

# Skills required in Italy. Evidence using the Job Requirements Approach

*“International Seminar on Measuring Generic Work Skills Using the Job Requirements Approach (JRA)”, organised by CEDEFOP and the OECD, Cedefop, Thessaloniki, 12-13 February 2009*

Gabriella Di Francesco & Fabio Roma

ISFOL

## BACKGROUND

- ✓ ISFOL is a public research Institute funded and controlled by the Italian Ministry of Labour.
- ✓ Within the Institute several research activities have been developed in the last few years concerning a) activities and needs at the national level in the field of continuous VET; b) formal recognition and transferability of skills certificates; c) recognition of non formal and informal learning outcomes; d) activities concerning the Italian NQF.
- ✓ The OLC Project covers an area at the borders of the above: it regards competencies dynamics within organisational systems.

## AIMS

- OLC is a multi-disciplinary project (Economy, Sociology, Psychology...), established in March 2003, funded by ESF.
- Two surveys: the “Employees Perspective Survey” (3650 completed interviews) and the “Employers Perspective Survey” (1820 completed interviews).
- The project was (and is) aimed at producing:
  - new knowledge for policy-makers and VET practices, especially in relation to new regulations in Italy (“Biagi act”) which enlarged work contract typologies in order to increase work flexibility;
  - new knowledge for the scientific communities (economists, sociologists, cultural psychologists, etc..) interested in data gathered from a widely representative national sample;
  - a database open to scholars and policy-makers (following the so-called ‘open source philosophy’), up-dated every two or three years.

## ASSUMPTIONS

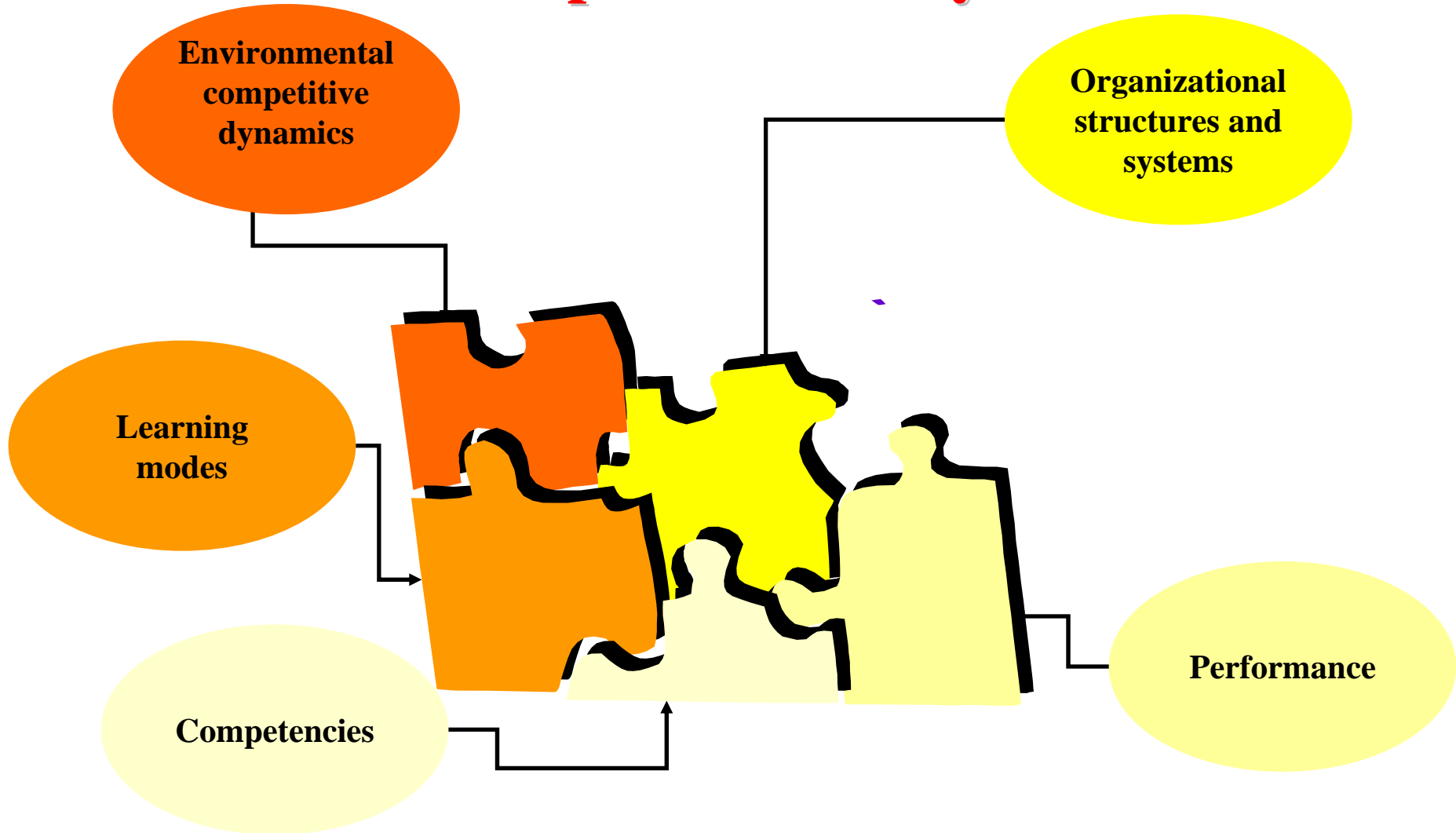
- Learning is closely related to work practices. Learning development occurs within organisational (.. teams, communities, organisational units) and inter-organisational dynamics.
- Competencies are clusters of behavioural and cognitive skills needed in work practices, based on both tacit and explicit knowledge. Competence development is strictly related to organisational development.
- Productivity, effectiveness and competitive capabilities of firms are positively correlated to dynamic firm policies in the HRD and VET practices.
- Competencies should be interpreted not as abstract but as context-dependent factors.

## THE OLC PROJECT ADOPTS THE “JOB REQUIREMENTS APPROACH” (JRA)

Underpinning the application of this approach there are some assumptions (Felstead et al., 2007):

- ✓ it is assumed that measures of skills in use in jobs are a reasonable proxy for the skills of the job-holder;
- ✓ the individual is a well-informed person to report about the job he/she is doing;
- ✓ the individual reports his/her activities in a sufficiently unbiased way (individuals might talk up their jobs, but it is held that they are less likely to do so when reporting their activities than reporting how good they are in the performance of the same activities).

# Questionnaire Design of the Employees Perspective Survey



# THE QUESTIONNAIRE OF THE EMPLOYEES PERSPECTIVE SURVEY

## *Broad skills*

In the OLC Survey there are three indicators to measure the degree of employees' own professional **broad skills** required in the job, measured in terms of the **total training time required to do the job, the time spent learning on the job in order to become fully competent, and the educational level required by employers for new recruits to the job.**

The following questions were asked in the questionnaire:

- 1) If you were applying today, what qualification, if any, would someone need to get the type of job you now have?
- 2) At the moment of hiring, have you had side by side training for the type of work that you currently do by colleagues or senior staff? How long, in total, did that training last?
- 3) How long did it take for you, after you first started doing this type of job, to learn to do it well?

# THE QUESTIONNAIRE OF THE EMPLOYEES PERSPECTIVE SURVEY

## *Generic skills*

- ✓ In particular the questionnaire utilized in the “Employees Perspective Survey” generates 44 items in order to describe competences involved in doing the job.
- ✓ The analysis of competences concerns organizational behaviors such as: attention given to detail, interaction and negotiation with other persons, analysis in depth of complex problems, writing of relationships and documents, ability to work independently, ability in problem solving, independent organization of time, ability to work in groups, appraisal abilities, ability to learn by reflecting on mistakes, abilities to aid other team members, understanding of the operation of the organization, ability to employ instruments and equipment, ability to concentrate, ability to communicate in public, ability in training or teaching others, ability to read documents, etc.
- ✓ Each organizational behavior has been measured on a 7 point Likert scale from 1 – “rarely” to 7 - “almost always”. (Zero = “not requested”)
- ✓ The method utilized to accommodate and analyze these data has been the Principal Component Analysis (PCA).



# THE QUESTIONNAIRE OF THE EMPLOYEES PERSPECTIVE SURVEY

## *Generic skills*

- ✓ It must be noted that the OLC Survey asks the employees not for an assessment of the importance of their own competences, but for **the rate in which these are performed** or – which is the same - the **frequency** in which the competences required by their work position are effectively acted with efficacy.
- ✓ The aim is not to ask an assessment of the owned competences, but **the rate in which the role is performed**.
- ✓ *This means measuring the frequency in which the competences requested by the position are effectively well acted (this means with efficacy) by the employee.*

# MAIN FINDINGS OF THE EMPLOYEES PERSPECTIVE SURVEY

## Broad skills

	Mean	Std. Deviation
<b>Gender</b>		
Male	0.099	1.040
Female	-0.158	0.911
<b>Age groups</b>		
15-29	-0.164	0.905
30-44	0.077	1.000
45-64	0.014	1.069
<b>Qualification held</b>		
Compulsory school	-0.632	0.909
Professional qualification	-0.067	0.893
High school leaving certificate	0.348	0.871
Degree / post-degree	0.811	0.795
<b>Establishment size</b>		
1-3	-0.174	0.871
4-9	0.043	1.011
10-15	0.002	0.918
16-49	0.092	1.018
50-99	0.062	0.944
100-499	0.161	1.118
500-w	0.431	0.998
<b>Occupation</b>		
Managers and Senior Officials	1.138	0.809
Professional Occupations	1.160	0.658
Associate Professional and Technical Occupations	0.867	0.852
Administrative and Secretarial Occupations	0.448	0.769
Skilled Trades Occupations	0.061	1.003
Personal Service Occupations	0.260	0.524
Sales and Customer Service Occupations	-0.226	0.904
Process, Plant and Machine Operatives	-0.524	0.842
Elementary Occupations	-0.786	0.787
<b>Economic Sector</b>		
Manufacturing: Traditional (Suppliers Dominated)	-0.284	0.833
Manufacturing: Scale intensive	-0.114	0.957
Manufacturing: Science based and Specialised Suppliers	0.076	0.980
Services: Wholesale, Retail, Hotels	-0.128	0.979
Services: Transport, Storage	-0.082	0.977
Services: Communication, ICT	0.650	0.904
Services: Financial and monetary intermediation	0.919	0.854
Services: Real estate, Renting, Research	-0.095	1.040

# MAIN FINDINGS OF THE EMPLOYEES PERSPECTIVE SURVEY

## *Broad skills*

- ✓ The results by personal characteristics highlight that, generally, men hold more skilled jobs than women, an average component score of 0.099 against -0.158.
- ✓ Middle-aged employees (30-44) hold more skilled jobs compared to other employees.
- ✓ There is a direct correlation between school qualifications and broad skills: employees with higher education usually hold more complex jobs.
- ✓ Regarding firm characteristics, there is a positive correlation between firm dimension and broad skills: for example large firms, of more than 500 employees, show an average component score of 0.431, whilst small firms, 1-3 employees, show a score of -0.174.

# MAIN FINDINGS OF THE EMPLOYEES PERSPECTIVE SURVEY

## *Generic skills*

- ✓ It seems that workers aged 30–44 hold jobs which require dexterity and numerical ability, while workers aged 45–64 hold jobs which require autonomy and a high level of communication skills.
- ✓ The qualification shows a linear trend: there is a positive connection between skills and qualification, with the exception of ‘dexterity’. In this case the less skilled workers show a better score.
- ✓ High ranking occupational groups show a higher level of generic skills. For example, ‘managers’ and ‘professionals’ show component scores far above average, with the exception of ‘dexterity’.
- ✓ By contrast, workers in the less skilled occupations show component scores below average, with the exception of some specific skills such as ‘dexterity’ for the assembly-line workers, elementary workers and skilled trade personnel, or ‘customer communication’ for the sellers.

# MAIN FINDINGS OF THE EMPLOYEES PERSPECTIVE SURVEY

## Key competences

	<i>Levels of the key competences</i>			
<b>Characteristics</b>	<b>Problem solving</b>	<b>Communication / Relationship with customers and collaborators</b>	<b>Team working</b>	<b>Overall skill index</b>
<b>Employees by work seniority</b>				
<i>0-5 years</i>	8.0	4.2	6.1	<b>18.3</b>
<i>6-15 years</i>	8.7	4.4	6.0	<b>19.1</b>
<i>15-30 years</i>	9.3	4.8	6.7	<b>20.8</b>
<i>30-44 years</i>	10.0	5.8	7.5	<b>23.4</b>
<b>Employees by learning time</b>				
<i>Months 0-6</i>	7.4	3.8	5.5	<b>16.8</b>
<i>Monthes 6-24</i>	9.7	4.8	6.9	<b>21.4</b>
<i>Months &gt;24</i>	10.6	6.0	7.6	<b>24.2</b>
<b>Employees by training time</b>				
<i>No training</i>	7.5	3.5	5.6	<b>16.7</b>
<i>Months 0-6</i>	9.6	5.5	6.9	<b>22.0</b>
<i>Months 6-24</i>	10.7	5.7	7.2	<b>23.7</b>
<i>Months &gt;24</i>	11.9	7.8	8.4	<b>28.1</b>

## HIGH PERFORMANCE WORK ORGANIZATION

- ✓ A summary term which stands for the introduction of a range of practices which include: job rotation, quality circles, reengineering, self managed teams, peer performance review, employee involvement, pay for skill, profit sharing, total quality management, just in time (Applebaum and Batt, 1994; Osterman, 1994).
- ✓ The “High Performance Work Organizations” seem to hold higher levels of skills than the other organizations, showing a strong relationship between their characteristics and the skill development
- ✓ Our survey confirms these facts.

## HPWO and medium key competences index

Practices adopted	Medium key competences index (%)	
	<i>Manufacturing sector</i>	<i>Service sector</i>
None	11.6	13.7
1 practice	18.6	20.7
3 practices	16.5	19.2
All the 5 practices	28.9	25.7

## HPWO and percentages of employees involved

<b>Practices adopted</b>	<b>Percentage of employees involved in Italy (%)</b>	<b>Percentage of employees involved in Great Britain (%)</b>
None	18	Not available
1 practice	82	20
3 practices	71	Not available
All the 5 practices	3	33



## MAIN FINDINGS OF THE “EMPLOYERS PERSPECTIVE SURVEY”

- ✓ About the work force school training, the graduates represent a minority, just above the 6%. This percentage raises to 9% when we consider the *specialized suppliers* enterprises (based on product innovation) and over the 15% when we take into consideration the *science based* ones. Enterprises with over 100 workers (13,4%); enterprises belonging to Italian groups (14%) and with foreign shareholders (about 20%).
- ✓ About the management of human resources, there's not a great will to introduce selection methodologies able to identify the real competences of the employees to develop entry training and refresher training courses and to recognise the team work. The biggest companies and the ones operating in more advanced sectors or having foreign shareholders have introduced more advanced methods for the human resources selection.

## MAIN FINDINGS OF THE “EMPLOYERS PERSPECTIVE SURVEY”

- ✓ Changes between 2003-2007 have confirmed the priority of the technological preference and, except certain occupational profiles, a minor investment in human resources management. These changes have not determined a **shift** in the direction of higher educational levels (for the 77% of the companies the required level of education has not increased), induced significant changes in the **hierarchical levels** (around 91% does not identify **any variation**), or involved the **participation** of employees in decisions concerning the management (only 26% said that there was an increase).
- ✓ What really increase significantly is the **discretion** of “Professional” (65%) and “Customer and service” occupations (54%), compared to an average of only 13% of the other occupations. It is the same with the **stress** - 58.3% for the “Professionals” and 48.2% for “Customer and service” - at a rate of only 11%.
- ✓ Between 2003-2007 levels of competences seem to increase in particular in the big companies (with more than 100 employees): for example, **literacy** of professionals in big companies increased in 15.7% of cases **vs** 5.1% in companies with 11-15 employees.

## CONCLUSIONS

✓ In the OLC Project it was proved that there was an empirical relationship between nature and dynamics of competences and organisational learning processes and organisational performance. In practice it means that organisations becoming “**High Performance Work Organisations**” probably achieve **higher levels of skills** and **higher performance**. However, further research is needed to verify the existence of specific configurations of these variables.

✓ In our opinion at a national level the **JRA** is very useful in order to identify the **key characteristics of workplaces that foster skill development** and, as a consequence, could prompt the employers and the employees to adopt practices designed to develop and restructure workplaces and to transform their organisations into HPWOs.

## CLUES FOR POLICIES

- ✓ Without a good comprehension of what skills are and how they could be developed, concepts like ‘knowledge society’ or ‘learning economy’ are just *cliché*, words that have lost their link to the reality.
- ✓ Examining the **job requirements** and the link between workplaces and skills, it is possible to go beyond a simple approval the ‘learning discourse’ and tried to analyse the assumptions underpinning the work skills.
- ✓ At policy level economic and industrial policies that encourage this **organizational development** of workplaces are strongly requested, especially for SMEs or for Regions with serious economic or structural problems.  
*The European policy level has already tried to encourage the creation of these conditions and the implementation of long term strategies.*

## **CLUES FOR POLICIES**

Our past President of Republic, Mr. Carlo Azeglio Ciampi, wrote:

**“(...) a cooperative approach to a different organization of work within the firm will improve industrial relations, allow greater worker participation in decisions and potentially lead to a better product quality. The latter in fact represents an essential component in any strengthening of the competitiveness of the European economy”.**

**THANK FOR THE ATTENTION**

Contact details:

[g.difrancesco@isfol.it](mailto:g.difrancesco@isfol.it)

[f.roma@isfol.it](mailto:f.roma@isfol.it)