N)	(274)	(241)	(515)

$\chi^2= 8.279$  p=.218

< 4-6 > HRD-Net

( : %)

	10	20	30	40	
HRD-Net	82.0	80.7	80.9	87.3	81.9
HRD-Net 가	4.9	10.2	11.5	8.5	9.7
HRD-Net 가	1.6	1.2	1.5	2.8	1.6
HRD-Net 가	6.6	2.0	2.3	-	2.4
HRD-Net 가	1.6	3.7	3.1	-	2.8
	-	.4	-	-	.2
/	3.3	1.6	.8	1.4	1.6
	100.0	100.0	100.0	100.0	100.0
(N)	(61)	(244)	(131)	(71)	(507)

$\chi^2=15.359$   $p=.637$

< 4-7 > HRD-Net

( : %)

			2		
HRD-Net	81.3	80.0	83.0	84.4	81.9
HRD-Net 가	6.3	9.2	8.5	11.0	9.5
HRD-Net 가	-	2.8	2.1	-	1.8
HRD-Net 가	-	2.4	3.2	1.9	2.3
HRD-Net 가	6.3	3.6	2.1	1.3	2.7
	-	4	-	-	.2
/	6.3	1.6	1.1	1.3	1.6
(N)	100.0 (16)	100.0 (250)	100.0 (94)	100.0 (154)	100.0 (514)

$\chi^2=12.561$   $p=.817$

< 4-8 >

HRD-Net

( : %)

HRD-Net		94.6	81.0	81.4	79.5	81.9
HRD-Net	가	2.7	11.7	8.1	11.5	9.5
HRD-Net	가	2.7	1.1	2.3	1.3	1.7
HRD-Net	가	-	2.8	2.3	2.6	2.3
HRD-Net	가	-	1.7	3.6	3.8	2.7
		-	-	.5	-	.2
	/	-	1.7	1.8	1.3	1.6
		100.0	100.0	100.0	100.0	100.0
(N)		(37)	(179)	(221)	(78)	(515)

$\chi^2=11.188$   $p=.889$

< 4-9 >

HRD-Net

( : %)

	/	/ /	/		
HRD-Net	89.0	82.6	78.8	0.4	81.9
HRD-Net 가	5.5	7.4	12.5	12.0	9.5
HRD-Net 가	1.4	2.6	1.9	-	1.7
HRD-Net 가	1.4	2.6	1.3	4.3	2.3
HRD-Net 가	1.4	2.1	4.4	2.2	2.7
	-	.5	-	-	.2
/	1.4	2.1	1.3	1.1	1.6
(N)	100.0 (73)	100.0 (190)	100.0 (160)	100.0 (92)	100.0 (515)

$\chi^2=15.021$   $p=.660$

< 4-10 >

HRD-Net

( : %)

HRD-Net	83.1	79.5	78.6	81.5	89.8	81.9
HRD-Net 가	6.5	9.4	13.2	11.1	5.1	9.5
HRD-Net 가	2.6	3.1	.6	-	2.0	1.7
HRD-Net 가	3.9	2.4	1.3	3.7	2.0	2.3
HRD-Net 가	2.6	2.4	4.4	3.7	-	2.7
	-	-	.6	-	-	.2
/	1.3	3.1	1.3	-	1.0	1.6
(N)	100.0 (77)	100.0 (127)	100.0 (159)	100.0 (54)	100.0 (98)	100.0 (515)

$\chi^2=15.021$   $p=.660$

< 4-11 > PC /

HRD-Net

( : %)

	PC /		
HRD-Net	82.5	78.8	81.9
HRD-Net 가	8.8	13.8	9.5
HRD-Net 가	1.6	2.5	1.8
HRD-Net 가	2.5	1.3	2.3
HRD-Net 가	2.8	2.5	2.7
	-	1.3	.2
/	1.8	-	1.6
(N)	100.0 (434)	100.0 (80)	100.0 (514)

$\chi^2=9.581$   $p=.143$

5.

1)

< 5-1 >

( : )

						F	
	30	30 -99	100 -299	300			
	14.67	8.05	12.20	8.93	11.04	.430	.732
	10.00	4.02	7.32	5.36	6.71	.316	.814
	3.33	6.40	2.44	1.79	4.13	.206	.892
	2.03	3.49	3.66	3.57	3.06	.027	.994
	3.38	1.72	2.44	3.57	2.61	.034	.992
	10.96	1.15	-2.44	3.57	3.93	1.204	.309
	8.44	4.02	6.10	-3.57	4.94	.559	.643

: =100, =50, =0, =-50, =-100 .



< 5-2 >

( : )

				<b>F</b>	
	6.45	20.78	11.21	7.244	.008
	4.52	11.04	6.68	1.399	.238
	4.22	3.90	4.11	.004	.947
	2.94	3.25	3.04	.003	.954
	3.90	.00	2.60	.580	.447
	1.30	9.87	4.13	2.273	.133
	4.17	6.49	4.94	.151	.698

< 5-3 >

( : )

				<b>F</b>	
	15.49	9.32	11.21	1.257	.263
	9.15	5.59	6.68	.398	.529
	8.45	2.19	4.11	1.597	.208
	9.86	.00	3.04	3.367	.068
	5.63	1.25	2.60	.704	.402
	4.23	4.09	4.13	.001	.981
	1.43	6.40	4.91	.662	.417

< 5-4 > /

( : )

	2000 /				F	
	(1.39 % )	(0.06% 1.39% )	(0.06% )			
/	2.15E-16	8.33	11.76	7.19	1.003	.370
	-2.94	15.07	15.71	10.92	2.957	.055
	5.88	15.75	7.14	11.27	1.015	.365
	14.71	4.11	2.94	6.38	1.386	.254
	8.82	2.74	10.61	6.07	.628	.535
	11.76	-4.11	10.29	3.19	3.057	.050
	-2.94	6.85	4.55	3.93	.673	.512
	-4.41	6.76	15.28	6.25	1.866	.159

2)

< 5-5 >

( : )

				<b>F</b>	
/	36.28	26.56	31.83	7.860	.005
	41.91	34.53	38.48	4.774	.029
	40.52	35.24	38.08	2.391	.123
	31.51	22.40	27.25	7.149	.008
	34.33	21.66	28.40	13.354	.000
	33.81	23.29	28.89	9.162	.003
	39.34	25.37	32.80	16.204	.000
	32.33	20.72	26.92	8.677	.003

< 5-6 >

( : )

						<b>F</b>	
	<b>10</b>	<b>20</b>	<b>30</b>	<b>40</b>			
/	38.00	30.65	27.78	39.80	32.00	1.986	.115
	47.33	36.17	33.24	50.51	38.60	4.520	.004
	44.00	38.87	30.48	45.45	38.12	3.072	.027
	30.92	25.64	24.87	34.85	27.29	1.379	.248
	27.33	27.65	25.94	35.86	28.31	1.054	.368
	26.67	27.08	27.81	37.88	28.73	1.481	.218
	36.99	29.05	30.59	44.90	32.48	3.282	.020
	37.33	25.44	23.40	31.63	27.02	1.604	.187

< 5-7 >

( : )

						F	
			2				
/	61.54	29.85	27.82	34.08	31.83	4.427	.004
	69.23	41.25	33.79	33.09	38.39	6.079	.000
	51.92	41.67	35.86	31.82	37.99	2.943	.032
	42.31	27.94	25.17	25.36	27.15	1.182	.316
	36.54	25.96	27.89	31.40	28.30	.858	.462
	36.54	27.29	26.87	31.88	28.86	.736	.531
	50.00	31.59	29.59	34.86	32.77	1.567	.196
	38.46	27.54	22.41	27.27	26.82	.783	.504

< 5-8 >

( : )

						F	
/	46.05	26.92	32.12	40.12	31.83	3.228	.022
	51.25	35.82	37.25	45.45	38.48	2.180	.089
	43.90	35.16	39.87	38.51	38.08	.768	.512
	39.02	27.29	25.65	27.22	27.25	1.026	.380
	46.34	27.46	26.72	28.89	28.40	2.189	.088
	43.90	29.05	26.56	29.44	28.89	1.670	.172
	42.68	30.85	32.67	34.83	32.80	.829	.478
	56.10	23.06	29.28	17.44	26.92	5.913	.001

< 5-9 >

( : )

						F	
	/	/ /	/				
/	37.91	30.22	29.21	35.78	31.83	1.168	.321
	52.75	37.89	36.94	31.78	38.48	4.049	.007
	46.20	38.25	36.94	33.47	38.08	1.421	.235
	42.39	27.10	28.57	13.45	27.25	7.192	.000
	37.50	30.35	28.57	16.39	28.40	3.984	.008
	37.50	28.95	29.24	21.43	28.89	2.061	.104
	40.34	35.61	30.36	25.00	32.80	2.416	.065
	31.67	33.10	19.82	21.55	26.92	3.317	.020

< 5-10 >

( : )

							F	
/	33.05	28.33	34.13	32.09	31.75	31.82	.413	.800
	37.29	44.29	39.39	40.14	29.01	38.48	2.287	.059
	38.56	42.12	37.32	40.00	32.20	38.08	.958	.430
	25.42	34.05	26.98	27.46	19.70	27.25	1.976	.096
	25.00	30.71	26.98	28.87	30.30	28.40	.372	.829
	24.79	27.84	30.23	28.87	31.82	28.89	.421	.794
	36.32	33.98	28.27	33.80	34.85	32.80	.766	.547
	41.45	29.78	22.56	16.67	22.52	26.92	3.642	.006

< 5-11 > PC /

( : )

	PC /			F	
/	31.18	36.36	31.83	.982	.322
	37.50	44.51	38.39	1.917	.167
	38.80	32.42	37.99	1.557	.212
	27.15	27.17	27.15	.000	.996
	28.55	26.63	28.30	.135	.714
	28.47	31.52	28.86	.341	.560
	32.66	33.52	32.77	.026	.871
	27.01	25.54	26.82	.062	.804

**6.**

**1)**

< 6-1 >

( : )

						F	
	30	30 -99	100 -299	300			
	10.71	1.83	1.35	10.00	5.61	.939	.422
	7.25	2.44	6.76	1.92	4.67	.286	.835
	17.86	13.37	18.92	5.56	14.77	.901	.441
	16.90	10.92	12.16	11.11	13.06	.364	.779
	10.56	7.83	6.94	8.00	8.60	.116	.951
	4.48	3.80	-7.14	-2.08	1.46	1.282	.282
/	5.30	-.65	-4.05	-2.00	.49	.452	.716

: =100, =50, =0, =-50, =-100 .

< 6-2 >

( : )

				F	
	5.14	5.88	5.37	.018	.895
	2.76	7.25	4.21	.688	.408
	12.08	19.01	14.32	1.708	.193
	12.08	15.07	13.06	.304	.582
	6.12	13.24	8.37	1.945	.165
	.71	2.34	1.22	.115	.735
/	.00	.81	.24	.015	.902

< 6-3 >

( : )

				F	
	6.62	5.10	5.58	.073	.788
	2.17	5.82	4.65	.443	.506
	15.71	14.24	14.71	.075	.785
	14.29	12.75	13.23	.079	.779
	9.09	8.33	8.56	.022	.884
	3.13	.70	1.46	.252	.616
/	2.27	.00	.73	.124	.725

< 6-4 > /

( : )

	2000 /				F	
	(1.39 % )	(0.06% 1.39% )	(0.06% )			
	-1.52	3.03	6.06	2.65	.319	.728
	5.88	-2.22E-16	12.50	4.55	1.148	.321
	18.57	16.91	13.64	16.54	.151	.860
	12.86	13.04	16.67	13.87	.110	.896
	7.58	6.06	6.25	6.49	.020	.980
	4.84	3.12	1.67	3.20	.083	.921
/	-12.50	-8.87	14.52	-4.00	3.467	.034

2)

< 6-5 >

( : )

				F	
	34.23	24.84	29.90	8.237	.004
	36.29	19.94	28.78	22.399	.000
	33.51	28.51	31.16	2.593	.108
	30.48	27.36	29.02	.835	.361
	28.59	27.24	27.97	.188	.665
	26.72	17.68	22.55	7.866	.005
/	34.75	24.05	29.78	7.889	.005



< 6-6 >

( : )

						F	
	10	20	30	40			
	40.85	29.57	25.82	29.08	29.68	2.116	.097
	36.30	27.68	23.63	34.38	28.47	1.969	.117
	32.88	32.63	26.90	31.44	30.96	.839	.472
	31.76	30.42	22.28	33.16	28.79	1.823	.142
	30.14	27.69	23.77	33.84	27.79	1.389	.245
	26.76	21.70	17.60	30.21	22.36	2.181	.089
/	37.67	24.53	30.45	40.10	29.78	3.231	.022

< 6-7 >

( : )

						F	
			2				
	38.00	30.98	26.76	29.23	29.87	.630	.596
	52.08	28.62	24.82	29.19	28.82	2.435	.064
	50.00	29.85	31.47	31.09	31.21	1.734	.159
	52.08	26.36	27.24	31.84	28.99	2.814	.038
	48.00	26.82	29.37	26.50	28.01	2.242	.082
	54.35	22.73	20.90	19.70	22.55	4.873	.002
/	52.17	35.03	23.53	22.96	29.82	4.763	.003

< 6-8 >

( : )

						F	
	41.25	23.15	31.46	40.59	29.90	5.110	.002
	46.25	22.10	31.42	32.35	28.78	4.386	.005
	35.00	24.18	35.02	38.37	31.16	4.593	.003
	37.80	20.83	33.33	36.05	29.02	5.216	.001
	36.59	23.72	28.36	36.05	27.97	2.743	.042
	26.92	17.82	24.39	28.82	22.55	2.083	.101
/	42.11	23.66	30.03	41.95	29.78	3.876	.009

< 6-9 >

( : )

						F	
	/	/ /	/				
	39.20	29.30	24.77	34.09	29.90	2.791	.040
	42.31	31.04	19.91	29.46	28.78	5.673	.001
	37.22	31.93	26.80	33.04	31.16	1.603	.187
	36.81	26.53	28.05	30.70	29.02	1.265	.285
	34.62	25.45	28.77	27.19	27.97	1.192	.312
	33.52	21.09	21.16	19.64	22.55	2.454	.062
/	39.33	29.62	26.16	29.57	29.78	1.475	.220

< 6-10 >

( : )

							F	
	28.95	24.01	34.71	30.15	31.05	29.90	1.513	.197
	31.74	29.43	26.94	25.74	29.84	28.78	.301	.877
	26.72	31.56	31.58	37.68	30.40	31.16	.793	.530
	23.08	24.86	34.29	36.23	27.78	29.02	2.071	.083
	25.00	29.26	28.64	33.82	24.60	27.97	.773	.543
	23.21	24.70	22.82	23.88	17.77	22.55	.529	.714
/	36.73	29.82	31.40	35.51	17.08	29.78	2.811	.025

< 6-11 > PC /

( : )

	PC /			F	
	30.08	28.41	29.87	.116	.734
	28.80	28.98	28.82	.001	.973
	31.99	25.84	31.21	1.742	.187
	30.02	21.91	28.99	2.496	.115
	28.61	23.86	28.01	1.035	.309
	22.79	20.93	22.55	.147	.701
/	29.27	33.52	29.82	.557	.456

## 7. HRD-Net

1)

< 7-1 >

HRD-Net

( : )

						F	
	30	30 99	100 299	300			
	28.95	22.22	12.50	12.50	22.88	.539	.658
	26.32	25.00	12.50	10.00	30.34	.841	.477
	13.16	25.00	16.67	10.00	16.95	.463	.709
	18.42	19.44	8.33	-10.00	11.86	1.244	.303

< 7-2 >

HRD-Net

( : )

				F	
	27.03	14.29	22.41	1.773	.188
	22.97	16.67	20.69	.462	.500
	18.92	14.29	17.24	.208	.650
	14.86	7.14	12.07	.423	.518

< 7-3 >

HRD-Net

( : )

				F	
	22.22	23.44	22.88	.017	.896
	22.22	18.75	20.34	.154	.696
	16.67	17.19	16.95	.003	.957
	7.41	15.63	11.86	.533	.468

< 7-4 >

/

HRD-Net

( : )

	2000 /			F		
	(1.39 % )	(0.06% 1.39%)	(0.06% )			
	4.55	26.09	10.00	17.05	1.840	.172
	4.55	28.26	10.00	18.18	2.563	.089
	9.09	17.39	25.00	17.05	.511	.603
	-4.55	10.87	20.00	9.09	.869	.427

2)

< 7-5 > HRD-Net

( : )

				F	
	44.49	16.67	31.70	23.594	.000
	38.19	15.28	27.66	17.014	.000
	35.43	12.96	25.11	13.271	.000
	35.04	15.28	25.96	10.335	.001

< 7-6 > HRD-Net

( : )

						F	
	10	20	30	40			
	50.00	30.08	25.40	32.81	30.82	1.467	.224
	39.47	25.85	19.84	37.50	26.94	1.747	.158
	39.47	26.69	13.49	28.13	24.35	1.875	.135
	34.21	25.00	18.25	32.81	25.00	.952	.416

< 7-7 > HRD-Net

( : )

						F	
			2				
	40.00	37.38	27.05	25.41	31.70	1.233	.298
	40.00	33.98	22.95	19.67	27.66	1.907	.129
	50.00	31.07	16.39	19.67	25.11	2.364	.072
	30.00	31.55	22.13	19.67	25.96	.972	.407

< 7-8 >

HRD-Net

( : )

						F	
	64.29	26.09	35.11	36.84	31.70	2.035	.110
	42.86	23.48	29.26	39.47	27.66	1.131	.337
	35.71	23.48	25.53	28.95	25.11	.196	.899
	57.14	19.57	32.45	21.05	25.96	2.354	.073

< 7-9 >

HRD-Net

( : )

						F	
	/	/ /	/				
	55.56	32.73	20.29	32.76	31.70	4.041	.008
	44.44	27.73	18.84	32.76	27.66	2.422	.067
	44.44	26.36	13.77	29.31	25.11	2.870	.037
	38.89	26.82	16.67	32.76	25.96	1.745	.159

< 7-10 >

HRD-Net

( : )

							<b>F</b>	
	33.33	30.95	38.43	23.68	26.32	31.70	.477	.753
	32.22	33.33	22.86	23.68	23.68	27.66	.709	.587
	34.44	25.40	21.43	18.42	23.68	25.11	.617	.651
	27.78	28.57	25.71	21.05	22.37	25.96	.164	.956

< 7-11 > PC /

HRD-Net

( : )

	<b>PC /</b>			<b>F</b>	
	30.88	41.67	31.70	.922	.338
	26.96	36.11	27.66	.723	.396
	24.42	33.33	25.11	.563	.454
	25.12	36.11	25.96	.876	.350



8.

1)

< 8-1 >

( : )

						F	
	30	30 99	100 299	300			
	2.40	2.36	2.14	3.00	2.42	.992	.398
	2.08	2.20	1.96	2.55	2.17	2.883	.038
	1.93	1.96	1.71	1.80	1.88	1.319	.271
	1.80	1.84	1.68	1.80	1.79	.576	.632
	1.88	2.04	1.64	2.00	1.91	.208	.891
	1.93	2.04	1.82	2.70	2.06	1.247	.295
	2.03	2.05	1.89	2.50	2.08	3.278	.023

: =100, =50, =-50, =-100

< 8-2 >

( : )

				F	
	2.33	2.62	2.42	.239	.626
	2.04	2.44	2.17	2.499	.116
	1.80	2.07	1.88	4.514	.035
	1.80	1.78	1.79	2.932	.089
	1.82	2.11	1.91	.014	.908
	1.90	2.40	2.06	3.282	.072
	1.94	2.38	2.08	7.221	.008

< 8-3 >

( : )

				F	
	1.45	1.47	1.46	.006	.936
	2.69	2.25	2.42	6.258	.014
	2.33	2.07	2.17	2.006	.159
	1.87	1.89	1.88	.008	.929
	1.80	1.78	1.79	.011	.915
	2.04	1.83	1.91	1.754	.188
	2.18	1.98	2.06	1.263	.263
	2.20	2.00	2.08	1.217	.272

< 8-4 > /

( : )

	2000 /				F	
	(1.39 % )	(0.06% 1.39% )	(0.06% )			
	81.67	78.30	76.92	79.17	.186	.830
	-3.33	14.15	34.62	11.46	1.585	.211
	18.33	30.19	50.00	29.17	1.061	.350
	61.67	54.72	50.00	56.25	.486	.617
	66.67	63.21	57.69	63.54	.253	.777
	58.33	50.00	50.00	52.60	.302	.740
	37.93	49.06	34.62	43.68	.752	.474
	41.38	53.77	34.62	47.37	1.389	.255

2)

< 8-5 >

( : )

				<b>F</b>	
	78.48	81.51	79.92	1.533	.216
	68.98	69.82	69.38	.058	.809
	62.43	67.95	65.05	2.288	.131
	48.93	60.68	54.50	8.203	.004
	69.03	74.11	71.45	2.854	.092
	53.21	52.96	53.09	.005	.946
	52.81	48.52	50.77	1.325	.250
	52.01	47.63	49.93	1.290	.257

< 8-6 >

( : )

						<b>F</b>	
	<b>10</b>	<b>20</b>	<b>30</b>	<b>40</b>			
	74.68	80.98	80.34	79.38	79.89	.828	.479
	89.24	72.19	64.89	54.64	69.83	9.830	.000
	89.87	64.41	60.45	54.12	64.86	9.260	.000
	39.24	55.64	55.06	58.25	54.00	2.215	.085
	65.82	71.04	73.31	73.96	71.43	.787	.501
	53.80	49.71	56.74	56.70	52.92	1.064	.364
	50.00	44.81	55.90	59.28	50.21	3.243	.022
	51.90	42.92	56.46	57.22	49.36	3.797	.010

< 8-7 >

( : )

						F	
			2				
	82.00	76.30	79.14	86.34	79.89	3.935	.008
	76.00	72.29	78.48	56.96	69.55	7.503	.000
	66.00	74.56	64.90	48.97	65.21	12.016	.000
	62.00	54.69	57.33	51.55	54.65	.476	.699
	76.00	72.58	68.54	70.98	71.41	.470	.703
	52.00	53.52	48.34	56.19	53.09	.741	.528
	56.00	55.13	42.38	48.97	50.77	2.504	.058
	44.00	55.28	40.00	48.97	49.93	3.263	.021

< 8-8 >

( : )

						F	
	87.50	80.80	80.56	73.71	79.92	1.641	.179
	47.50	68.69	72.88	64.95	69.38	2.413	.066
	47.50	58.82	70.92	68.75	65.05	4.172	.006
	50.00	54.17	55.88	52.06	54.50	.176	.913
	67.50	74.48	71.08	64.43	71.45	1.617	.184
	75.00	56.23	49.35	51.03	53.09	2.393	.067
	52.50	53.29	48.20	51.03	50.77	.528	.663
	65.00	50.69	50.16	43.81	49.93	1.056	.367

< 8-9 >

( : )

						F	
	/	/	/				
	71.00	80.60	80.33	85.00	79.92	3.547	.014
	86.00	66.01	59.72	80.42	69.38	10.583	.000
	86.00	53.74	66.82	71.01	65.05	12.527	.000
	60.00	50.00	55.71	58.33	54.50	1.194	.311
	72.00	67.44	75.24	73.75	71.45	1.707	.164
	58.50	49.11	59.72	46.25	53.09	3.115	.026
	63.00	44.84	55.69	45.83	50.77	4.512	.004
	56.00	47.14	54.50	43.33	49.93	1.966	.118

< 8-10 >

( : )

							F	
	78.99	78.16	74.20	85.42	91.52	76.92	6.054	.000
	71.01	69.74	70.55	69.44	64.73	69.38	.357	.839
	71.85	59.74	74.43	70.42	45.09	65.05	8.461	.000
	52.94	50.26	57.53	65.28	50.45	54.50	1.321	.261
	69.75	71.43	69.63	75.00	74.55	71.45	.474	.755
	51.26	52.63	54.79	52.08	53.13	53.09	.119	.976
	42.02	49.74	53.20	57.64	52.68	50.77	1.466	.211
	45.38	52.38	48.40	58.33	48.21	49.93	.903	.462

< 8-11>PC /

( : )

	PC /			F	
	80.92	72.78	79.89	4.910	.027
	70.29	64.44	69.55	1.269	.260
	64.57	69.66	65.21	.858	.355
	53.23	64.44	54.65	3.304	.070
	72.58	63.33	71.41	4.200	.041
	52.01	60.56	53.09	2.389	.123
	49.68	58.33	50.77	2.391	.122
	49.11	55.56	49.93	1.236	.267

9.

1)

< 9-1>

( : )

						F	
	30	30 99	100 299	300			
	1.98	2.11	1.93	2.30	2.06	.833	.478
	2.23	2.31	2.07	2.40	2.25	.595	.619
	1.88	1.71	1.64	1.90	1.77	.584	.627
/	1.58	1.64	1.54	1.55	1.59	.094	.963
	2.08	2.18	1.96	2.65	2.17	1.975	.121
	1.85	1.93	1.64	1.85	1.84	.675	.568
	1.88	1.87	1.64	2.20	1.87	1.421	.239

: =100, =50, =-50, =-100

< 9-2 >

( : )

				<b>F</b>	
	2.01	2.18	2.06	1.057	.306
	2.20	2.36	2.25	.816	.368
	1.73	1.84	1.77	.455	.501
/	1.56	1.64	1.59	.254	.615
	2.09	2.36	2.17	2.037	.156
	1.87	1.78	1.84	.332	.565
	1.84	1.96	1.87	.506	.478

< 9-3 >

( : )

				<b>F</b>	
	2.07	2.06	2.06	.010	.919
	2.35	2.19	2.25	.906	.343
	1.84	1.73	1.77	.494	.483
/	1.69	1.52	1.59	1.147	.286
	2.35	2.07	2.17	2.479	.118
	1.78	1.88	1.84	.395	.531
	1.96	1.82	1.87	.834	.363

< 9-4 > /

( : )

	2000 /				F	
	(1.39 % )	(0.06%-1.39% )	(0.06% )			
	30.00	47.17	46.15	41.67	1.118	.331
	6.67	33.02	19.23	22.92	1.926	.151
	58.33	73.58	73.08	68.75	1.976	.144
/	61.67	81.13	76.92	74.48	2.396	.097
	15.00	39.62	53.85	33.85	2.376	.099
	55.00	66.04	46.15	59.90	1.957	.147

2)

< 9-5 >

( : )

				F	
	42.74	37.87	40.42	1.308	.253
	33.87	29.88	31.97	.774	.379
	75.13	71.60	73.45	1.446	.230
/	80.91	84.47	82.61	1.895	.169
	69.76	72.63	71.13	.787	.375
	63.88	63.46	63.68	.016	.900
	48.92	59.17	53.80	7.249	.007



< 9-6 >

( : )

						F	
	10	20	30	40			
	43.04	34.49	42.98	53.61	40.27	3.204	.023
	42.41	25.36	32.87	44.33	31.83	3.556	.014
	81.01	73.48	69.38	74.74	73.46	1.670	.172
/	78.48	80.43	83.15	92.27	82.55	3.412	.017
	77.85	71.01	71.35	68.56	71.53	.753	.521
	67.72	58.14	68.54	70.10	63.54	3.410	.017
	53.16	48.26	62.64	57.22	53.72	3.349	.019

< 9-7 >

( : )

						F	
			2				
	62.00	45.89	32.45	34.64	40.55	3.983	.008
	46.00	38.27	23.18	25.78	31.95	3.465	.016
	74.00	74.78	70.53	73.44	73.48	.411	.745
/	92.00	81.52	80.79	84.64	82.58	1.097	.350
	84.00	72.87	70.53	66.67	71.09	1.627	.182
	72.00	64.56	58.28	65.10	63.63	1.155	.326
	62.00	58.36	49.67	47.66	53.74	2.408	.066

< 9-8 >

( : )

						F	
	67.50	37.02	40.00	46.35	40.42	2.233	.083
	42.50	29.07	32.13	38.02	31.97	.749	.523
	82.50	72.32	76.39	65.63	73.45	2.302	.076
/	97.50	80.45	84.75	79.17	82.61	2.362	.070
	45.00	70.59	74.59	67.19	71.13	3.421	.017
	60.00	62.11	65.79	62.50	63.68	.419	.739
	57.50	50.87	55.41	56.77	53.80	.566	.638

< 9-9 >

( : )

						F	
	/	/	/				
	40.50	38.39	42.42	41.60	40.42	.223	.880
	36.00	23.93	37.68	37.39	31.97	2.779	.040
	73.50	72.32	71.80	78.99	73.45	.997	.394
/	72.50	82.68	85.55	85.71	82.61	3.764	.011
	79.00	65.54	71.09	77.73	71.13	3.652	.012
	67.50	58.96	65.17	68.91	63.68	1.946	.121
	54.00	52.50	57.82	49.58	53.80	.773	.509

< 9-9 >

( : )

							F	
	40.76	38.42	39.68	36.81	47.30	40.42	.549	.700
	33.19	25.79	36.24	37.50	29.28	31.97	.990	.412
	76.47	75.79	71.79	68.06	72.97	73.45	.789	.532
/	82.77	77.63	83.03	84.03	89.19	82.61	2.065	.084
	71.85	70.00	73.39	75.00	65.32	71.13	.840	.500
	66.10	60.53	63.07	68.75	64.41	63.68	.582	.676
	53.78	57.63	58.72	66.67	29.28	53.80	8.744	.000

< 9-11 > PC /

( : )

	PC /			F	
	39.18	50.00	40.55	2.877	.090
	30.61	41.11	31.95	2.382	.123
	73.99	70.00	73.48	.815	.367
/	82.71	81.67	82.58	.073	.787
	71.49	68.33	71.09	.419	.517
	64.64	56.67	63.63	2.556	.110
	52.34	63.33	53.74	3.681	.055

**10.**

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< 10-1 >

( : )

						<b>F</b>	
	<b>30</b>	<b>30 99</b>	<b>100 299</b>	<b>300</b>			
	58.60	61.29	53.57	67.86	59.77	.745	.526
	52.69	59.68	53.57	57.14	55.86	.444	.722
	48.39	54.84	50.00	55.36	51.76	.301	.825
	46.77	49.46	48.81	60.71	49.61	.559	.643
	-2.15	7.53	8.33	-5.36	2.73	.618	.604
	16.13	19.89	13.10	8.93	16.21	.262	.853

: =100, =50, =-50, =-100 .

< 10-2 >

( : )

				<b>F</b>	
	58.33	62.96	59.80	.698	.404
	55.75	55.56	55.69	.001	.974
	52.59	50.00	51.76	.137	.711
	49.43	49.38	49.41	.000	.995
	8.91	-12.35	2.16	6.308	.013
	20.98	4.94	15.88	3.619	.058

< 10-3 >

( : )

				F	
	63.51	58.47	59.92	.793	.374
	64.86	52.19	55.84	4.521	.034
	56.08	50.00	51.75	.731	.393
	53.38	48.09	49.61	.589	.443
	-.68	3.83	2.53	.264	.608
	8.78	19.40	16.34	1.498	.222

< 10-4 > /

( : )

	2000 /				F	
	(1.39 % )	(0.06%- 1.39% )	(0.06% )			
	48.68	71.52	52.38	61.01	7.407	.001
	50.00	65.19	44.05	55.97	4.332	.015
	51.32	59.49	45.24	53.77	1.302	.275
	42.11	56.33	40.48	48.74	1.913	.151
	13.16	.63	-8.33	1.26	1.225	.296
	11.84	22.15	1.19	14.15	1.619	.201

2)

< 10-5 >

( : )

				<b>F</b>	
	70.3	70.6	70.5	.014	.907
	66.2	69.1	67.5	1.118	.291
	60.9	67.5	63.9	5.880	.016
	60.7	67.3	63.8	5.187	.023
	29.9	26.1	28.1	.761	.383
	37.5	42.1	39.7	1.156	.283

: =100, =50, =-50, =-100

< 10-6 >

( : )

	<b>10</b>	<b>20</b>	<b>30</b>	<b>40</b>		<b>F</b>	
	71.9	65.8	73.5	78.6	70.2	4.386	.005
	65.0	64.4	68.8	76.7	67.3	3.238	.022
	59.4	61.7	65.7	70.4	63.7	1.962	.118
	57.5	62.9	64.2	69.4	63.5	1.412	.238
	30.6	19.7	32.5	46.6	28.0	6.263	.000
	50.6	35.9	38.7	45.2	39.5	1.764	.153

: =100, =50, =-50, =-100

< 10-7 >

( : )

						<b>F</b>	
	82.7	68.6	71.6	71.2	70.4	1.423	.235
	84.6	65.4	70.7	66.5	67.5	2.697	.045
	69.2	64.5	61.9	63.7	63.9	.343	.794
	78.9	63.0	60.3	65.6	63.8	1.829	.140
	51.9	30.3	18.7	28.3	28.1	2.860	.036
	40.4	44.2	30.0	39.1	39.7	2.144	.093

: =100, =50, =-50, =-100

< 10-8 >

( : )

						<b>F</b>	
	67.05	71.60	70.79	67.53	70.47	.456	.713
	57.95	68.88	68.10	65.98	67.53	1.210	.305
	61.36	63.61	64.92	62.89	63.93	.174	.914
	56.82	65.48	65.56	56.19	63.80	2.024	.109
	34.09	26.53	28.50	28.87	28.10	.227	.878
	37.50	35.71	45.56	33.51	39.67	1.909	.127

< 10-9 >

( : )

	/	/	/			<b>F</b>	
	/	/	/				
	73.00	67.33	73.80	69.83	70.47	1.605	.187
	67.50	65.50	69.65	68.60	67.53	.592	.620
	65.00	60.33	66.59	66.94	63.93	1.598	.188
	58.00	62.50	67.47	64.88	63.80	1.497	.214
	29.00	21.74	38.21	23.97	28.10	3.585	.014
	33.00	36.67	43.01	46.28	39.67	1.473	.221

< 10-10 >

( : )

							<b>F</b>	
	70.08	68.95	70.52	75.34	70.22	70.47	427	.790
	69.67	71.84	66.16	71.23	59.93	67.53	2.497	.042
	61.48	64.47	64.85	70.55	60.29	63.93	1.065	.373
	60.25	69.47	60.48	71.23	60.66	63.80	2.478	.043
	30.74	28.95	30.57	29.45	19.63	28.10	.862	.487
	52.46	47.89	29.69	46.58	29.78	39.67	5.447	.000

< 10-11 > pc /

( : )

				<b>F</b>	
	70.74	68.37	70.43	.372	.542
	68.05	63.78	67.49	1.151	.284
	64.13	62.24	63.89	.216	.642
	64.59	58.16	63.75	2.229	.136
	27.00	35.20	28.07	1.620	.204
	39.86	38.27	39.65	.064	.801



11.

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< 11-1 >

( : )

						F	
	30	30 99	100 299	300			
	26.34	34.95	30.95	32.14	30.86	.415	.742
	50.00	62.90	59.52	57.14	57.03	1.385	.248
	62.90	74.19	67.86	80.36	69.73	2.165	.093
/	62.37	69.35	69.05	83.93	68.36	2.031	.110
	63.98	68.28	67.86	82.14	68.16	2.288	.079

: =100, =50, =-50, =-100 .

< 11-2 >

( : )

				F	
	35.63	21.60	31.18	3.966	.048
	56.03	59.88	57.25	.414	.520
	70.69	67.90	69.80	.288	.592
/	70.98	64.20	68.82	1.541	.216
	68.97	66.05	68.04	.446	.505

< 11-3 >

( : )

				F	
	39.19	27.60	30.93	2.564	.111
	59.46	56.28	57.20	.272	.603
	74.32	68.03	69.84	1.412	.236
/	77.70	64.75	68.48	5.290	.022
	68.24	68.03	68.09	.002	.962

< 11-4 > /

( : )

	2000 /			F		
	(1.39 % )	(0.06 % 1.39% )	(0.06 % )			
	38.16	31.01	17.86	29.25	1.627	.200
	65.79	59.49	48.81	58.18	2.058	.131
	65.79	74.68	65.48	70.13	1.120	.329
/	71.05	72.78	65.48	70.44	.446	.641
	73.68	68.99	58.33	67.30	2.117	.124

2)

< 11-5 >

( : )

				<b>F</b>	
	45.8	40.6	43.4	1.842	.175
	57.9	60.2	58.9	.461	.497
	79.3	80.2	79.7	.154	.695
/	77.6	80.4	78.9	1.128	.288
	72.1	76.1	73.9	2.530	.112

: =100, =50, =-50, =-100

< 11-6 >

( : )

	<b>10</b>	<b>20</b>	<b>30</b>	<b>40</b>		<b>F</b>	
	45.6	39.0	44.6	51.5	42.9	1.761	.153
	59.4	58.6	58.5	58.3	58.6	.010	.999
	83.1	80.8	77.1	78.2	79.7	.943	.419
/	75.0	76.5	82.2	82.5	78.7	1.698	.166
	76.9	73.2	72.4	75.2	73.7	.406	.749

: =100, =50, =-50, =-100

< 11-7 >

( : )

						<b>F</b>	
	53.9	48.0	35.5	40.0	43.3	2.841	.037
	61.5	57.1	56.8	63.3	59.0	.940	.421
	78.9	77.5	82.3	81.6	79.7	1.141	.332
/	84.6	76.2	80.3	81.4	78.8	1.287	.278
	80.8	72.5	72.9	76.1	73.9	.855	.464

: =100, =50, =-50, =-100

< 11-8 >

( : )

						<b>F</b>	
	45.45	45.24	43.77	35.57	43.38	.900	.441
	62.50	59.52	60.00	52.06	58.93	.860	.462
	71.59	81.12	81.27	74.23	79.73	2.301	.076
/	80.68	80.95	78.73	72.16	78.87	1.473	.221
	69.32	75.17	74.92	69.07	73.93	1.121	.340

< 11-9 >

( : )

	/	/	/			<b>F</b>	
	/	/	/				
	48.50	41.33	47.80	35.95	43.38	1.887	.130
	53.00	57.50	63.10	59.50	58.93	1.254	.289
	84.00	77.17	79.26	83.47	79.73	1.774	.151
/	72.50	76.83	84.93	77.69	78.87	3.567	.014
	69.50	73.83	76.64	72.73	73.93	1.074	.359

< 11-10 >

( : )

							<b>F</b>	
	41.39	42.89	43.61	49.32	42.28	43.38	.307	.873
	61.89	59.47	51.97	59.59	66.91	58.93	2.430	.046
	78.28	84.47	76.86	81.51	78.31	79.73	1.665	.156
/	75.82	82.11	74.02	83.56	82.72	78.87	2.330	.055
	74.18	76.84	69.00	78.77	75.37	73.93	1.947	.101

< 11-11 > pc /

( : )

				<b>F</b>	
	41.99	52.04	43.31	3.249	.072
	60.14	51.02	58.95	3.269	.071
	81.26	69.39	79.71	11.654	.001
/	79.03	77.55	78.84	.142	.706
	75.04	66.33	73.90	5.483	.019

**12.**

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< 12-1 >

( : )

						<b>F</b>	
	<b>30</b>	<b>30 99</b>	<b>100 299</b>	<b>300</b>			
	63.98	75.27	59.52	76.79	68.75	2.646	.050
	64.52	73.12	71.43	67.86	69.14	.956	.414
	66.13	76.88	71.43	78.57	72.27	1.679	.172
	33.87	48.37	38.10	33.93	39.80	1.296	.276
	48.92	55.91	53.57	39.29	51.17	1.129	.338
/	54.30	59.68	50.00	53.57	55.47	.532	.661

: =100, =50, =-50, =-100 .

< 12-2 >

( : )

				<b>F</b>	
	69.25	67.90	68.82	.068	.794
	71.26	64.20	69.02	2.132	.145
	72.41	72.22	72.35	.002	.969
	40.17	38.27	39.57	.069	.792
	52.87	45.68	50.59	1.407	.237
/	56.03	53.70	55.29	.153	.696

< 12-3 >

( : )

				<b>F</b>	
	71.62	67.76	68.87	.534	.466
	68.24	69.40	69.07	.054	.816
	75.00	71.31	72.37	.541	.463
	41.22	39.29	39.84	.068	.794
	45.27	53.01	50.78	1.556	.213
/	54.73	55.74	55.45	.027	.869

< 12-4 > /

( : )

	2000 /				F	
	(1.39 % )	(0.06% 1.39% )	(0.06% )			
	65.79	74.68	61.90	69.18	1.649	.195
	65.79	70.89	70.24	69.50	.238	.789
	78.95	74.05	67.86	73.58	.838	.435
	51.32	44.23	33.33	43.04	1.358	.260
	44.74	53.80	42.86	48.74	1.009	.367
/	52.63	63.92	44.05	55.97	2.958	.055

2)

< 12-5 >

( : )

				F	
	78.6	79.5	79.0	.207	.650
	72.9	79.4	75.9	6.131	.014
	77.6	82.7	79.9	4.359	.037
	55.1	55.9	55.5	.049	.825
	58.5	60.3	59.3	.345	.557
/	65.2	69.1	67.0	1.678	.196

: =100, =50, =-50, =-100

< 12-6 >

( : )

	10	20	30	40		F	
	84.4	78.3	78.4	78.2	79.0	1.054	.368
	75.6	76.2	77.6	72.3	76.0	.504	.679
	79.4	79.8	81.7	76.7	79.8	.502	.681
	51.3	52.1	58.8	62.1	55.1	1.837	.139
	65.6	55.5	62.4	60.2	59.1	1.865	.134
/	72.5	64.4	68.0	68.9	66.9	1.109	.344

: =100, =50, =-50, =-100

< 12-7 >

( : )

						F	
	78.9	80.3	74.8	79.8	79.0	1.374	.250
	76.9	77.3	69.0	78.4	75.9	2.483	.060
	73.1	78.2	80.0	83.5	79.9	1.492	.215
	69.2	54.3	52.6	57.7	55.4	1.177	.318
	71.2	59.6	53.2	61.6	59.3	1.942	.121
/	69.2	69.8	65.5	63.0	67.0	1.363	.253

: =100, =50, =-50, =-100

< 12-8 >

( : )

						F	
	70.45	79.08	81.43	74.74	79.00	2.763	.041
	67.05	77.04	78.89	67.01	75.93	3.811	.010
	75.00	83.16	80.95	69.07	79.93	4.797	.003
	56.82	56.80	56.03	48.97	55.47	.725	.538
	57.95	59.69	61.27	52.58	59.33	1.049	.370
/	60.23	67.86	68.73	61.86	67.00	1.166	.322



< 12-9 >

( : )

	/	/	/			<b>F</b>	
	84.50	77.33	77.73	80.99	79.00	1.897	.129
	74.00	73.50	78.17	79.34	75.93	1.237	.295
	76.50	79.50	80.13	83.47	79.93	.819	.484
	49.00	54.33	58.95	57.02	55.47	1.155	.326
	60.50	58.00	62.45	55.79	59.33	.806	.491
/	61.50	63.83	70.96	71.90	67.00	2.558	.054

< 12-10 >

( : )

							<b>F</b>	
	80.74	82.37	77.29	80.14	75.00	79.00	1.651	.160
	77.05	79.47	73.14	78.08	73.53	75.93	1.074	.368
	84.43	82.37	74.02	82.88	80.88	79.93	2.779	.026
	60.66	52.37	56.55	52.05	55.15	55.47	.706	.588
	61.89	58.16	60.04	63.01	55.51	59.33	.567	.686
/	71.31	71.32	63.10	70.55	61.76	67.00	2.133	.075

< 12-11 > pc /

( : )

				<b>F</b>	
	80.18	70.92	78.97	8.897	.003
	77.34	66.33	75.90	8.239	.004
	81.26	70.92	79.91	8.188	.004
	55.84	52.55	55.41	.417	.519
	59.91	55.10	59.28	1.080	.299
/	68.43	57.14	66.96	6.655	.010

**13.**

**1)**

< 13-1 >

( : )

						F	
	30	30 99	100 299	300			
	63.98	70.43	64.29	60.71	66.02	.620	.602
	54.84	65.05	61.90	58.93	60.16	1.022	.384
	60.75	66.13	54.76	62.50	61.91	.748	.525
	49.46	57.61	48.81	62.50	53.73	.882	.451
	48.92	53.76	46.43	48.21	50.20	.278	.841
	52.15	55.38	51.19	37.50	51.56	.906	.439
/	51.08	58.06	52.38	51.79	53.91	.329	.805

: =100, =50, =-50, =-100 .

< 13-2 >

( : )

				F	
	63.79	70.37	65.88	1.438	.232
	60.92	57.41	59.80	.416	.520
	60.34	63.58	61.37	.321	.572
	53.47	54.32	53.74	.017	.897
	48.56	53.70	50.20	.600	.439
	50.00	54.32	51.37	.404	.526
/	55.17	49.38	53.33	.702	.403

< 13-3 >

( : )

				F	
	69.59	64.48	65.95	.830	.363
	65.54	57.92	60.12	1.876	.172
	63.51	60.66	61.48	.239	.625
	58.78	51.65	53.71	1.141	.286
	56.76	47.54	50.19	1.862	.174
	54.73	50.27	51.56	.412	.522
/	52.70	53.83	53.50	.025	.874

< 13-4 > /

( : )

	2000 /			F	
	(1.39 % )	(0.06% 1.39% )	(0.06% )		
	65.79	74.05	58.33	67.92	2.330 .101
	61.84	63.92	54.76	61.01	.699 .499
	65.79	68.35	64.29	66.67	.161 .851
	59.21	63.29	50.00	58.81	1.230 .295
	50.00	60.76	46.43	54.40	1.582 .209
	46.05	62.66	42.86	53.46	2.828 .062
/	59.21	62.03	51.19	58.49	.661 .518

2)

< 13-5 >

( : )

				<b>F</b>	
	78.9	82.4	80.5	2.396	p=.122
	64.7	72.5	68.3	7.901	p=.005
	64.3	71.1	67.5	5.399	p=.020
	58.9	63.9	61.2	2.618	p=.106
	60.5	67.3	63.7	5.392	p=.020
	59.5	69.2	64.0	10.592	p=.001
/	57.5	66.1	61.5	6.368	p=.012

: =100, =50, =-50, =-100

< 13-6 >

( : )

	<b>10</b>	<b>20</b>	<b>30</b>	<b>40</b>		<b>F</b>	
	76.9	80.9	81.2	78.6	80.2	.515	.672
	69.4	68.9	68.0	64.6	68.1	.386	.763
	65.0	64.8	71.9	67.5	67.1	1.438	.230
	61.3	55.9	68.6	63.1	60.8	3.836	.010
	60.6	61.7	67.0	64.6	63.4	.865	.459
	60.6	61.6	68.6	64.1	63.7	1.366	.252
/	50.0	59.8	65.5	66.5	61.2	2.664	.047

: =100, =50, =-50, =-100

< 13-7 >

( : )

						<b>F</b>	
	86.5	82.4	74.8	80.7	80.5	2.514	.057
	71.2	70.8	67.7	64.2	68.3	1.421	.235
	59.6	67.4	64.2	70.7	67.4	1.169	.321
	63.5	61.5	57.7	62.8	61.2	.468	.705
	67.3	64.5	62.3	62.8	63.6	.209	.890
	65.4	66.6	60.0	62.3	64.0	1.081	.357
/	65.4	60.1	62.9	62.1	61.4	.231	.875

: =100, =50, =-50, =-100

< 13-8 >

( : )

						<b>F</b>	
	71.59	85.15	79.37	74.23	80.51	4.979	.002
	57.95	70.07	67.94	69.07	68.33	1.325	.265
	59.09	71.26	66.83	61.86	67.47	2.239	.082
	52.27	65.48	59.52	57.73	61.20	2.014	.111
	50.00	66.50	63.49	61.86	63.67	2.228	.084
	50.00	67.52	64.44	58.25	64.00	3.096	.026
/	55.68	64.80	59.05	61.86	61.47	1.015	.386

< 13-9 >

( : )

	/	/ /	/			<b>F</b>	
	81.50	80.43	78.17	84.30	80.51	1.079	.357
	71.50	65.50	69.65	70.25	68.33	.983	.400
	65.00	67.83	67.90	67.77	67.47	.149	.930
	60.00	60.83	62.88	59.92	61.20	.189	.904
	63.50	60.50	65.72	67.77	63.67	1.224	.300
	63.50	62.33	66.59	63.64	64.00	.476	.699
/	60.00	62.17	63.32	57.44	61.47	.478	.698

< 13-10 >

( : )

							<b>F</b>	
	81.56	81.22	79.91	79.45	80.15	80.51	.107	.980
	68.85	71.05	69.43	75.34	58.46	68.33	3.257	.012
	61.89	71.84	63.76	72.60	69.85	67.47	2.129	.076
	58.61	63.95	56.33	69.18	63.60	61.20	1.812	.125
	60.66	66.58	61.14	71.92	62.13	63.67	1.449	.216
	63.93	69.47	60.92	73.97	56.25	64.00	3.500	.008
/	58.61	62.89	61.35	72.60	56.25	61.47	1.639	.163

< 13-11 > pc /

( : )

				<b>F</b>	
	81.08	76.53	80.48	1.841	.175
	68.97	63.78	68.29	1.594	.207
	68.89	57.65	67.42	6.905	.009
	61.83	56.63	61.15	1.265	.261
	64.21	59.69	63.62	1.059	.304
	64.52	60.20	63.95	.939	.333
/	61.44	61.22	61.42	.002	.965

14. , ,

1)

< 14-1 > , ,

( : )

						F	
	30	30 99	100 299	300			
	61.29	74.19	67.86	78.57	68.95	1.738	.160
	67.20	79.57	75.00	75.00	73.83	1.493	.217
	40.32	52.69	54.76	25.00	45.51	2.474	.062
	61.29	67.20	59.52	42.86	61.13	2.153	.094
	67.74	70.43	67.86	30.36	64.65	5.601	.001
	40.32	52.15	46.43	28.57	44.34	2.022	.111
	43.01	51.61	44.05	37.50	45.70	.778	.507
/	55.91	57.53	63.10	55.36	57.62	.281	.839

: =100, =50, =-50, =-100 .

< 14-2 > , ,

( : )

				F	
	69.83	66.67	68.82	.267	.606
	72.99	75.93	73.92	.292	.590
	45.11	46.30	45.49	.025	.875
	61.78	59.88	61.18	.098	.754
	63.51	66.67	64.51	.235	.629
	41.95	47.53	43.73	.709	.401
	41.95	52.47	45.29	2.385	.124
/	56.03	62.35	58.04	1.139	.287



< 14-3 >

( : )

				F	
	70.95	68.03	68.87	.217	.642
	73.65	74.04	73.93	.005	.943
	36.49	49.45	45.72	2.873	.091
	53.38	64.48	61.28	3.243	.073
	51.35	69.95	64.59	8.016	.005
	40.54	45.36	43.97	.505	.478
	43.24	46.17	45.33	.177	.675
/	57.43	57.92	57.78	.006	.936

< 14-4 > /

( : )

	2000 /			F		
	(1.39 % )	(0.06% 1.39% )	(0.06% )			
	63.16	74.05	63.10	68.55	1.182	.309
	71.05	84.18	64.29	75.79	4.503	.013
	25.00	58.86	35.71	44.65	5.970	.003
	43.42	66.46	61.90	59.75	3.567	.031
	44.74	71.52	69.05	64.47	4.405	.014
	34.21	55.06	27.38	42.77	5.585	.005
	44.74	56.33	20.24	44.03	7.413	.001
/	60.53	67.72	44.05	59.75	3.977	.021

2)

< 14-5 >

( : )

				<b>F</b>	
	72.3	77.5	74.7	3.299	.070
	75.6	79.5	77.4	2.244	.135
	57.6	59.9	58.7	.383	.536
	73.8	79.8	76.6	5.491	.019
	78.3	85.7	81.7	7.621	.006
	53.6	54.2	53.9	.029	.865
	52.7	55.0	53.8	.463	.496
/	62.3	65.0	63.6	.735	.392

: =100, =50, =-50, =-100

< 14-6 >

( : )

	<b>10</b>	<b>20</b>	<b>30</b>	<b>40</b>		<b>F</b>	
	67.5	75.8	72.7	77.7	74.4	1.348	.257
	75.0	79.1	76.3	73.8	77.2	.791	.499
	83.1	56.5	55.7	51.0	58.4	7.833	.000
	82.5	77.1	73.2	75.2	76.4	1.426	.234
	86.9	82.5	79.6	77.2	81.5	1.287	.278
	58.1	51.5	51.8	61.7	53.7	1.777	.150
	60.6	51.5	55.2	52.4	53.6	.962	.410
/	62.5	61.5	69.7	60.7	63.6	1.650	.177

: =100, =50, =-50, =-100

< 14-7 >

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( : )

						<b>F</b>	
	84.6	72.5	74.2	77.4	74.70	1.286	.278
	86.5	76.6	77.4	77.4	77.37	.609	.610
	61.5	62.5	51.9	56.7	58.62	1.776	.150
	86.5	76.1	77.4	75.6	76.57	.815	.486
	82.7	81.6	84.8	79.5	81.71	.636	.592
	55.8	55.5	51.6	52.3	53.82	.398	.755
	50.0	54.3	51.6	54.9	53.75	.224	.880
/	73.1	63.5	63.2	62.6	63.50	.435	.728

: =100, =50, =-50, =-100

< 14-8 >

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( : )

						<b>F</b>	
	62.50	79.25	74.60	67.01	74.43	4.061	.007
	70.45	78.23	79.84	70.10	77.40	2.414	.065
	67.05	54.61	60.48	61.34	58.68	1.295	.275
	63.64	75.85	80.00	73.71	76.60	3.301	.020
	56.82	83.84	83.97	79.38	81.73	7.846	.000
	45.45	55.65	54.30	51.03	53.88	.826	.480
	45.45	54.97	54.60	51.55	53.81	.651	.582
/	60.23	64.16	63.33	63.92	63.55	.105	.957

< 14-9 >

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( : )

	/	/ /	/			F	
	75.50	75.00	73.14	76.45	74.73	.221	.882
	73.00	76.50	76.86	84.30	77.40	2.059	.104
	61.50	55.18	58.52	65.29	58.68	1.308	.270
	77.00	73.50	76.86	83.47	76.60	2.362	.070
	84.50	79.67	79.48	88.84	81.73	2.331	.073
	61.50	51.68	53.71	53.31	53.88	1.235	.296
	54.00	54.36	56.55	47.11	53.81	1.138	.333
/	66.16	62.17	64.63	62.81	63.55	.266	.850

< 14-10 >

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( : )

							F	
	75.82	76.05	73.36	74.66	74.26	74.73	.152	.962
	76.64	79.21	77.29	78.08	75.37	77.40	.247	.911
	70.08	55.56	60.92	51.37	52.94	58.68	2.766	.027
	77.46	79.47	75.33	77.40	73.53	76.60	.685	.603
	83.61	86.58	77.29	89.04	76.84	81.73	3.122	.015
	56.56	53.46	55.68	49.32	51.48	53.88	.500	.736
	51.64	52.93	57.21	52.05	52.21	53.81	.462	.764
/	62.70	64.47	66.01	65.75	57.72	63.55	.834	.504

< 14-11 > pc / , , ( : )

				F	
	75.12	71.94	74.70	.562	.454
	77.80	74.49	77.37	.718	.397
	59.38	53.57	58.62	1.158	.282
	78.26	65.31	76.57	11.845	.001
	83.33	70.92	81.71	9.893	.002
	53.86	53.57	53.82	.004	.953
	54.70	47.45	53.75	2.110	.147
/	64.31	58.16	63.50	1.626	.203

## 15. 가

1)

< 15-1 > 가 ( : )

						F	
	30	30 99	100 299	300			
가	55.91	62.37	66.67	53.57	59.77	.828	.479
1	15.59	24.19	34.52	12.50	21.48	1.383	.248
	65.59	66.13	72.62	64.29	66.80	.350	.789
/	55.38	60.75	59.52	55.36	58.01	.237	.870
/	49.46	56.45	50.00	41.07	51.17	.710	.547
	60.22	51.61	60.71	48.21	55.86	.809	.490
	45.70	58.60	65.48	50.00	54.10	2.101	.101

: =100, =50, =-50, =-100 .

< 15-2 >

가

( : )

				F	
가	59.48	60.49	59.80	.027	.869
1	25.57	12.35	21.37	3.016	.084
	68.10	64.20	66.86	.500	.480
/	60.92	51.85	58.04	1.994	.159
/	54.31	44.44	51.18	1.989	.160
	56.61	53.70	55.69	.186	.666
	52.01	58.64	54.12	1.050	.307

< 15-3 >

가

( : )

				F	
가	59.46	60.11	59.92	.011	.917
1	25.68	19.40	21.21	.642	.424
	66.89	66.94	66.93	.000	.993
/	58.78	57.92	58.17	.017	.896
/	47.30	53.01	51.36	.634	.427
	60.14	54.10	55.84	.772	.380
	55.41	53.55	54.09	.079	.780

< 15-4 > / 가 ( : )

	2000 /				F	
	(1.39 % )	(0.06% 1.39% )	(0.06% )			
가	52.63	65.19	53.57	59.12	1.399	.250
1	25.00	29.75	13.10	24.21	1.290	.278
	63.16	72.78	60.71	67.30	1.513	.224
/	52.63	64.56	52.38	58.49	1.234	.294
/	46.05	60.13	46.43	53.14	1.419	.245
	43.42	58.23	55.95	54.09	1.097	.336
	47.37	58.23	52.38	54.09	.698	.499

2)

< 15-5 > 가 ( : )

				F	
가	63.6	68.1	65.7	2.354	.125
1	45.9	41.7	43.9	1.188	.276
	76.9	76.5	76.7	.023	.879
/	73.3	72.5	72.9	.081	.776
/	69.8	64.8	67.5	2.437	.119
	63.0	66.5	64.6	1.197	.274
	55.1	64.0	59.3	6.875	.009

: =100, =50, =-50, =-100

< 15-6 >

가

( : )

	10	20	30	40		F	
가	69.4	63.0	66.0	69.4	65.4	1.071	.361
1	49.4	39.2	46.7	49.0	43.6	1.741	.157
	79.4	76.1	79.6	71.4	76.7	1.217	.302
/	72.5	71.0	75.0	74.8	72.7	.531	.661
/	68.8	63.3	73.2	70.9	67.5	2.422	.065
	68.1	60.4	65.5	72.3	64.2	2.375	.069
	55.0	57.0	62.4	61.2	58.8	.809	.489

: =100, =50, =-50, =-100

< 15-7 >

가

( : )

						F	
가	65.4	67.9	56.8	68.4	65.6	3.301	.020
1	44.2	44.9	33.9	49.3	43.9	2.699	.045
	76.9	75.2	75.2	80.2	76.7	.871	.455
/	73.1	73.2	69.0	75.1	72.9	.727	.536
/	75.0	68.8	62.6	67.7	67.4	.988	.398
	69.2	65.3	63.2	63.7	64.6	.205	.893
	67.3	56.7	55.8	64.9	59.2	1.952	.120

: =100, =50, =-50, =-100



< 15-8 >

가

( : )

						F	
가	62.50	67.52	65.56	61.86	65.67	.603	.614
1	40.91	45.41	43.17	43.30	43.93	.152	.929
	62.50	79.59	77.30	72.68	76.73	2.986	.030
/	73.86	73.81	75.40	61.86	72.93	3.027	.029
/	63.64	67.18	69.05	64.95	67.47	.350	.789
	62.50	64.46	65.71	62.37	64.60	.186	.906
	62.50	58.50	59.68	58.76	59.27	.108	.955

< 15-9 >

가

( : )

	/	/	/			F	
가	65.50	62.00	69.21	68.18	65.67	1.625	.182
1	40.00	37.67	50.00	51.24	43.93	3.437	.017
	80.00	73.67	75.33	84.30	76.73	2.581	.052
/	72.00	70.33	74.67	76.86	72.93	.997	.394
/	63.50	62.00	72.27	75.21	67.47	3.948	.008
	64.00	59.33	70.52	66.94	64.60	2.986	.031
	41.00	57.17	67.03	64.88	59.27	8.227	.000

< 15-10 >

가

( : )

						F		
가	65.16	63.16	67.25	65.75	66.91	65.67	.317	.867
1	41.39	42.11	47.38	39.04	45.59	43.93	.565	.688
	76.23	78.68	77.51	73.97	74.63	76.73	.349	.845
/	69.67	73.95	72.27	70.55	76.84	72.93	.652	.626
/	65.16	67.63	66.16	74.66	67.65	67.47	.611	.655
	59.43	66.05	66.81	71.23	59.93	64.60	1.432	.222
	54.51	54.74	55.68	70.55	69.85	59.27	3.977	.003

< 15-11 > pc / 가 ( : )

				F	
가	66.21	61.73	65.62	1.077	.300
1	43.93	43.37	43.86	.010	.921
	77.57	70.92	76.70	2.580	.109
/	73.66	67.86	72.90	1.833	.176
/	67.43	67.35	67.42	.000	.985
	64.52	64.80	64.55	.003	.953
	60.91	47.96	59.21	6.595	.010

## 16. 가

1)

< 16-1 > / 가 ( : )

						F	
	30	30 99	100 299	300			
	36.02	37.63	38.10	35.71	36.91	.032	.992
	29.57	46.77	45.24	35.71	39.06	2.185	.090
	11.83	25.81	21.43	14.29	18.75	1.031	.379
	51.61	53.76	51.19	37.50	50.78	.638	.591
	53.76	60.22	58.33	35.71	54.88	1.691	.169
	51.61	64.52	64.29	41.07	57.23	2.144	.095

: =100, =50, =-50, =-100 .

< 16-2 > / 가 ( : )

				F	
	37.64	34.57	36.67	.228	.633
	42.24	30.86	38.63	2.897	.090
	23.85	7.41	18.63	4.702	.031
	52.30	48.77	51.18	.229	.633
	54.31	58.64	55.69	.396	.530
	58.91	55.56	57.84	.230	.632

< 16-3 > / 가 ( : )

				F	
	33.78	38.25	36.96	.460	.498
	37.84	39.07	38.72	.032	.857
	17.57	18.85	18.48	.027	.870
	48.65	51.64	50.78	.155	.694
	52.70	56.01	55.06	.214	.644
	52.70	59.29	57.39	.840	.360

< 16-4 > / 가 ( : )

	2000 /				F	
	(1.39 % )	(0.06% 1.39% )	(0.06% )			
	28.95	39.24	36.90	36.16	.585	.558
	25.00	44.30	34.52	37.11	2.008	.138
	11.84	27.85	4.76	17.92	2.518	.084
	32.89	54.43	54.76	49.37	2.028	.135
	28.95	65.82	57.14	54.72	6.805	.001
	35.53	59.49	63.10	54.72	3.143	.046

2)

< 16-5 > / 가 ( : )

				F	
	56.1	50.1	53.3	3.335	.068
	57.5	54.3	56.0	.952	.330
	37.0	26.4	32.1	6.093	.014
	72.1	69.0	70.6	1.063	.303
	72.2	75.0	73.5	.936	.334
	67.7	71.7	69.6	1.650	.199

: =100, =50, =-50, =-100

< 16-6 > / 가 ( : )

	10	20	30	40		F	
	68.1	48.5	54.6	54.9	53.1	4.453	.004
	66.3	55.1	55.7	50.0	55.8	2.069	.103
	22.5	34.3	30.8	35.0	32.2	.985	.399
	70.0	75.1	68.1	59.2	70.5	4.357	.005
	80.6	74.9	71.2	66.0	73.3	2.431	.064
	78.8	68.8	68.1	67.5	69.5	1.452	.226

: =100, =50, =-50, =-100

< 16-7 > / 가 ( : )

						F	
	59.6	58.1	45.8	50.0	53.3	3.390	.018
	61.5	57.7	52.9	54.7	55.9	.608	.610
	63.5	30.5	26.8	34.6	32.0	3.137	.025
	69.2	68.1	73.9	72.4	70.6	.902	.440
	80.8	73.0	74.2	72.9	73.5	.346	.792
	78.9	71.5	68.1	66.1	69.5	1.202	.308

: =100, =50, =-50, =-100

< 16-8 > / 가 ( : )

						F	
	51.14	52.89	53.49	55.15	53.33	.100	.960
	51.14	56.97	55.40	57.22	56.00	.264	.851
	32.95	32.82	31.59	31.25	32.11	.032	.992
	68.18	71.43	69.37	73.44	70.63	.337	.799
	52.27	74.66	76.03	71.35	73.50	4.904	.002
	56.82	70.75	69.05	73.44	69.56	1.688	.168

< 16-9 > / 가 ( : )

	/	/	/			F	
	58.50	54.00	52.62	48.76	53.33	.909	.436
	64.50	53.83	57.42	51.65	56.00	1.917	.125
	39.00	29.33	37.55	22.92	32.11	2.326	.073
	78.00	68.17	67.69	76.25	70.63	2.587	.052
	81.50	69.33	71.83	80.42	73.50	3.872	.009
	76.50	64.00	70.96	75.00	69.56	3.383	.018

< 16-10 > / 가 ( : )

							F	
	54.92	50.53	56.33	50.68	52.21	53.33	.568	.686
	52.05	55.53	58.73	55.48	55.88	56.00	.462	.764
	27.46	27.11	38.86	31.94	31.99	32.11	1.293	.271
	61.89	74.47	69.43	74.31	73.16	70.63	2.130	.075
	72.13	76.05	72.27	75.69	72.06	73.50	.389	.817
	67.21	75.53	70.52	76.39	58.09	69.56	4.082	.003

< 16-11 > pc / 가 ( : )

				F	
	52.76	56.63	53.27	.637	.425
	56.53	52.04	55.94	.863	.353
	32.77	27.04	32.02	.809	.369
	70.92	68.37	70.59	.329	.567
	74.23	68.37	73.46	1.870	.172
	69.92	66.84	69.52	.450	.502

## 17. 가

1)

< 17-1 > / 가 ( : )

						F	
	30	30 99	100 299	300			
	58.03	59.68	51.19	48.21	56.45	.714	.544
/	47.85	48.92	51.19	35.71	47.46	.615	.606
	53.76	67.20	66.67	37.50	58.98	4.282	.006
	54.30	66.13	65.48	55.36	60.55	1.751	.157
	50.54	59.68	59.52	35.71	53.71	2.583	.054

: =100, =50, =-50, =-100 .

< 17-2 > / 가 ( : )

				F	
	56.90	55.56	56.47	.050	.824
/	50.29	41.36	47.45	1.752	.187
	57.18	62.96	59.02	.939	.333
	61.78	58.64	60.78	.338	.561
	52.87	54.94	53.53	.121	.728

< 17-3 > / 가 ( : )

				F	
	49.32	59.56	56.61	2.799	.096
/	40.54	50.27	47.47	2.002	.158
	50.68	62.57	59.14	3.850	.051
	58.78	61.48	60.70	.239	.626
	50.00	55.19	53.70	.735	.392

< 17-4 > / / 가 ( : )

	2000 /			F	
	(1.39 % )	(0.06%-1.39% )	(0.06% )		
	52.63	63.29	53.57	58.18	1.054 .351
/	44.74	50.00	39.29	45.91	.610 .545
	57.89	63.92	63.10	62.26	.300 .741
	55.26	60.13	59.52	58.81	.176 .839
	48.68	59.49	48.81	54.09	1.212 .300



2)

< 17-5 > / 가 ( : )

				<b>F</b>	
	71.7	68.8	70.3	1.139	.286
	73.9	75.9	74.9	.623	.430
	69.1	67.2	68.2	.425	.515
	64.2	63.0	63.7	.139	.709

: =100, =50, =-50, =-100

< 17-6 > / 가 ( : )

	<b>10</b>	<b>20</b>	<b>30</b>	<b>40</b>		<b>F</b>	
	80.0	69.5	71.4	65.5	70.6	2.504	.058
	75.6	76.0	73.2	72.3	74.7	.464	.708
	73.8	68.9	65.2	67.0	68.2	.974	.405
	66.3	64.3	61.1	64.1	63.6	.358	.783

: =100, =50, =-50, =-100

< 17-7 > / 가 ( : )

						<b>F</b>	
	76.9	73.7	62.9	69.3	70.3	3.304	.020
	78.9	73.2	76.1	76.1	74.8	.533	.660
	75.0	69.7	66.5	66.1	68.2	.736	.530
	80.8	64.9	57.7	63.7	63.6	2.444	.063

: =100, =50, =-50, =-100

< 17-8 > / 가 ( : )

						<b>F</b>	
	63.64	67.86	74.76	66.49	70.33	2.719	.044
	60.23	77.89	75.24	71.13	74.87	3.840	.010
	50.00	71.77	69.21	62.37	68.20	4.755	.003
	53.41	64.46	66.67	56.19	63.67	2.357	.071

< 17-9 > / 가 ( : )

	/	/ /	/ /			<b>F</b>	
	68.00	71.33	67.47	75.21	70.33	1.330	.263
	76.00	73.00	75.11	78.10	74.87	.688	.560
	70.50	69.50	64.85	69.42	68.20	.809	.489
	63.00	61.67	63.10	70.25	63.67	1.177	.318

< 17-10 > / 가 ( : )

							<b>F</b>	
	74.18	70.26	69.65	67.81	69.49	70.33	.439	.780
	70.49	80.53	72.93	71.23	76.10	74.87	2.217	.066
	74.59	71.05	66.59	60.27	65.44	68.20	2.052	.085
	68.85	65.00	63.97	56.85	60.29	63.67	1.155	.330

< 17-11 > pc / / 가 ( : )

				<b>F</b>	
	71.58	61.73	70.29	5.914	.015
	76.11	66.33	74.83	6.926	.009
	68.89	63.27	68.16	1.730	.189
	63.90	61.73	63.62	.215	.643

18. 가

1)

< 18-1 > / 가 ( : )

						F	
	30	30 99	100 299	300			
	42.47	50.00	52.38	32.14	45.70	1.417	.238
	40.86	52.69	48.18	37.50	46.09	1.231	.299
	15.59	20.97	23.81	5.36	17.77	.672	.570
	51.61	55.38	61.90	39.29	53.32	1.153	.328
	59.14	66.67	65.48	42.86	61.13	1.944	.123
	59.14	67.20	72.62	44.64	62.70	2.472	.062

: =100, =50, =-50, =-100 .

< 18-2 > / 가 ( : %)

				F	
	45.69	44.44	45.29	.036	.849
	43.68	51.23	46.08	1.292	.257
	17.24	18.52	17.65	.025	.874
	54.02	53.70	53.92	.002	.963
	58.33	67.90	61.37	2.181	.141
	60.92	67.28	62.94	.994	.320

< 18-3 >

/ 가

( : )

				F	
	44.59	45.63	45.33	.024	.877
	46.62	45.90	46.11	.011	.916
	16.89	17.76	17.51	.011	.916
	50.00	54.92	53.50	.474	.492
	56.76	63.11	61.28	.920	.338
	58.78	64.48	62.84	.764	.383

< 18-4 >

/

/ 가

( : )

	2000 /			F	
	(1.39 % )	(0.06% 1.39% )	(0.06% )		
	35.53	44.94	51.19	44.34	.978 .378
	35.53	54.43	46.43	47.80	1.996 .139
	10.53	22.15	5.95	15.09	1.157 .317
	30.26	56.96	60.71	51.57	4.097 .018
	35.53	70.89	67.86	61.64	7.944 .001
	42.11	67.09	71.43	62.26	4.601 .011

2)

< 18-5 > / 가 ( : )

				F	
	61.7	57.9	59.9	1.434	.231
	65.0	60.5	62.9	2.204	.138
	38.4	29.2	34.1	4.646	.031
	72.3	73.2	72.7	.097	.756
	74.6	77.2	75.8	.972	.324
	69.6	74.1	71.7	2.306	.129

: =100, =50, =-50, =-100

< 18-6 > / 가 ( : )

	10	20	30	40		F	
	76.9	58.0	59.5	54.9	60.0	4.794	.003
	74.4	61.5	61.6	60.2	62.7	2.413	.066
	43.1	35.6	29.4	30.6	34.1	1.279	.280
	78.1	72.9	71.7	68.0	72.5	1.056	.367
	83.1	76.5	73.5	70.6	75.6	2.141	.094
	82.5	70.2	71.7	67.0	71.5	2.525	.056

: =100, =50, =-50, =-100

< 18-7 > / 가 ( : )

						F	
	73.1	66.4	52.6	52.8	59.9	6.881	.000
	80.8	65.2	58.1	60.2	62.8	2.977	.031
	44.2	34.6	30.7	34.4	34.7	.452	.716
	78.9	72.4	70.7	74.0	72.7	.439	.725
	82.7	75.3	78.1	74.0	75.7	.738	.530
	73.1	73.7	67.4	71.2	71.6	.874	.454

: =100, =50, =-50, =-100

< 18-8 > / 가 ( : )

						F	
	52.27	59.35	60.48	63.40	59.93	.683	.563
	53.41	63.78	63.65	61.86	62.87	.866	.458
	35.23	32.99	35.71	31.96	34.13	.164	.920
	64.77	72.11	74.13	73.71	72.73	.789	.500
	55.68	75.77	78.57	75.77	75.77	5.330	.001
	55.68	71.77	76.03	64.43	71.67	4.614	.003

< 18-9 > / 가 ( : )

	/	/ / /	/			F	
	66.50	56.83	60.48	61.16	59.93	1.294	.275
	72.00	59.67	63.32	62.40	62.87	2.237	.083
	41.00	31.67	35.37	32.23	34.13	.718	.541
	78.50	70.00	70.31	79.34	72.73	2.689	.045
	80.00	72.67	73.46	84.30	75.77	3.848	.009
	73.00	69.17	71.83	76.45	71.67	.983	.400

< 18-10 > / 가 ( : )

							F	
	63.93	61.32	60.92	58.90	53.31	59.93	1.118	.347
	62.30	64.21	63.32	63.70	60.29	62.87	.200	.938
	36.89	33.42	38.21	28.08	29.04	34.13	.810	.519
	70.08	75.53	73.14	75.34	69.12	72.73	.763	.549
	78.69	81.75	70.74	76.03	73.16	75.77	2.846	.023
	74.18	76.32	69.65	73.97	65.07	71.67	1.859	.116

< 18-11 > pc / 가

( : )

				<b>F</b>	
	60.75	54.08	59.88	1.976	.160
	63.75	56.63	62.82	2.512	.113
	34.49	31.12	34.05	.283	.595
	73.43	67.86	72.70	1.736	.188
	77.08	66.84	75.74	6.989	.008
	73.43	59.69	71.63	9.927	.002

## 19. 가

1)

< 19-1 > / 가

( : )

						<b>F</b>	
	<b>30</b>	<b>30 99</b>	<b>100 299</b>	<b>300</b>			
	53.76	53.76	50.00	58.93	52.54	.309	.819
	56.45	62.37	60.71	50.00	58.59	.564	.639
	54.30	66.13	59.52	50.00	58.98	1.346	.260
	38.71	51.61	52.38	44.64	46.29	1.283	.281
1	38.71	43.01	38.10	35.71	39.84	.196	.899
	44.62	46.77	46.43	42.86	45.51	.059	.981
	46.24	45.16	54.76	53.57	48.05	.510	.676

: =100, =50, =-50, =-100 .



< 19-2 >

/ 가

( : )

				F	
	53.74	49.38	52.35	.507	.477
	56.90	61.73	58.43	.546	.461
	59.20	58.02	58.82	.033	.855
	45.69	48.15	46.47	.132	.717
1	41.95	35.19	39.80	.901	.343
	47.41	41.98	45.69	.643	.424
	45.98	52.47	48.04	.933	.335

< 19-3 >

/ 가

( : )

				F	
	55.41	51.64	52.72	.361	.548
	58.78	58.74	58.75	.000	.995
	57.43	59.56	58.95	.106	.745
	54.73	43.17	46.50	2.829	.094
1	44.59	37.43	39.49	.959	.328
	54.05	42.35	45.72	2.885	.091
	57.43	44.54	48.25	3.559	.060

< 19-4 > / 가 ( : )

	2000 /				F	
	(1.39 % )	(0.06% 1.39% )	(0.06% )			
	52.63	55.06	52.38	53.77	.069	.934
	63.16	59.49	57.14	59.75	.172	.842
	59.21	63.29	58.33	61.01	.193	.825
	51.32	51.27	41.67	48.74	.643	.527
1	27.63	47.47	27.38	37.42	3.09 9	.048
	40.79	46.84	42.86	44.34	.200	.819
	46.05	50.00	40.48	46.54	.450	.638

2)

< 19-5 > / 가 ( : )

				F	
	59.6	54.4	57.2	2.662	.103
	69.3	71.6	70.4	.716	.398
	72.4	72.2	72.3	.004	.950
	60.0	63.8	61.7	1.472	.225
1	58.0	53.9	56.1	1.499	.221
	58.7	65.9	62.1	4.594	.032
	59.7	62.5	61.0	.732	.393

: =100, =50, =-50, =-100

< 19-6 >

/ 가

( : )

	10	20	30	40		F	
	66.3	54.8	59.8	52.4	57.0	2.190	.088
	73.1	70.2	71.7	66.5	70.4	.599	.616
	77.9	72.8	70.9	67.0	72.0	1.424	.234
	60.0	62.6	57.7	65.5	61.4	.928	.427
1	58.1	53.7	57.8	60.2	56.2	.747	.524
	69.4	60.4	62.4	62.1	62.1	.854	.465
	68.8	58.3	62.4	61.7	61.0	1.405	.240

: =100, =50, =-50, =-100

< 19-7 >

/ 가

( : )

						F	
	61.5	56.0	52.9	61.6	57.1	1.449	.227
	76.9	69.7	69.0	71.6	70.4	.455	.714
	71.2	72.9	68.7	74.0	72.3	.678	.565
	65.4	63.9	57.4	60.7	61.7	.936	.423
1	63.5	59.2	50.0	54.2	56.0	1.814	.143
	63.5	67.3	57.4	56.5	62.0	3.140	.025
	69.2	63.9	56.1	58.6	61.0	1.678	.170

: =100, =50, =-50, =-100

< 19-8 >

/ 가

( : )

						F	
	60.23	55.78	59.37	53.09	57.20	.731	.534
	73.86	70.24	71.43	65.98	70.40	.664	.574
	65.91	72.45	73.73	70.10	72.30	.723	.538
	46.59	59.52	67.46	56.70	61.73	4.537	.004
1	60.23	53.74	57.14	57.81	56.07	.478	.697
	59.09	60.20	62.70	67.01	62.07	.619	.603
	59.09	58.50	62.38	64.95	61.00	.715	.543

< 19-9 >

/ 가

( : )

	/	/ /	/			F	
	55.00	57.50	54.37	63.64	57.20	1.313	.269
	71.00	67.83	70.96	75.21	70.40	1.175	.318
	75.50	70.23	70.74	77.69	72.30	1.587	.191
	61.50	61.17	60.48	65.70	61.73	.435	.728
1	61.50	53.33	59.65	51.65	56.07	1.674	.171
	63.50	54.33	66.81	71.07	62.07	5.348	.001
	62.50	55.83	60.92	72.73	61.00	4.397	.004

< 19-10 >

/ 가

( : )

							F	
	56.97	56.58	58.73	54.11	57.35	57.20	.175	.951
	72.54	71.58	67.47	75.34	69.12	70.40	.865	.484
	69.26	75.40	69.87	71.23	75.37	72.30	1.055	.378
	65.16	65.53	57.86	67.81	56.62	61.73	1.922	.105
1	52.46	58.42	57.21	62.50	50.74	56.07	1.170	.323
	61.48	65.53	65.72	69.86	47.43	62.07	4.729	.001
	57.38	66.58	64.85	62.33	49.26	61.00	3.954	.003

< 19-11 > pc /

/ 가

( : )

				F	
	57.68	53.57	57.14	.769	.381
	71.89	60.20	70.36	8.473	.004
	73.46	64.29	72.26	5.377	.021
	61.67	61.73	61.68	.000	.990
1	55.92	56.63	56.02	.020	.886
	61.83	63.27	62.02	.084	.773
	61.14	59.69	60.95	.093	.761

20. 가 가

1)

< 20-1 > / 가

( : )

						F	
	30	30 99	100 299	300			
	63.98	69.89	72.62	64.29	67.58	.583	.627
	72.04	73.12	75.00	66.07	72.27	.260	.854
가	47.31	51.61	61.90	39.29	50.39	1.418	.238
	54.84	60.22	71.43	44.64	58.40	1.946	.123

: =100, =50, =-50, =-100 .

< 20-2 > / 가

( : )

				F	
	66.09	70.99	67.65	.754	.386
	70.11	75.93	71.96	1.004	.317
가	49.71	51.85	50.39	.106	.745
	60.34	54.94	58.63	.665	.415

< 20-3 >

/ 가

( : )

				F	
	70.27	66.67	67.70	.391	.532
	73.65	71.58	72.18	.121	.728
가	47.97	51.64	50.58	.298	.586
	57.43	59.02	58.56	.055	.815

< 20-4 >

/

/ 가

( : )

	2000 /			F	
	(1.39% )	(0.06% 1.39% )	(0.06% )		
	69.74	70.25	66.67	69.18	.105 .900
	76.32	77.22	69.05	74.84	.611 .544
가	43.42	53.80	45.24	49.06	.771 .464
	48.68	60.76	54.76	56.29	.817 .444

2)

< 20-5 > / 가 ( : )

				F	
	76.1	73.9	75.1	.671	.413
	79.4	81.2	80.3	.564	.453
가	59.9	64.8	62.1	2.555	.110
	62.8	67.8	65.1	2.448	.118

: =100, =50, =-50, =-100

< 20-6 > / 가 ( : )

	10	20	30	40		F	
	76.9	74.9	72.9	76.2	74.8	.319	.812
	80.6	79.8	79.6	81.1	80.0	.056	.983
가	63.1	62.6	60.1	61.7	61.8	.178	.912
	60.0	66.9	63.9	62.6	64.8	.716	.543

: =100, =50, =-50, =-100



< 20-7 >

/ 가

( : )

						F	
	73.1	74.9	71.9	77.7	75.0	.812	.487
	82.7	79.5	77.1	83.5	80.2	1.289	.277
가	73.1	63.0	57.7	62.3	62.1	1.210	.305
	75.0	63.0	61.6	69.8	65.1	1.921	.125

: =100, =50, =-50, =-100

< 20-8 >

/ 가

( : )

						F	
	69.32	77.55	76.19	66.49	75.07	2.862	.036
	73.86	81.63	81.75	74.23	80.27	2.042	.107
가	51.14	61.90	65.08	58.25	62.13	1.810	.144
	69.32	63.27	67.94	59.79	65.13	1.269	.284

< 20-9 >

/ 가

( : )

	/	/ /	/			F	
	82.50	73.50	73.58	75.62	75.07	1.796	.146
	80.50	77.67	81.44	84.30	80.27	1.335	.262
가	66.00	59.17	63.54	63.64	62.13	.919	.431
	66.00	61.83	65.28	72.31	65.13	1.732	.159

< 20-10 >

/ 가

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							<b>F</b>	
	75.00	80.00	72.93	69.18	75.00	75.07	1.625	.166
	78.69	84.21	77.29	79.45	81.62	80.27	1.296	.270
가	61.48	65.79	59.61	65.07	60.29	62.13	.729	.572
	67.62	64.47	63.10	65.75	66.91	65.13	.302	.877

< 20-11 > pc /

/ 가

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				<b>F</b>	
	75.88	69.39	75.03	2.842	.092
	81.49	71.94	80.24	7.258	.007
가	63.13	55.10	62.08	3.127	.077
	66.67	54.59	65.09	6.761	.010

21.

1)

< 21-1 >

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						F	
	30	30 99	100 299	300			
	53.76	56.99	61.90	46.43	55.47	.576	.631
가	52.15	53.76	50.00	46.43	51.76	.159	.924
	62.90	68.28	70.24	62.50	66.02	.445	.721
	54.84	59.14	50.00	46.43	54.69	.634	.594
	67.20	70.97	73.81	71.43	70.12	.284	.837
	73.12	74.73	69.05	78.57	73.63	.374	.772
	71.51	75.27	75.00	71.43	73.44	.171	.916

< 21-2 >

( : )

				F	
	52.03	59.88	54.71	1.205	.273
가	52.01	50.62	51.57	.039	.843
	65.23	67.28	65.88	.126	.723
	55.75	52.47	54.71	.241	.624
	69.25	70.99	69.80	.096	.757
	73.56	72.84	73.33	.019	.890
	71.26	77.16	73.14	1.140	.287

< 21-3 >

( : )

				F	
	54.04	55.46	55.06	.040	.842
가	50.00	52.73	51.95	.144	.705
	64.86	66.67	54.05	.093	.761
	55.46	55.06	50.00	.198	.657
	52.73	51.95	64.86	.050	.824
	66.67	66.15	52.70	.001	.977
	55.74	54.86	70.95	.335	.563

< 21-4 > /

( : )

	2000 /			F		
	(1.39 % )	(0.06% 1.39% )	(0.06% )			
	50.00	59.49	50.00	54.72	.716	.490
가	32.89	55.06	60.71	51.26	3.617	.029
	60.53	71.52	63.10	66.67	1.014	.365
	38.16	66.46	54.76	56.60	4.559	.012
	65.79	74.68	69.05	71.07	.680	.508
	65.79	77.85	76.19	74.53	1.408	.248
	63.16	82.28	75.00	75.79	3.062	.050

2)

< 21-5 >

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				<b>F</b>	
	57.2	49.9	53.8	4.250	.040
가	50.4	47.4	49.0	.517	.472
	70.0	69.1	69.5	.095	.758
	53.0	52.2	52.6	.047	.829
	74.7	76.2	75.4	.293	.588
	73.9	78.1	75.9	2.246	.134
	77.2	82.2	79.5	3.838	.050

: =100, =50, =-50, =-100

< 21-6 >

( : )

	<b>10</b>	<b>20</b>	<b>30</b>	<b>40</b>		<b>F</b>	
	69.4	48.9	53.6	60.7	54.0	4.730	.003
가	57.5	42.5	53.9	57.8	49.3	3.586	.014
	72.5	70.2	68.0	66.5	69.4	.466	.706
	63.1	48.8	52.3	56.3	52.3	1.810	.144
	77.5	76.7	74.0	71.4	75.3	.674	.568
	78.1	75.8	77.3	69.4	75.6	1.168	.321
	78.8	80.4	81.2	72.3	79.3	1.633	.180

: =100, =50, =-50, =-100

< 21-7 >

( : )

						<b>F</b>	
	55.8	57.1	49.0	51.4	53.7	1.205	.307
가	48.1	52.8	47.1	44.0	48.9	1.188	.313
	65.4	71.1	68.1	68.4	69.5	.409	.746
	57.7	52.0	54.5	51.4	52.5	.194	.901
	75.0	75.5	73.9	76.3	75.4	.119	.949
	67.3	74.5	76.1	78.8	75.8	1.043	.373
	65.4	78.9	80.0	81.9	79.5	1.755	.154

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< 21-8 >

( : )

						<b>F</b>	
	54.55	51.53	56.51	51.55	53.80	.602	.614
가	35.23	50.00	50.00	48.96	49.00	.945	.418
	60.23	68.54	71.75	69.59	69.53	1.194	.311
	52.27	51.70	53.34	53.09	52.60	.051	.985
	65.91	78.06	74.44	74.74	75.40	1.432	.232
	65.91	76.87	76.19	76.29	75.87	1.101	.348
	73.86	80.78	79.52	78.35	79.53	.536	.657

< 21-9 >

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	/	/ /	/ /			F	
	54.50	54.50	52.84	53.31	53.80	.061	.980
가	65.00	38.50	54.39	51.65	49.00	7.155	.000
	73.50	67.00	69.65	72.31	69.53	.938	.422
	66.00	44.82	57.42	51.65	52.60	4.860	.002
	77.50	71.83	74.02	85.12	75.40	3.656	.012
	76.00	70.83	79.48	81.40	75.87	3.373	.018
	78.00	77.67	80.13	84.30	79.53	1.099	.349

< 21-10 >

( : )

							F	
	56.56	57.63	53.28	52.74	47.43	53.80	.978	.419
가	45.90	53.16	55.48	60.96	28.68	49.00	6.576	.000
	63.11	74.74	67.47	73.29	69.49	69.53	1.940	.102
	43.80	57.89	57.64	56.85	42.28	52.60	3.177	.013
	70.90	80.26	76.20	76.03	70.96	75.40	1.658	.158
	69.67	77.37	74.67	80.82	78.68	75.87	1.459	.213
	75.82	83.95	77.07	80.14	80.51	79.53	1.393	.235

< 21-11 > pc /

( : )

				<b>F</b>	
	53.30	56.63	53.74	.393	.531
가	48.54	51.55	48.93	.241	.623
	70.28	64.29	69.49	1.940	.164
	53.08	48.98	52.54	.494	.482
	76.73	66.33	75.37	6.237	.013
	77.19	66.84	75.83	6.442	.011
	80.41	73.47	79.51	3.305	.069



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(Tel : 02-3415-5115, Fax : 02-556-9880)

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<b>SQ3.</b>			
<b>SQ4.</b>			
<b>SQ5.</b>	( . )		/



A.

A1. 가 ?

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A2. ?

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A3. 가 ( ) ?

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A4. 가 가 \_\_\_\_\_ ?

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가

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A5. 가 ?

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A6. 가 ?

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A7. ?

A8-1. ( ) ?

A8-2. ( ) ?

A9. . ?

$$\left( \begin{array}{c} \mathbf{A10} \\ : \underline{\hspace{2cm}} \end{array} \right) \left( \mathbf{A10} \right)$$

A9-1. (**A9** )            ?


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A9-2. (A9) ) , \_\_\_\_\_  
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A10. ( AII ) ?

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A11. 가 ?  
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A11-1. 가  
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가 가 ( : )

**B.**

B1. ?  
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( Work-Net HRD-Net )  
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B2.

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B3.

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B4.

HRD- Net(

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- ( B4-1 )
- ( B4-1 )
- ( B4-3 )
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B4- 1. (B4 , ) HRD-Net  
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B4- 2. (B4 , ) HRD-Net ?

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B4- 3. (B4 , ) HRD-Net 가 ?  
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C8. \_\_\_\_\_ 가 \_\_\_\_\_ ?



C9. \_\_\_\_\_ 가 \_\_\_\_\_ ?

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- E4. ?
- E5. ( ) ?
- E6. ? ( **FI** )
- E7. 가 ?
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- E8. 가 ?
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- E9-1. ( ) 가 ( ) ?
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- E10. 가 ( ) ( ) ?
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- E11. 가 ( ) ?
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A. \_\_\_\_\_ .

A1.

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(Work-Net, HRD-Net \_\_\_\_\_ )  
( \_\_\_\_\_ : \_\_\_\_\_ )

A2.

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가 \_\_\_\_\_ : \_\_\_\_\_  
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A3. , \_\_\_\_\_ ?


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A4. HRD-Net( ) ?  
 가 ( A4-1 )  
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 ( A4-3 )  
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A4-1. (A4 , ) HRD-Net ?


A4-2. (A4 , ) HRD-Net ?

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A4-3. (A4 , ) HRD-Net 가 가 ?  
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**B.**

B1. \_\_\_\_\_ ?



B4.  $\frac{1}{2} + \frac{1}{3} = ?$



B5.  $\frac{1}{4} + \frac{1}{5} = ?$







B10.            가 \_\_\_\_\_ ?

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B11.            가 \_\_\_\_\_ 가 \_\_\_\_\_ ?

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B12. \_\_\_\_\_ ?

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**C.**

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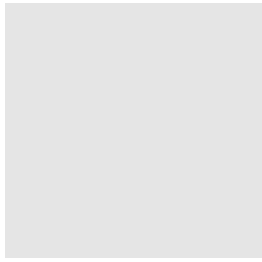
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C3.

- 가 ? :  
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C4.

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C5. \_\_\_\_\_  
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C6. \_\_\_\_\_  
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**D.** \_\_\_\_\_

D1. ? ( \_\_\_\_\_ ) ( \_ )  
D2. ?

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D3. ?  
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