
THE CONTRIBUTION OF CULTURAL HISTORICAL ACTIVITY THEORY IN ANALYSING VOCATIONAL E-TRAINING OF OLDER WORKERS

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Introduction

This study draws attention on the challenges for workers embodied in the transition from industrial society to knowledge-based society [22, 21]. The focus is on workers, rather than unemployed people, since I wish to investigate the activity of training, in the framework of lifelong learning (LLL), as defined by the European Commission [8]. My aim is to study the structure of motivations which could be less obvious and linear in the case of workers than motivations brought about by the need of finding a new job like in the case of unemployed individuals.

In particular, the research looks at vocational training using Information and Communication Technologies (ICT) as one of the changes required to workers in the historical transition from an industrial society towards a knowledge-based one. I deem that older workers are the most challenged ones by this transition. Their personalities have developed through a good deal of experiences accumulated along life and maybe they are less prone to changes now. Moreover vocational training provided through ICT (e-training) may be even more challenging for older workers, since they appear to be underrepresented among users of PC [1].

More in general, older workers attending e-training courses represent a case of the wider issue of the relation between ageing and innovation. It is widespread among scholars the consideration of ageing as a possible obstacle to the introduction of new technologies in the workplace [10]. Such a question is relevant in societies – mostly in Europe - where the workforce is being transformed by a decrease of young people and an increase of older ones.

In this study ageing is conceptualized taking into account that different cohorts of workers may grow older in different ways and the issue of training older workers might change over time.

The research is in progress and has been developed under the supervision of the School of Lifelong Education and International Development, University of London, as doctoral work. The results of the investigation consist so far in having shed light on the contribution of Cultural Historical Activity Theory to frame the analysis of vocational e-training of older workers. The following paragraphs aim to discuss this. Firstly, I point out how the transition from an industrial society towards a knowledge-based one can be challenging for older workers. In the second paragraph I state the characteristics of the theoretical approach needed to analyse such a challenge. In the third paragraph I outline Cultural Historical Activity Theory (CHAT) which allows going beyond the behaviorism and cognitivism, and connecting the transformations of the contexts and individuals, as an interplay. In the last two paragraphs I sketch how the adoption of CHAT frames my investigation. Firstly, it stresses the relevance of culture developed by older workers through the activities in which they have been involved so far and how this culture can also shape the other subjects of vocational system. Then analysing vocational e-training as an activity highlights the tension between social and individual goals, and how these latter can develop consistently with the former. Social integration of older workers can play a primary role in the development of consistency between social and individual goals.

The data collection will investigate these issues empirically.

Socioeconomic transformations in work activities and life styles

The age in which we are living is characterized by a high speed of innovation in the development of information and communication technologies and by the consequent changes in organisational and fundamental aspects of the social and economic systems. The ongoing transformations seem deep, numerous and pervasive, crossing the boundaries of countries, regions, institutions, social groups and classes, involving and affecting the lives of people regardless of status, ages and conditions [14, 5].

This phenomenon – usually referred to as globalisation - is bringing about a different labour division in the world. In the most developed countries the old form of industrialism based on manufacturing has rapidly contracted under the pressure of an increased competition from the emerging countries in the East and South of the world. This process is provoking deep transformations in the labour market, with a decrease of traditional jobs and an increase of jobs new in their form and content. The more advanced economies abandon traditional industrialism and develop a new one. Castells terms this new emerging form of industrialism as *informational industrialism*, referring to "... the attribute of a specific form of social organisation in which information generation, processing, and transmission become the fundamental sources of productivity and power." [4]. The skills needed in the economies centred on informational factors of production are claimed to be higher than in the one based on traditional and – following the ongoing innovation – are continuously shifting and changing. Not all scholars agree on this assertion and some points out that only a part of such jobs is involved in this process [3, 23]. Nevertheless in informational societies the traditional manufacturing employment is declining while managerial, professional and technical jobs are rapidly increasing [17].

Both types of changes (changes due to the transition from the old industrialism and changes intrinsic in the dynamic characteristic of the informational industrialism) challenge the identities and have a strong impact on the lives of workers, especially on the less skilled ones, working in sectors in transformation.

In the European Union (EU) vocational training is promoted as one of the strategies to increase human capital and build the most competitive and knowledge-based areas in the world. Such a target has to be reached by the Member States in an inclusive fashion, reducing the exit of older workers (55-64 years old) from the labour market [20, 8, 9]. Moreover in the EU documents emphasis is given to e-learning [13].

My hypothesis is that vocational e-training is challenging especially for older workers, since it involves their motivations and goals, calling for changes to which they could be less prone than other workers.

I have chosen to conduct the study in a European region characterised by a shifting process from manufacturing to informational industrialism, with an advanced process of ageing and the need – in the frame of European Employment Strategies - to increase the rate of employment of older workers. The chosen region – Piedmont – is in Italy, and it is characterized by the transition from an industrial towards a knowledge-based economy.

Contexts and Individuals: a separation to overcome

The hypothesis of this research is that one of the crucial components involved in training is personality. I deem that context has to be considered as an essential element to understand personality. On the other hand I want to avoid a dualistic view such that individual and context appear as two separate entities. The choice of activity as the unit of analysis – instead of older workers or contexts - seems a profitable way to concentrate on connections and processes among elements belonging to the same system. Therefore I need a theoretical approach to analyse training as a complex activity. Since the focus is on training using ICT, I also want to emphasise the role of this new kind of artefacts in learning.

Therefore I adopt the Cultural Historical Activity Theory (CHAT), which allows conceptualising:

- Training as activity which involves not only the individuals, but which is shaped by a system made up of different elements, defined by historical social relations, unified in a single process of development.
- ICT as artefacts which – with other artefacts – mediate between the older workers as learners and the activity's object of acquiring new knowledge and skills. CHAT makes distinctions between use of familiar and unfamiliar tools, linking these latter to the issue of developing motivations.
- Personality as the space where social goals combine with individual goals, stressing the relevance of the meaning and signification individuals attach to them. In my research the social goal is lifelong learning, while the individual ones are specific for every older worker.

Since such an approach seems to lack a conceptualisation of power, I also draw my theoretical perspective on the Giddens's theory of power [15, 16].

Outline of the Cultural Historical Activity Theory

The underpinning concepts of CHAT, in particular activity and practice, stem from the philosophy of Karl Marx [24]. It was the Soviet psychologists who carried on Marx's analysis to develop an historical approach to psychology and the study of activity and its structure [18]. From the work of Vygotsky, Leont'ev and Luria, who developed the Activity Theory, it descends the current school of thought called Cultural Historical Activity Theory (CHAT). This theoretical perspective puts activity at the centre of its speculation, and conceives the social world of activity in relational terms. In such approach the unit of analysis is the activity as a system, made up by the subjects and the object of the activity. The actions of the subject are object-oriented and 'mediated' by artefacts such as tools and signs, as products of the historical development of the human species and its civilisation [11].

The central problem of this approach is the relation among mind, activity and world. The scholars who refer to this thread of thought lay special emphasis on the interplay among mind and world through activity and its artefacts, in the service of goals [7]. That implies a dialectical reciprocal transformation between the Self and the context, going beyond the behaviorism (focusing on environment), cognitivism (centred on psychological processes) and ontological separation between persons and environments. Adopting this view means to conceptualise learning as an ongoing activity that coincides with the relation between changing individuals and changing social contexts [2]. Therefore learning is made up of processes of transition and transformation of knowledge, skill and personalities and considering learning bound to activities in educational and training systems is reductive. Learning is continuous transformation of knowledge, skill and personalities across various forms of social organizations, which sees individuals and artefacts interplaying in historically shaped social relations. The whole of artefacts developed over the human history and linked to specific activities constitute culture, which the individual masters in her ontogenetic development.

The e-training of older workers: taking into account culture and life course

In CHAT the strict relation between mind and activity is mediated by artefacts - both material and ideal - which contain in their shape the way in which other people – in the past or in other contexts – have answered to their needs.

The analysis of older workers and e-training is framed within the base of this perspective, which allows seeing the manner in which older workers participate in e-training as linked to the lifelong process of interaction between them and activities, mediated by artefacts. Their minds – which comprise also extension of their bodies – have been shaped by the activities in which they were involved so far.

Socio-economic activities in Piedmont are changing and moving from an industrial mode towards a new one based on knowledge, communication and information. Therefore in Piedmont activities can refer to one of the two modes, or to both of them, in a mix where industrial or knowledge-based cultural elements (artefacts) can exist. So far older workers have mastered industrial culture in their life, bringing this culture in the activity of vocational e-learning. Nevertheless they are also changing their mind in interacting with the changes that occur around them, indeed they can be involved in these changes in different ways.

Taking this stance, I expect the following evidences from the fieldwork. Firstly the older workers' approach to e-training could refer to material and ideal artefacts of industrial matrix, but also to knowledge-based mode. Secondly, and related to the last point, since participating to new activities – such as e-training - can bring about a process of appropriation of new artefacts, the appropriation of these latter can be challenging because they are in contradiction with previous knowledge, habits, practices. On the base of Leont'ev's view of personality, older workers can accept such a challenge if they can make sense of this [22].

From CHAT view, older workers are not the only ones to be shaped by the culture they have come to use through industrial activities. The other subjects of the vocational system such as teachers, tutors, civil servants, policy makers, union officers could show an industrial culture, mixed up with new elements coming from the transition of the economy. This can increase frictions and disagreements among the subjects involved in vocational system and makes it more difficult for older workers to make sense of e-training.

Social and individual goals in activity

Using CHAT, and in particular Leont'ev's work, can also highlight the tension between social and individual goals. Leont'ev sees activity as the uppermost level of human activity, collective and driven by an object [12]. The object of an activity is its true motive, which is to answer to one need or another [18]. The middle level of human activity is actions to achieve the object of the activity. Actions are driven by goals, which don't coincide with the motive of the activity. The motive arouses actions, but actions are directed towards a purpose. The conditions and the tools of action afford the methods for accomplishing the action, which are at bottom level of the activity and are indicated also as automatic operations.

Behind this idea of three levels of activity there is the division of work developed to achieve a collective goal [19]. This collective goal is directly linked to a motive and a need to be satisfied. The goals of actions are not aimed at answering directly to the need. The cooperation of all participants is necessary to satisfy it.

In my research, a vocational e-training course, funded by the European Social Fund, can be seen as an activity system to achieve the Union's strategic goal of developing new knowledge and skills, aroused by the motive "...to become the most competitive and dynamic knowledge-based economy in the world" [20]. Nevertheless, in the European recommendations to the Member States to implement lifelong learning policies, it seems implicit that such a goal is shared or can be easily shared by all subjects involved in the system, workers included [8]. Leont'ev draws our attention on the fact that rarely the motive of an activity coincides with the subjects' goals [18]. Human beings can act towards goals that don't coincide with the activity's motive, since the result of their actions is linked to the final outcome of the activity by the social relations with the other members of the group, by virtue of which they get the part of the product of their joint labour activity [19]. As I can interpret, the subjects can be aware of participating in a collective work only if their relations are structured as relations of a group acting all together, moved by the same motive. In this case the link between the object of their actions and the motive of the activity can be understood [19].

To improve the effectiveness of vocational e-training, the goals of older workers should be linked to the motive of the activity, which is building a knowledge-based society. However it is possible to image that there could be a wide range of individual goals related to the object of the course, but

which could not have the same motive of the activity. Older workers have a hierarchy of goals [22], and these latter can develop consistently with the collective ones. Different degrees of such a consistency take form in the social network and activities of older workers. If the older worker feels to be part of a cohesive network of relations, especially in the workplace, she can develop the sense of what is doing, like vocational e-training. Besides, the more vocational e-training is meaningful for the older worker, the more she is able to work out the conflicts aroused by approaching new type of artefacts as ICT are. In Leont'ev's view, the making of the connective system of personal senses expresses the making of personality [6].

Conclusions

The adoption of CHAT allows a systemic view of the issue of vocational e-training of older workers, able to connect analytically the individual and context in the transition from an industrial to a knowledge-based society. This implies to investigate vocational e-training as an activity mediated by artefacts which belong to both old and new cultures, arising conflicts which can find a solution in the process of making sense and the formation of goals. In CHAT this latter depends on the social network of the individual and her feeling of social integration.

References:

1. B. BARACAT and J. C. MARQUIÉ (1994) "Training the middle-aged in new computer technology using signal detection theory in a real-life word-processing learning situation," *Work and Aging. A European Prospective*, J. SNEL and R. CREMER (Editors), Taylor&Francis, London, Bristol, pp. 197-211.
2. K. BEACH (1999) "Consequential Transitions: A Sociocultural Expedition Beyond Transfer in Education," *Review of Research in Education*, A. IRAN-NEJAD and P. D. PEARSON (Editors), vol. 24, American Educational Research Association, Washington, D.C., pp. 101-139.
3. M. CASTELLS (1996) *The Rise of the Network Society*, Blackwell, Oxford.
4. --- (2000) *The Rise of the Network Society*, Blackwell, Oxford - Malden.
5. V. CESAREO (Editor) (2000) *Globalizzazione e contesti locali. Una ricerca sulla realtà italiana*, Angeli, Milano.
6. S. CHAIKLIN (2001) "The Category of 'Personality' in Cultural-Historical Psychology," *The Theory and Practice of Cultural-historical Psychology*, S. CHAIKLIN (Editor), vol. 22, Aarhus university press, Aarhus, pp. 238-259.
7. M. COLE (1985) "The zone of proximal development: where culture and cognition create each other," *Culture, communication and cognition*, J. V. WERTSCH (Editor), Cambridge University Press, Cambridge, pp. 146-161.
8. COMMISSION-OF-THE-EUROPEAN-COMMUNITIES (2000) "A Memorandum on Lifelong Learning," Brussels.
9. --- (2002) "Increasing labour force participation and promoting active ageing," Brussels, p. 36.
10. S. J. CZAJA (1996) "Aging and the Acquisition of Computer Skills," *Aging and Skilled Performance. Advances in Theory and Applications*, A. W. ROGERS, D. A. FISK and N. WALKER (Editors), Lawrence Erlbaum Associates, Mahwah, Ney Jersey, pp. 201-220.
11. Y. ENGSTRÖM (1999) "Activity theory and individual and social transformation," *Perspectives on Activity Theory*, Y. ENGSTRÖM, R. MIETTINEN and R.-L. PUNAMÄKI

- (Editors), Cambridge University Press, Cambridge, New York, Port Melbourne, Madrid, Cape Town, pp. 19-38.
12. Y. ENGSTRÖM and R. MIETTINEN (1999) "Introduction," *Perspectives on Activity Theory*, Y. ENGSTRÖM, R. MIETTINEN and R.-L. PUNAMÄKI (Editors), Cambridge University Press, Cambridge, New York, Port Melbourne, Madrid, Cape Town, pp. 1-16.
 13. EUROPEAN-COMMISSION (2003) *eLearning. Better eLearning for Europe*, Office for Official Publications of the European Communities, Luxembourg.
 14. L. GALLINO (2000) *Globalizzazione e disuguaglianze*, Il Saggiatore, Milano.
 15. A. GIDDENS (1979) *Central problems in social theory. Action, Structure and Contradiction in Social Analysis*, The MacMillan Press, Southampton and London.
 16. --- (1990) *La costituzione della società. Lineamenti di teoria della strutturazione*, Edizioni di Comunità, Milano.
 17. D. GUILÉ (2002) *Skill and Work Experience in the European Knowledge Economy*, Journal of Education and Work **15**, no. 3, 251-276.
 18. A. N. LEONT'EV (1978) *Activity, Consciousness, and Personality*, Prentice-Hall, Englewood Cliffs, N.J.
 19. A. N. LEONTYEV (1981) *Problems of the development of mind*, Progress Publishers, Moscow.
 20. LISBON-EUROPEAN-COUNCIL (2000) *Presidency Conclusion*, p.^pp.
 21. M. C. MIGLIORE (2003) "Informational Society and challenges to the identities: Education as a resource for people to participate in the transformation? The case of the Older Workers. Outline of a Research," IRES, Turin, p. 22.
 22. --- (2005) "How do older workers make sense training late in career using ICT," Turin, p. 60.
 23. R. B. REICH (1991) *The Work of Nations. Preparing Ourselves for 21st-Century Capitalism*, Simon&Schuster, London.
 24. C. W. TOLMAN (2001) "The Origins of Activity as a Category in the Philosophies of Kant, Fichte, Hegel and Marx," *The Theory and Practice of Cultural-historical Psychology*, S. CHAIKLIN (Editor), vol. 22, Aarhus university press, Aarhus, pp. 84-92.

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