



**HAL**  
open science

## **Training: A way of reducing the risks of weakening for older workers at work and in employment? The case of a call centre**

Dominique Cau-Bareille, Annie Jolivet, Jeanne Thébault, Catherine Delgoulet

### ► **To cite this version:**

Dominique Cau-Bareille, Annie Jolivet, Jeanne Thébault, Catherine Delgoulet. Training: A way of reducing the risks of weakening for older workers at work and in employment? The case of a call centre. *Safety Science*, 2022, 148, pp.1-11. 10.1016/j.ssci.2021.105581 . hal-03559777

**HAL Id: hal-03559777**

**<https://hal.science/hal-03559777v1>**

Submitted on 22 Jul 2024

**HAL** is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.



Distributed under a Creative Commons Attribution - NonCommercial 4.0 International License

## **Training: a way of reducing the risks of weakening for older workers at work and in employment? The case of a call centre**

Dominique Cau-Bareille<sup>1</sup>, Annie Jolivet<sup>2</sup>, Jeanne Thébault<sup>3</sup>, Catherine Delgoulet<sup>4</sup>

<sup>1</sup> *Institut d'Etude du Travail de Lyon, Laboratoire de recherche Education, Cultures et Politiques, Lyon 2 University, Lyon, France*

<sup>2</sup> *Centre d'études de l'emploi et du travail (CEET) et Centre de recherche sur le travail et le développement (CRTD), Conservatoire National des Arts et Métiers, Paris, France*

<sup>3</sup> *ULR 4072 – PSITEC – Psychologie : Interactions, Temps, Emotions, Cognition, Lille University, Lille, France*

<sup>4</sup> *Conservatoire National des Arts et Métiers, Paris, France*

**Corresponding author:** Annie JOLIVET

29, promenade Michel SIMON

F - 93 192 Noisy le Grand Cedex

annie.jolivet@lecnam.net

**Acknowledgements:** The authors wish to thank:

- all the telemarketers, supervisors, human resources department and trainers who have helped us with this study;
- our colleague Carole Tuchsirer (CNAM-Lise) for her participation in the field and to the research;
- the funders of the study: DARES, Gis CREAPT, CNAM-CEET.

**Declarations of interest:** none.

## Introduction

Developments in the world of work, in organisational models, management methods and technologies increasingly require employees to undergo frequent changes (Wolff *et al.*, 2015). For workers, these changes involve a risk of weakening “by”, “in relation to” and “at” work (Volkoff & Gaudart, 2006), by reducing their ability to achieve the performance targets set by employers, limiting their promotion opportunities and potentially having effects on their health. There is also a risk of weakening regarding job retention, in the event that the employment relationship is terminated by the employer. The concept of weakening is not tackled here from an individual perspective referring to personal characteristics and a category of so-called “weak” workers, but in terms of a weakening processes related to work characteristics, acting on individual and collective career paths (Delgoulet *et al.*, 2020). Studying the processes of weakening, the ways in which they are constructed thus amounts to questioning two interrelated dimensions. The first one refers to health and skill pathways of individuals (Molinié, Gaudart & Pueyo, 2012). The second one is the possibility for individuals to produce safely and efficiently in a context of permanent change. This approach becomes even more important in view of the ageing of the working population and the lengthening of careers which characterise many industrialised countries.

In this context, in-company training is often referred to as 'the' solution (Fournier, Lambert & Marion-Vernoux, 2017) and seen as an important lever to adapt and evolve workers' skills. However, this type of training can itself generate risks of weakening when its modalities are not designed taking into account the constraints and requirements of the real work activity and the specific and diverse characteristics of the trainees (Fournier, 2004; Lacomblez, 2001; Teiger & Montreuil, 1996; Teiger, Lacomblez & Montreuil, 1998). A number of studies have pointed out, for example, the problem of ignoring their needs and the changes in the cognitive processes involved in learning with age and experience (Marquié & Rico-Duarte, 2007; Cau-Bareille *et al.*, 2012; Delgoulet & Vidal-Gomel, 2015). They have also showed the importance of integrating the specific learning needs of older people from the design stage of training courses (Paumès & Marquié, 1995; Cau-Bareille *et al.*, 2012; Delgoulet, 2013, 2014). Thus non-adapted training can not only make learning difficult, cognitively costly, or eventually lead to failure, but can also affect the physical (fatigue) and psychological health of individuals and their ability to remain at work or in employment. Moreover, return to work after training may also be accompanied by greater difficulties in meeting performance challenges if the learning process "overruns" the formal training time. Periods of change and training also create occupational health risks due to the extra efforts they need to make, the feeling sometimes of not being supported, of not being up to the task.

The question that guided us was the following: how does in-company training systems deal with the risks of weakening in work and employment for older workers, in a work environment that is undergoing frequent change? From this perspective, we examined the training system within a telephone call centre which employs older workers, in a context of frequent change. This research was carried out in response to a call for

research proposals launched in 2016<sup>1</sup> on “*The occupational training of older employees: practices and expectations.*” We approached this company because a previous study on agreements in favour of the employment of older workers had noted its training practices with regard to "older" teleoperators recruited<sup>2</sup>. It therefore combined three interesting characteristics for our research problem: the presence of older employees, a context of frequent changes and regular, non-age-selective formal training.

In the first part, we present a set of theoretical frameworks which highlight the issues of vocational training, and more specifically those relating to the senior population. In the second part, we describe the overall research device implemented, the grid of the semi-directive interviews with nine senior telesellers who agreed to answer and the characteristics of these interviewees. The third part sets out the results in two steps: firstly, the different elements of individual and collective formal training and the point of view of the organisers/supervisors/trainers, secondly, the point of view of the telesellers and their individual and collective strategies developed at work and outside of work. Finally, the fourth part discusses our results. We highlight the fact that there is informal learning that complements formal training, but that this is not encouraged or supported by the company. Therefore, risks of weakening are identified: firstly "in relation to", then "in" the work, and finally in relation to the job.

## **I - Ageing, Training and Work: health and performance issues in the workplace**

There is very little literature on the issues of age and training in the professional environment of call centres, whereas there is a great deal written on these themes in other sectors of activity. The learning process evolve with age and these elements of knowledge make it possible to envisage the design of training taking these specificities into account. Besides, to fully understand the issues at stake, we need to define two notions that are closely linked in professional circles: training and learning. This will allow us to lay the foundations for an understanding of health and safety issues in work and employment in a constructive ergonomic approach, using the notion of an enabling environment. This notion, initially used for the general framework of work, is now used in the context of training.

### **I.1 Older workers and training: two oversights of research about call centres**

Over the last 20 years, there have been many studies on working conditions in call centres (Buscatto, 2002; Cossalter, 2002; Bagnara & Livigni, 2005; Venco, 2009; Santos Oliveira, Brito & Lacomblez, 2012; Ianeva & Vacherand-Revel, 2015). We notice that all agree on: 1) the particularly difficult working conditions; 2) very significant performance and quality constraints underpinned by benchmark practices; 3) ongoing checks that are a source of tension; 4) considerable problems linked to ethical

---

<sup>1</sup> This call for proposals was launched jointly by the French Department of Research, Studies and Statistics (DARES) and the Research Mission, Ministry of Employment, Occupational Training and Social Dialogue.

<sup>2</sup> A law adopted at the end of December 2008 in France encouraged companies to put in place agreements or action plans on this subject.

conflicts that raise the question of the meaning of work; 5) health problems such as MSD, voice problems (vocal dysphonia), hearing problems and psychological disorders.

These studies mention the over-representation of young people in this activity. For them, working in this environment is often a transitory phase before they move on to other careers (Santos Oliveira, Brito & Lacomblez, 2012), or find something better in another sector of activity. Rorive & Naedenoene (2005) however point out that workers with more years' service (usually older workers) often want to continue their career in this sector. The authors do not however specify whether this desire is a career choice or stems from problems in finding work in other sectors that makes them want to stay in this environment. Call centre workers at the end of their career are not indeed mentioned in these articles, as if there were not enough of these employees to make them a subject for examination. No particular difficulties have been mentioned in relation to these workers.

Training is also rarely discussed in these articles. Little reference is made to learning methods for teleoperators, initial training, elements concerning the induction of new workers, and even less to continuous training methods to help with their professional career development.

It therefore seems that older workers are something of a blind spot in research into this occupational area. The problem of ageing at work becomes a non-question in terms of the relationship to the job, its constraints, performance targets and even more so in terms of training.

## I.2 Learning at work: changes with age and experience

Contrary to what is thought, many research studies identify a relative stability in the cognitive capacity<sup>3</sup> of learners during the years of active life (Salthouse, 1984; Marquié, 2006; Marquié & Ansiau, 2008) and an elasticity and malleability in the cognitive functions used in learning (Ludwig & Chicherio, 2004). These results confirm that older workers are capable of learning just as well as younger workers. Nevertheless, they learn differently and thus may require specific learning methods to succeed (Paumès & Marquié, 1995; Cau-Bareille *et al.*, 2012; Delgoulet, 2013, 2014).

In an occupational learning situation, certain components of the situation complicate the relationship between age, work and training: 1) the impact of training methods and previous knowledge both on the way of learning and the opportunities for learning (Paumès & Marquié, 1995; Rogers *et al.*, 1996; Chassaing & Gaudart, 2012; Delgoulet & Gaudart, 2012); 2) the learning context and the criteria defining success, to assess the newly acquired skills (Cleveland & Shore, 2007; Kruse & Schmitt, 2007); 3) the duration and content of the training.

Thus, several studies have identified the conditions that are favourable or otherwise to learning in a training situation for older employees (Dworschak, Buck & Schletz, 2006; Cau-Bareille *et al.*, 2012; Delgoulet, 2014): 1) taking into account the context of how the training is initiated (mandatory or voluntary training, planned or unplanned); 2) integrating their specific characteristics into the design of the training course

---

<sup>3</sup> Cognitive capacity means “the capacity to keep the acquired skills active, to acquire new ones, to solve new problems efficiently, creatively and adaptively, and to maintain over time the significant efforts these operations require” (Marquié, 2010, p. 106).

(involvement of operators in the training project, systems that relate to the actual job activity, participative educational methods, adaptable training, gradation of difficulty); 3) preparing for the period after training (allowing time for appropriation, putting in place a local trainer, asking the trainer questions after the course).

These elements of diversity among learners due to age should therefore be taken into account when designing the training. The problems encountered by older workers in an occupational learning situation are less due to their age than to training conditions that can create age-selective situations (i.e. training modalities not adapted to the diversity of the trainees' needs can increase the cognitive and psychic cost during the learning process).

### I.3 Occupational training and learning: formal and informal dimensions

Two concepts intimately linked in occupational environments must be identified and specified: training and learning. The term training means “a specific context that takes place around an educational and technical system, in order to achieve one or more pre-defined educational objectives” (Delgoulet, 2012, p. 48). The term learning means “a process that can be understood and inferred in diverse situations, at work or in formal training centres. It is a hypothetical construct that is not observable and will be inferred from different indicators of intellectual activity (interactions between the stakeholders, production of the trainees, behavioural activity implemented)” (ibid., p.48). Learning therefore involves both cognitive, motivational and social aspects (Bourgeois & Nizet, 2005; Bourgeois, 2009).

The studies carried out in the field of occupational learning recognise the existence of diverse learning situations ranging from formal to informal or even incidental learning situations (Marsick & Watkins, 1990). Formal learning situations are formally structured situations (place, objectives, content, methods, etc.), supported by institutions (local or more general) whose primary intention is focused on learning. By contrast, informal and incidental learning situations take place in everyday life (at work or not), during unforeseen circumstances, when responses and procedures that people usually use no longer function.

This dual distinction between training/learning and formal/non-formal is important, as occupational learning takes place both in formal occupational training situations organised by the company, and in the actual work situation through informal interaction, going beyond the time spent on training and upgrading employees' skills (Cloutier *et al.*, 2002, 2012a, 2012b; Gaudart, Delgoulet & Chassaing, 2008; Thébault, Delgoulet & Zara-Meylan, 2018; Thébault *et al.*, 2012, 2014). The analysis of occupational learning situations therefore requires a reflection on the enabling dimension of the work environment, of the work organisations and of the training "spaces and methods" offered, with an ergonomic approach to the work activity.

### I.4 Training: Enabling environment or risks of weakening?

Within a developmental constructivist approach to ergonomics, an enabling, sustainable environment is identified by three dimensions (Falzon, 2005, p. 4): 1) “From a preventive standpoint, an enabling environment is an environment that is not detrimental to the individual. It should preserve its future capabilities to act. This is of course a very classical aspect of ergonomics actions: detection and prevention of safety hazards, elimination of exposure to toxic materials, elimination of exposure to task

demands resulting in long-term deficiencies or negative psychological effects (e.g. stress), etc.”; 2) “From a palliative/universal standpoint, an enabling environment is an environment that takes into account inter-individual differences (in anthropometric characteristics, but also in age, gender, culture) and compensates individual deficiencies (due to aging, illnesses, incapacities). An enabling environment is an environment that prevents exclusion and unemployment”; 3) “From a developmental standpoint, an enabling environment is an environment that makes it possible for people to develop new skills and knowledge, to enlarge their possibilities of action, their degree of control on their task and on the way in which they perform their task, i.e. their autonomy. An enabling environment is an environment that contributes to the cognitive development of individuals and of teams, i.e. that encourages learning”<sup>4</sup>.

By transposing Falzon's proposals into the field of training, Vidal-Gomel & Delgoulet (2016) and Vidal-Gomel (2017) suggest identifying “enabling training” as: 1) contributing to producing work and training environments that do not harm the health and safety of individuals; 2) designed for everyone, thus promoting access to and maintenance at work; 3) enabling both professional and personal development.

Examining the enabling dimensions of training therefore involves taking into account the relationships between developing and constructing health. Development is a process in constructing health that takes place throughout life. According to Montmollin (1993, translated by Falzon 2005, p. 4) “[Cognitive health] means being competent, that is to say possessing competencies that allow one to be employed, to be successful, to improve.” By contrast, failure to learn a task can lead to a feeling of incompetence with regard to all the tasks, leading to abandonment of the job or position, or even depression and identity problems (Chatigny, 2001; Chatigny & Montreuil, 2003). We can perceive here how much learning, and more widely development of a person, can contribute to constructing occupational health and remaining in employment (Delgoulet & Vidal-Gomel, 2015).

To go further in understanding the effects of inadequate training, we mobilise the recent notion of “weakening”. Although it does not yet have a stabilised scientific definition, this notion makes it possible to encompass a set of current concerns of companies (Delgoulet *et al.*, 2020): prevention of health and safety risks in the workplace, but also an increase in retirement age, early retirement due to unfitness, job retention, etc. Research studies on a conditional and evolutionary approach to health-work links (Molinié & Pueyo, 2012; Volkoff & Molinié, 2011; Volkoff & Gaudart, 2006) distinguishes between weakening 'by', 'in relation to' and 'in' work. Weakening 'through' work points to the effects of work on health, including positive effects, with a particular focus on people with difficulties. Weakening "in relation to" work refers to the identification of work characteristics at the origin of selection processes, linked to health problems, or even work-related discomfort, or to unequal access to training. Finally, weakening "in" work covers the way in which workers confront working conditions and the individual and/or collective strategies they deploy to cope with them.

This approach seems to us to be appropriate for analysing the effects of training, and in the remainder of the article we shall take up the distinction between the weakening 'by', 'in relation to' and 'in' the work of older employees in relation to training.

---

<sup>4</sup> The numbering, which does not appear in the original text, has been added to make it easier to read.

## I.5 Research issue: occupational training and risks of weakening older professionals

Investigating the way in which training schemes do or do not prevent the risks of older employees becoming vulnerable involves questioning/analysing the enabling dimensions of training and of work organisation for these employees and their effects on their performance, health and job retention.

We analyse these elements on the basis of a case study within a call centre whose activity requires frequent training and learning for employees. Call campaigns of varying lengths are carried out for different principals. They concern products whose characteristics may change during the course of the campaign or from one campaign to another for the same client.

Thus, to what extent does the formal training system deployed by the call centre promote the 'upgrading of skills' of older employees? What role does it play regarding the risks of weakening? Training is presented as necessary to enable workers to be effective, to cope with new campaigns, to provide appropriate information to the various customers and to carry out a certain number of product placements. Does the formal training system developed by the company achieve alone this efficiency? Is the training as provided by the company adapted to the needs of the trainees in their diversity (age and experience)? Does it contribute to creating an enabling environment and avoiding hazardous situations in terms of health and job security? What strategies do older workers use to try to remain effective at work, to secure their jobs and maintain their health?

## II – Research device

This research, produced in the form of a case study (Yin, 2003; Baxter & Jack, 2008), tackled the challenges of training within a company from various angles: political, organisational, didactic.

### II.1 General approach

Firstly, we collected general information on the company and its development since it was created (1990), before investigating its internal training system in more detail. To do this, we used various data collection tools: document analysis, semi-structured interviews (group and individual), observations of training sessions and work situations. We conducted 18 interviews (recorded and transcribed) and four days of observations of training and work situations. The research phases are summarised in the table below.

Table 1: Approach to the research and objectives

<b>Research phases and data collection methods</b>	<b>Objectives</b>
Analysis of how the call centre works	
1) Management - <i>Analysis of documents</i> provided on the company concerning its development, demographic changes, development	Understanding the company's specific context, evolution of commercial choices by management in terms of operations, clients and the impact this can have on the

<p>strategies</p> <ul style="list-style-type: none"> <li>- <i>Semi-structured interviews</i> with the Production Director and Human Resources Manager (2 hours)</li> </ul>	<p>complexity of the operations.</p> <p>Understanding the management's position on the matter of ageing within the company, in relation to its choice of operations, perception of problems that older telemarketers might have.</p>
<p>2) Line managers</p> <ul style="list-style-type: none"> <li>- <i>Semi-structured individual interviews</i> with two supervisors (3 hours)</li> </ul>	<p>Identifying how supervisors perceive the challenges of ageing at work in a context of profound transformation in the sector, the operations, and implementing multi-functionality.</p>
<p>3) Employees' representatives</p> <ul style="list-style-type: none"> <li>- <i>Semi-structured group interview</i> with three personnel representatives (2 hours)</li> </ul>	<p>Collecting the viewpoint of employee's representatives on the changes in working conditions, training methods at the call centre and on the problems mentioned by employees.</p> <p>Identifying whether training is a trade union issue around which demands are made.</p>
<p>Analysis of the training system set up by the company</p> <ul style="list-style-type: none"> <li>- <i>Analysis</i> of agreements/action plans</li> <li>- <i>Semi-structured interview</i> with the Human Resources Manager (2 hours) and the Training Manager (1.5 hours)</li> </ul>	<p>Examining the way in which the company's internal training system has been constructed over time, its current methods.</p> <p>Identifying whether or not age is taken into account in the training methods.</p>
<p>Analysis of older workers' experience of training</p> <ul style="list-style-type: none"> <li>- <i>Semi-structured, individual interviews</i> with 9 older worker volunteers (1.5 hours), some having difficulties with their jobs, others less so.</li> </ul>	<p>Re-situating the older workers' experience at the call centre within their careers.</p> <p>Collecting their perception of the impact of age on learning and the acquisition of new knowledge, how they understand the situation when operations change, their experience of the transition phases between operations</p> <p>Identifying potential strategies to access or follow training.</p>
<p>Analysis of the activity of trainers and trainees during the training</p> <ul style="list-style-type: none"> <li>- <i>Observations</i> of two training sessions for new recruits and people in post but involved in new operations (4 days allowed)</li> <li>- <i>Debriefing interviews</i> with the Training and HR Manager following these observations (2 hours)</li> </ul>	<p>Understanding the effective training methods, the complementary nature of the educational methods used to support trainees' learning process.</p> <p>Understanding how the diversity of employees and the learning characteristics of older workers are taken into account, and identifying the difficulties encountered by trainees.</p>

The objective of the research was presented before our visit to the staff representatives and to all the employees who were approached via a presentation form sent to the management. This objective was reiterated at the beginning of each interview. All interviewees agreed to participate in the study and to be recorded for transcription and analysis. All individual interviews were conducted by two researchers from different

disciplines (socio-economist and ergonomist). Both pairs participated in the group interviews

Three interview grids were developed: 1) for the interviews with management, trainers and supervisors; 2) for the interview with staff representatives; 3) for the interviews with telesellers.

This methodological approach enabled us to cross-reference the opinions of the different persons in charge of the company's economic and social strategy, of the design/management of the training with those of the employees/trainees experiencing them in their everyday jobs.

## II.2 Analysis of the formal training system and the training experience of older employees

Our initial objective was to identify the methods and content of training, on the one hand for new recruits, and on the other for telemarketers in post over the course of the campaigns, and to identify the difficulties and resources of older employees. The notion of "older" or "senior" was used with caution, making clear to our company contacts the very relative nature of this notion and our attention to changes with age rather than to an age threshold.

However, from the company's point of view, it was not possible to interview employees of various ages and to be present on the set to directly observe the work activity of older telemarketers without disrupting the work. Thus, given the company's production constraints and the minimum time needed for interviewing employees (1 hour), we opted for individual interviews focusing on employees aged 45 and over, with varying ages and seniority.

We were also able to observe the training scheme for telemarketers in the recruitment phase, both in the room and on the set. However, of these, the only older person was 45 years old. We later received confirmation that recent changes in recruitment criteria and channels have considerably reduced the hiring of older employees (cf. section III.1.1).

The choice to favour individual semi-directive interviews with older telemarketers was made for two reasons: 1) they allow access to a broad vision of the professional and life path in order to identify the resources for coping with changes and training; 2) they allow us to collect the feelings and the point of view on training during the call campaigns. All of this was done in conditions conducive to discussion and recording, i.e. outside the set.

For example, the specific interview grid for the interviews with the telemarketers was structured according to the following themes, in this order (only a few extracts of items here):

- the career path: namely previous jobs; changes (voluntary or not); the circumstances of being hired at the call centre; the evolution of the job since the hiring, etc. The description of the career pathway made it possible to specify the age and seniority of the person, and elements related to his/her life path.
- the current job: what is the work to be done; what changes have occurred?
- the training/learning pathway in the call centre: initial training; before being hired in this company, what opportunities to learn? wish to follow a particular type of training and the reasons associated with it; since being hired, ways of learning about

the work to be done? what opportunities to learn and train? what situation and resource persons?

- projection into the future: what are the expectations in the job? what are the wishes for training? reflection on the passage to retirement?

### II.3 Characteristics of the telemarketers interviewed

Nine telemarketers aged 55 and over were individually interviewed (table 2), which is around one-third of the older telemarketers in the company. Most of them were recruited and trained recently, following the very significant changes experienced in the company.

Table 2: Summary table of the main characteristics of the older telemarketers interviewed, in descending order of years of seniority in the company <sup>5</sup>

	Age	Length of service at the call centre	Career before joining the call centre
<i>Melha</i>	55	14	- Catering - Telephone operator: surveys, marketing, tele-advice, telesales
<i>Gérard</i>	59	14	- Accounting - Advertising space sales (employee and entrepreneur) - Salesperson - Distributing newspapers - Period of unemployment
<i>Anne-Marie</i>	64	8	- Office worker - Teacher - Tele-adviser at a competitor in the region
<i>Corinne</i>	63	5	- Secretary, then salesperson, trainer and marketing manager (banking) - Catering - Property developer
<i>Anne</i>	63	5	- Shopkeeper - From age 50, short-term and temporary contracts - 2 years unemployment before current job
<i>Paul</i>	66	5	- Military career - Security agent
<i>Serge</i>	57	4	- Commercial /advertising
<i>Maryvonne</i>	58	3	- Real estate broker - Bureau de change - Financial department, retail - Receptionist - Property developer
<i>Jean-Christophe</i>	59	2	- Musician - Company director for 20 years - Long-term unemployment

---

<sup>5</sup> Out of respect for anonymity, first names have been changed. These names will be used later in the verbatim presentations.

Overall, their professional careers have been characterised by several changes in direction. For some these were deliberate choices, but generally the opposite was true. Some of them looked for jobs in their initial fields for a long time, in vain. Working in a call centre was therefore an opportunity to go back to work and was more of a forced occupational choice.

In addition, three of them are part of a group of ten people identified by the company, of all ages, as having difficulties in achieving the performance targets set (number of contacts made, number of sales) and the expected sales skills.

### **III. Results**

The results of our research on training systems and the risks of weakening are presented in two parts: firstly, the formal aspects of these systems, put forward by trainers, supervisors and management and, secondly, the point of view of the telemarketers we met on the formal and informal learning methods.

#### III.1 Formal aspect of training and views of organisers/trainers

##### *III.1.1 A training system structured to take account of changes in the company and the work activity*

The company is a remote management customer relations company, working on behalf of several clients. Founded in the mid-1990s, the number of staff has grown significantly since it was created. In 2017, when our research was conducted, it employed 200 people, three-quarters of which were women.

Initially, most operations related to incoming calls (assistance, arranging meetings, information, taking out loans, etc.). Competition increased after the 2008 crisis, in particular from call centres in North African countries. The company then redeployed its services to outgoing calls (debt recovery, canvassing and sales, surveys, etc.). This was accompanied by the removal of scripts for calls<sup>6</sup>, to differentiate itself from its competitors by making the telephone interaction less anonymous and stereotypical. The telemarketers' job has therefore changed considerably. In a few months "teleoperators" have become "telemarketers" who need to be sufficiently versatile to work on increasingly complex and technical operations, requiring to navigate easily between different software applications. They have to contact customers (individuals or companies) to offer them very specific offers, while ensuring total quality of the calls from a commercial, relational (individual conversations) and technical point of view.

To support these developments, for the past seven years the company has had a training department, consisting of three people who deliver most of the training internally. They are former telemarketers, recognised by both the management and their colleagues for their sales performances as well as their teaching qualities.

The training courses are set up when new call campaigns are launched or when existing campaigns change. The training systems combine 1) a presentation of the call campaign

---

<sup>6</sup> A script is a predefined and standardised sequence of arguments designed to capture the customer's attention and support his or her decision towards a sale as far as possible (our definition).

and the product or products to be placed; 2) rehearsing the action in situation under the control and with the support of the trainer (“school” work); and 3) reflective feedback on the action, guided by the trainer, identifying any weak points in the form of “role plays”.

The trainers therefore individually support each telemarketer, guiding them in assimilating the operation through individual and group debriefing sessions<sup>7</sup>. However, the fact that the training costs are not taken into account when negotiating contracts with clients, the fact that the format of the training is restricted by the latter (in time, methods of presenting the training, length of training) and the production requirements, means that the trainers speed up the pace of the training and condense the training time as much as possible.

### *III.1.2 Age is not seen as a barrier to training by trainers, but difficulties are identified*

In the 2000s, the company launched a social responsibility approach, accredited by a label, promoting the recruitment of older workers. The directors chose to develop a non-discriminatory recruitment policy in terms of age, to welcome older employees into the company. The proportion of “older workers” was notably higher than in most call centres in France: 45% of the people employed were 45 and above, and 32% were 50 and above.

According to the three trainers we met (such as the Director of Human Resources), age should not be an obstacle to training:

- *“Some older employees manage to meet the targets well and others less well, the same as in other age groups”.*

The trainers do not have the impression that age affects the trainees’ learning capabilities and performance. At the same time, without making a direct link to age, they mention telemarketers who have problems, particularly during changes in operations:

- *“Some people find it difficult to change”.*
- *“Some people take longer to adapt”.*

However, the training times are not adjusted to the needs of the trainees identified here. The trainers have however identified various strategies used by older workers to exempt themselves from changes in operation:

- *“Some people create comfort zones by staying on operations”.*
- *“When there is a reluctance to change, some telemarketers go off sick, which means that, as they have not followed the training for new operations, they cannot be allocated to them”.*

The supervisors explain that they put these older workers on easier operations, when possible. As these types of operation are increasingly rare, this strategy risks posing a problem in the long term. They also stress that repeated absences from training for specific operations (paid leave, work stoppages) can lead to termination of the employment contract.

---

<sup>7</sup> For more detail, consult the research report (reference cleared).

The redeployment to telesales operations after the crisis of 2008 led to a number of departures through contractual termination, has led to a number of resignations due to contractual termination, particularly older workers, and has caused difficulties for a number of operators still working at the company. The Human Resources Director points out the difficulties of a dozen telemarketers whose skills are not sufficient for the most frequent operations today. In 2015, the proportion of employees aged 45 years old and over had fallen considerably (31%).

The management also informed us of a recent change in its recruitment policy. Computer literacy has become one of the major criteria for selecting candidates for recruitment, a choice that could contribute to dissuading some older people from applying to the company. The recruitment channels have been modified to obtain a better return of job offers and to direct the sourcing towards younger candidates with a better command of IT tools. Whereas previously the management used public employment intermediaries (National Employment Agency, local missions for employment), more traditional recruitment channels (local press) and temporary work to recruit, it now more systematically uses online job sites or ad aggregators (Monster, Indeed, etc.). This way of recruiting significantly modifies the profile of the employees hired, at the expense of senior candidates who are less present on the online job market (Larquier & Rieucan, 2014).

These various elements collected during our fieldwork enabled us to discover that the adjustment to production constraints and competition in the company is ultimately less about training than about adapting recruitment methods and making them more selective. Although the criteria are not directly aimed at eliminating older candidates, they do so indirectly. However, selection on the basis of computer skills also excludes other candidates regardless of their age.

### *III.1.3 Formal collective learning in a work situation*

Through the interviews and observations on the call floor, we identified two learning methods in the work situation, planned and organised by the company to complete the training scheme.

1) The collective, formal debriefings organised by the supervisors are occasions when practices are discussed, which can be considered as group training. They are moments for redefining and correcting errors: the supervisor stops the outgoing calls, brings the staff together and goes over points that pose a problem. These debriefings often happen when products are changed and doubts and difficulties frequently arise:

- *“We go back over things: “Right, I don't think you've understood anything. I've been listening, and you're all making the same mistakes, you're all coming up against the same hurdles. So let's go over it again.” And [the supervisor] goes over it again, on the board”.* [Corinne]

Individual debriefings are also carried out by supervisors during working time, when the performances attained by telemarketers are judged to be inadequate or when errors are identified after listening to calls.

2) Very recently, “operational reinforcements” have been put in place in large teams, to support the supervisor. These are telemarketers experienced in the operation who can provide operational support to newly trained colleagues.

These formal learning methods reflect the recognition of the difficulties in increasing skills and achieving the level of performance set in the time dedicated to training. We

can see here the company's choice to control the discussions and training of telemarketers right up to the "ramp-up" phase. These formal learning mechanisms are closely linked to the control of performance and content of exchanges with the clients contacted.

### III.2 *Point of view of the senior telemarketers interviewed on their different learning methods*

#### III.2.1 *Formal training that is too quick and sometimes partial*

The older employees questioned unanimously said that, given the complexity of the operations, the formal training was too short.

- *"The training [PowerPoint presentations in a classroom] went over the concepts to be grasped very quickly.";* *"You need to become operational very quickly: You have to grasp it quickly".* [Serge]

These trainings do not allow for a deeper understanding of the commercial offers for each operation, generating some insecurity about the ability to answer customers' questions. This conflicts with their representation of quality work:

- *"Because the training is very quick, often too quick, we have the problem of selling products without all the information. We don't have enough training for the assignments we're given".* [Serge]

Most of the older workers we met noticed differences in their learning pace compared to younger employees:

- *"The change in operation is sometimes rapid: a half-day or two hours. The young people pick it up quicker, and for me it's too quick! However, I like changing products!".* [Serge]
- *"I'm a diesel engine, I take time. So when I think about going on new operations, I take risks because I might burn my wings. I get there, but it's a real effort. Sometimes, you lose the enjoyment of it! (...) You wonder why you're taking so long to adapt".* [Anne]

The experience of their own difficulties in a learning situation and the lack of room for manoeuvre to get to grips with the job makes them dread operation changes. The frequency of changes, the length of the campaigns and the need for multi-functionality exacerbates their problems and makes them afraid of failure.

- *"The problem, as an older employee, lies in being able to remember everything and achieve the quotas<sup>8</sup> when you're changing operation every month and a half or every two months. It's very difficult because you've hardly had time to begin before you have to move on to something else, whereas young people have a quicker intellectual capacity to do this kind of thing. As an older worker, I find it more difficult".* [Employees' representatives]

---

<sup>8</sup> The quotas are the number of contacts made and the number of sales, which lead to bonuses. Not achieving these quotas attracts the attention of the supervisors and results in face-to-face meetings about the operation.

- *“We have to know how to adapt, to each operation, at any given moment. It's our job, and we have to be on top of things”*. [Employees' representatives]
- *“You have to be capable of changing, of doing any job at any time; and you have to achieve the quotas systematically, from the first day you're trained. It's part of the job; it's very difficult. You don't ask questions: you don't have the choice”*. [Employees' representatives]

They don't always dare to talk about their difficulties with the trainers or supervisors.

*“If you've not understood something properly, you can of course ask them to explain again. But many people don't say anything, because they're afraid. They're afraid of other people's opinions or what the trainer or the other people present might think”*. [Employees' representatives]

We can see here the fear of being stigmatised for their difficulties, aware that they are very regularly and frequently listened to by the supervisor, floor manager, quality manager or client.

The supervisors are not always the best resources for new operations (having been newly trained themselves):

- *“The platform managers know less than the [client's] managers. They are not always the best sources of information. If I have a problem, I ask the supervisor, but they don't always know what to say. So I don't ask questions any more, I try to get by”*. [Serge]

### III.2.2 Strategies for trying to protect themselves

Two female telemarketers told us about the strategy they both use to try to control their allocation. As one of them explain:

- *“I'm pro-active on some operations. I offer myself for new operations. I try to maintain my mental agility. I don't want to get stuck in a routine. I want to work on my mental elasticity. So I look at the operations on offer and if I think it's the type of product that suits me, I apply”*. [Anne]
- *“Thanks to the internal offers, I target certain ones and this way I'm more likely to achieve the quotas. Some products are much more difficult; I feel exposed. Some operations don't suit me, I don't thrive on them, and then with others, I arrive at work singing in the morning. (...) I don't have the same sales drive as other people, so it restricts the type of operations I want to apply for. I haven't really spoken about that to the management”*. [Anne]

However, these strategies, which the management is unaware of, can be prevented by the floor manager in charge of planning operations; the margins for negotiation are therefore very limited:

- *“You can ask [to be allocated to certain operations]”; “the floor manager decides who they request for the assignment”; “you can't really refuse”*. [Corinne]

Others take the risk of refusing certain allocations to operations that are likely to cause them problems. In this case, the telemarketers know the probable consequences of this refusal: redundancy.

### III.2.3 Collective and individual informal learning, in a work situation and outside

For the people interviewed, mastering the operations requires a longer time than that planned or thought by the trainers and the principals. The existing training systems do not provide sufficient support for learning. Through the interviews and observations on the call centre, we have identified two more informal and invisible learning methods.

1) However, at times, the telemarketers directly consult their colleagues while they are on a call. This involves obtaining essential information to deal with a call in progress, without making it go on too long or making the contact wait too long, causing them to hang up, and without interfering with the work of the colleague being consulted. This method of regulation is not accepted and is fought against by the supervisors, who are afraid that incorrect information might be disseminated and that it will reduce the productivity of the telemarketers being consulted. They want to be the points of contact for all questions:

- *“Someone, for example, who comes into an operation on the floor, joining a group that’s already set up... they’re in the middle of this group, and it’s a normal reaction, if they’re on a call that’s more complex than usual, to ask their neighbour for help. But in principle, the neighbour shouldn’t help because, if they do, this means they’re not on the phone during this time, they’re not being productive, so they should call the supervisor instead. But... it often happens that we’re asked to give information.”* [Corinne]

Break times are also occasions when informal discussions take place between colleagues, out of sight of management, when colleagues share problems and advice. These discussions are multi-directional and can take place in both directions: younger – older workers; novices – experienced workers:

- *“When we’re on a break or amongst ourselves, we say “Hey, I’ve had such and such a case. Have you had one like this...? The aim is to improve”. [Employees’ representatives]*

These group regulations, which can take place in stable working groups, seem to be undermined by increasingly frequent changes in operations, in which telemarketers end up in new teams.

- *“By making us change products, they’ve broken all that. There are more changes now; people change more often. This breaks up the group”. [Anne]*

2) When the products are changed, some telemarketers feel the need for “solo” learning time (Fournier *et al.*, 2017, p. 77), as part of a solitary search for useful information, outside the company and outside working time, to help them master the products better. These are informal learning methods, sometimes hindered by clients who do not want the working documents to go outside the company, for reasons of confidentiality.

*“We have our magazines. They change every two months. I take them home and I work on getting to know my packages, etc... because when you have people on the line, they have old packages and you need to be able to understand the differences. It’s a lot of work. Personally, I need to do it. I take my work home. I sit down and try to understand it better so that I can be calmer when I’m on a call. This requires a personal investment.”* [Employees’ representative]

Again, these are clandestine regulations, but they are necessary to compensate for the too short time available for formal training and to make it possible to achieve performance targets while maintaining health.

## **IV – Discussion**

Firstly, we look at the enabling dimension of training and work organisation. Secondly, we show to what extent the characteristics of training contribute to the weakening process that particularly affects older workers, from three angles: “in relation” to work, “at” work, and in relation to employment.

### **IV.1 – Enabling dimension of training and work organisation**

#### *IV.1.1 Training that is not sufficiently enabling*

The logic of production and the company’s training model are at the heart of the difficulties that may be encountered by older workers. It is in fact a highly paradoxical situation. The more complex the operations become, the more training time they require, especially for employees who need more time to learn. However, the company finds itself in an inverse logic of reducing the training time in order to start the call campaign sooner. The training costs are not specifically financed by the clients. This is a fairly general characteristic of occupational training that the time devoted to learning tends to be condensed, swept up in the general movement of intensified work (Delgoulet, 2012). Periods of learning are considered as non-productive working time for the company, which must be limited. Learning therefore continues during the work situation.

We have noted that learner-employees have during formal training little time to understand, learn and assimilate new operations, enter into the subtleties of the different propositions involved in certain operations, construct their message in the absence of a script, and integrate the client's brand image of which they will be the representatives. This time-limited learning poses difficulties for all telemarketers, especially for older workers who express a need for more time to understand and learn. The training materials are also designed by the clients without a direct link to the telemarketers’ activity, which does not make learning easier. This requires adaptation time to construct the message and remember a number of arguments, responses, legal information and procedures to close the sale and thus try as much as possible to meet the quantitative objectives of product placement. This is an additional factor of difficulty for learners, a source of anxiety.

The trainers, like the human resources department, emphasise the fact that they do not want to treat people differently due to their age. They do not therefore recognise the specific learning features of older workers and do not take these into account when designing training. Hubault (2012, p. 5) raises the alarm bell on such positions: “In order to not / no longer make age a problem it [the company] prevents discussion about it, which has the counter-productive effect of no longer considering the matter or understanding how differences might still remain between ages, and ways to cope with these – and then leaving all the practical work to managers and employees on the ground. It's a genuine repressed memory that manifests itself here: the essentialisation of age, resulting in the fear that nothing can be done about it and convincing yourself that it can only be solved by no longer thinking about it”. However, denying the actual

differences between younger and older workers can compromise the chances of success among older workers (Delgoulet & Gaudart, 2012), slowing down the learning process and their skills improvement. According to Hubault (2012, p. 8), “age management should therefore be based on a capacity to distinguish without discrimination: the distinction organises the way in which the singular is connected to the whole, of which there are several possible forms”.

Taking into account age-related learning difficulties could help to identify the learning difficulties related to the telemarketer's activity and the training materials provided by the clients. We have been able to identify these difficulties for candidates or new employees in training in the role play phases (difficulties with projecting themselves into the role play, for example) or during informal discussions during breaks (fear of not succeeding, expression of anxiety during these training times). Problems with learning are one of the causes of interrupted training and non-validation of the trial period for a significant number of candidates.

Our results thus confirm Delgoulet's conclusions (2012): if there are difficulties with older workers, these are not intrinsic to them but are the result of the combination of three dimensions, which are the forms of training, its objectives and the teaching methods. Training is often “an incomplete experience where trainer and trainee are sent back to back. The operators are left in the middle of the ford; it is up to them to make their way through as best they can, with the means at hand” (ibid., p. 64). Telemarketers therefore continue to learn “on the job”, in a production situation and with product placement targets, the job itself becoming a factor in learning.

#### *IV.1.2 A partially enabling work organisation*

If we consider with Cloutier (2011) that work organisation plays a dominant role in the transfer of occupational knowledge, we can examine the enabling dimension of work organisation on the floor, following the training.

The company has designed a structured, very top-down training model, in which the trainers play a central role. The company seeks to monitor the telemarketers' knowledge and know-how regularly: they can be listened to at any time, remotely, by the clients and supervisors. The team managers are instructed to support the telemarketers in a production situation, while carrying out their own tasks. This makes it difficult for them to be available to respond to multiple requests when new campaigns are launched, as the amount of tasks can restrict the support process. This has led to the recent initiative to introduce “reinforcement” team managers who are experienced in the campaign. This initiative is certainly an enabling factor in encouraging the telemarketers' success.

Our interviews and observations revealed the existence of more informal methods of learning between colleagues: they exchange tips on how to do the job better, to consolidate some of their product knowledge and construct sales pitches for customers. However, these learning methods are clandestine, as they are not permitted. In the company, informal regulations between colleagues are not allowed: they are considered as an impediment to performance and a potential source of errors. The denial of the importance of groups and the refusal of mutual assistance between colleagues in building skills are non-enabling factors here.

Fournier, Lambert & Marion-Vernoux (2017, p. 75) identifies six organisational dimensions favourable to informal learning that go beyond the training framework: “decompartmentalising of work, dialogue and sharing information, reflection on

practices, development of the capacity to transfer and explain skills, individual engagement encouraged by management practices that value the group, development and mobility prospects”. Many of these dimensions are rarely or not at all present in the call centre: the work is compartmentalised, dialogue and sharing of information is restricted to discussions with line managers, spaces for reflecting on practice are increasingly reduced, informal exchanges between colleagues are prevented, the autonomy of telemarketers is extremely limited due to the fact that they can be listened to continually, without notice. These factors make the return to production even more difficult, a source of worry and stress, meaning that the call campaign is resumed without the resources for the activity being sufficiently stable.

Promoting informal learning would therefore requires thinking differently about the company’s performance logic, as it is not solely dependent on the individual performances of those involved, but more broadly on a collective dynamic that requires specific margins of manoeuvre for its expression. Recognising the importance of collective regulation in building skills and health would certainly be a significant point of improvement for the company, not only when preparing new call campaigns.

#### IV.2 – Forms of weakening among older workers, occurring at several levels

The interviews revealed that with age, the job becomes increasingly onerous and tiring, questioning the telemarketers’ ability to stay healthy and work until retirement<sup>9</sup>.

##### *IV.2.1 Weakening “in relation to” work*

Our research has primarily highlighted the processes of weakening “*in relation to*” work. The demands of the job have been considerably transformed in recent years, with the transition from the tele-advice role to telesales, from incoming to outgoing calls. For people hired as teleoperators before this change, this is a more commercially aggressive approach that has been imposed on them, for which they did not sign up. This caused an initial wave of resignations from the company, in particular former employees who did not really feel comfortable in their jobs. Those that remained have seen the operations become more complex; multi-functionality implemented to work on several operations; an increase in quality requirements when communicating with potential customers, contributing to a toughening of the job requirements. These requirements have been a problem for all employees, and even more so for older workers who are particularly vulnerable during operation changes. This has led to an increasingly marked selection process towards older workers within the company, from a dual viewpoint: 1) the management has noticed the problems encountered by some older workers and wants to get rid of them; 2) the older workers themselves are conscious of their difficulty in fitting in with this very demanding logic of flexibility, from a learning point of view.

The ongoing individual assessment of performance and the obstacles to collective regulations between colleagues isolate workers in their difficulties: the telemarketers do not benefit from enough collective regulation at work to offset their problems. This makes it easier to identify people in difficulty.

---

<sup>9</sup> We have not really been able to investigate, from a diachronic point of view, the processes of weakening “*by*” work and the impact on health in this company.

#### IV.2.2 Weakening “at” work

Our study also revealed the weakening process “at” work during product change phases requiring new learning. However, new learning requires cognitive processes that are sensitive to the effects of ageing.

The recent requirement in the company on multi-functionality to work on several operations has considerably increased the frequency of changes and the difficulties encountered by older employees. However, as observed by Gaudart (2000, 2003), the reduction in multi-functionality with age comes less from a refusal to change than a need for stability in work situations, being able to use work strategies that jointly support the challenges of health and performance. Older workers have often experienced in the past what has put them in difficulty or what, on the contrary, made them rapidly upgrade their skills in order to attain the productivity demanded by management.

For this reason, they try to use preservation strategies that are similar to coping strategies<sup>10</sup> (Hartmann, 2008). Some employees do not refuse multi-functionality, but they want to keep control of it by choosing the type of operations on which they work, in which they understand the level of complexity and know how to respond. For others, the training commitment relates to the extrinsic motivation of a hope to negotiate relative tranquillity at work (Delgoulet, 2012). They aim to remove themselves from the prospect of stigmatisation or redundancy (Dubar, 1996), which would send them back into periods of long-term unemployment that some experienced before joining the call centre. We would be tempted to assimilate this attitude with pro-active coping strategies<sup>11</sup> (Schwarzer, 2000) aimed at confronting the problem while controlling future events (choosing operations and the period in which training is undertaken) and by giving meaning to the challenge which the employee accepts. Other older telemarketers develop an avoidance strategy (Stanton *et al.*, 1994): trying to negotiate with the floor manager to avoid changing operation, absenting themselves from the company during training periods for new operations, in order to be exempted. This coping strategy is based on a personal estimation of their own ability to succeed and an assessment of the risks of failure and of weakening in respect of the job to be accomplished, aimed both at protecting themselves in terms of health and the human cost of learning. However, these strategies are firstly dependent on the existing margins of manoeuvre at work and secondly, a last resort when work organisation and training are defective or insufficiently enabling.

Although coping strategies enable work to be maintained in the very short term, there is a risk of weakening of health and employment, as we have been able to observe. Management is not duped by these avoidance strategies but is tolerating them less and less. The eventual risk is redundancy or contractual termination, as management has told us.

---

<sup>10</sup> Lazarus and Folkman (1984, p.141) define coping as “constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person”.

<sup>11</sup> In an academic review on coping strategies, Hartmann (2008, p. 287) defines the theory of proactive coping “as an approach integrating the temporal aspects of coping, i.e. not only coping with past events but also coping with future events. It includes both self-regulated goal attainment strategies and the concept of personal assessment of the situation (personal growth).”

Our observations confirm “the importance of tackling occupational health and training in the company as a whole (in relation to the conditions and costs of learning) and considering the impact on health during the continuous learning process” (Chatigny, 2001, p. 17). Employees having difficulties with learning may demonstrate infra-pathological signs, anxiety, mood problems and absence. These problems can lead to termination of the employment contract by the company or resignation by the telemarketers. This is particularly the case for employees who may claim to be retiring, even if they have said they want to continue working.

Our results have also tempered a number of recommendations traditionally mentioned when designing the conditions of “sustainable development” for older workers in the literature. Firstly, “promote the integration of continuous learning and sustainable development opportunities in the job itself” (Marquié & Rico Duarte, 2007, p. 4) poses the problem of the frequency of change with the increase in multi-functionality and its implications in terms of training and the length of training (Volkoff & Delgoulet, 2019). Above all, this can generate a significant cognitive burden rather than helping to create a feeling of development among the employees. Although “increasing the frequency of training is a means of maintaining learning skills” (Marquié & Rico Duarte, 2007, p. 2), we have seen that changes in operation that are too frequent, restricted time and inadequate training materials, to which accessibility is limited outside training time, can on the contrary weaken skills, the feeling of being in control of operations, and more broadly the relationship to the job, generating considerable anxiety among employees in terms of succeeding with learning and being able to continue working at the company. This dimension of training anxiety among older workers has been revealed by several research studies, both before and during training (Delgoulet & Marquié, 2002; Santos & Lacomblez, 2007). It can represent an obstacle to the acquisition of knowledge and contribute to emotional stress, which is not enabling to the learning process.

There is therefore a major issue in considering both the cognitive and conative dimensions of the learning activity and in designing training that will identify the stumbling blocks and develop didactic situations that enable them to be removed or bypassed (Delgoulet & Vidal-Gomel, 2015).

#### *IV.2.3 Weakening of employment among older workers*

A third, relatively invisible, form of weakening has emerged during our investigations.

During the interviews, some of the telemarketers questioned told us that they had been strongly encouraged to go part-time or seriously plan for their retirement, which was not necessarily their personal goal. The pressure around performance is increasingly present: people who do not attain the expected targets are summoned, retrained internally as if they were novices and, if they still fail to meet management's expectations, they are made redundant. There is therefore considerably more pressure than in the past on older workers who stay in work, who are forced to engage with very onerous job developments.

## **V. Conclusion**

This research into a company case study demonstrates the challenge that currently exists, in the context of extended careers and changes in work organisation models, to develop the enabling potential of training and organisation (Delgoulet & Vidal-Gomel, 2015), so that they simultaneously contribute in the long-term to the improvement of

employee wellbeing, regardless of age, skills development and performance improvement (Falzon, 2015).

This is achieved by recognising the complexity of learning, the diversity of employees and the challenges of health and employment. Integrating these dimensions into the design of work and training situations requires us: 1) to abandon the idea of standard training; 2) to make trainers aware of the variability of trainees; 3) to design training programmes that offer progressions that are adaptable over time, enabling us to take account of each person's difficulties, different acquisition paces; 4) to introduce materials so that the inevitable unfinished learning in formal training continues at work (this may involve various documents, for example product documents, as they are changed regularly); and 5) to facilitate the processes of mutual assistance between colleagues in both the training and production situation, regulations that are prevented in the case of a call centre.

This is also achieved by reflecting on the capacity for training and learning at work in building the necessary skills over time. Training on its own does not necessarily support the development of skills and health, and the maintenance of employment (Tuchszirer, 2017). The work and the way it is organised also need to be examined.

## References

- Baxter, P. & Jack, S. (2008). Qualitative Case Study Methodology: Study Design and Implementation for Novice Researchers. *The Qualitative Report*, 13(4), pp. 544-559.
- Bagnara, S. & Livigni, L. (2005) Services à distance : les centres d'appels. In M. Cerf et P. Falzon (Eds), *Situations de service : travailler dans l'interaction* (pp. 113-133). Paris, PUF, 254 p.
- Buscatto, M. (2002). Les centres d'appels, usines modernes ? Les rationalisations paradoxales de la relation téléphonique. *Sociologie du travail*, 44(1), pp. 99-117.
- Bourgeois, E. & Nizet, J. (2005) *Apprentissage et formation des adultes*. Paris : PUF, 232 p.
- Bourgeois, E. (2009) Apprentissage et transformation du sujet en formation. In J.-M. Barbier, E. Bourgeois, G. Chapelle et J.-C. Ruano-Borbala (Coord.), *Encyclopédie de la formation* (pp. 31-69). Paris : PUF.
- Cau-Bareille, D., Gaudart, C. & Delgoulet, C. (2012). Training, age and technological change: difficulties associated with age, the design of tools, and the organization of work. *Work*, 41(2), pp. 127-141.
- Chatigny, C. (2001). Les ressources de l'environnement : au cœur de la construction des savoirs professionnels en situation de travail et de la protection de la santé, *Perspectives interdisciplinaires sur le travail et la santé*, 3-2 | 2001, 22 p.
- Chatigny, C. & Montreuil, S. (2003). Apprenticeship in a work setting: the contribution and limits of operational resources constructed by worker. *Safety Science*, 41, pp. 377-391.
- Chassaing, K. & Gaudart, C. (2012). Formation « in situ » et « école de dextérité ». L'automobile : analyse des modalités d'apprentissage et de leurs coûts pour les opérateurs. In A.F. Molinié, C. Gaudart & V. Pueyo (Eds), *La vie*

*professionnelle : âge, expérience et santé à l'épreuve des conditions de travail* (pp.75-94). Toulouse : Octarès.

- Cleveland, J.N. & Shore, L.M. (2007). Work and employment: individual. In J. E. Birren (Ed), *Encyclopedia of Gerontology*, Elsevier, pp. 683-694.
- Cloutier, E. (2011). Transmission individuelle et collective des savoirs protecteurs dans les métiers de service : une question d'organisation du travail. In Les Actes du colloque CREAPT 2009 : *Transmission des savoirs et mutualisation des pratiques en situation de travail*, Rapport de recherches du Centre d'Etude de l'Emploi, pp. 19-26.
- Cloutier, E., Fournier, P.-S., Ledoux, E., Gagnon, I., Beauvais, A. & Vincent-Genod, C. (2012a). *La transmission des savoirs de métier et de prudence par les travailleurs expérimentés - Comment soutenir cette approche dynamique de formation dans les milieux de travail*. IRSST, Rapport R-740, Études et recherches, Montréal.
- Cloutier, E., Ledoux, É., & Fournier, P. S. (2012b). Knowledge transmission in light of recent transformations in the workplace. *Relations industrielles*, 67(2), pp.304-324.
- Cloutier, E., Lefebvre, S., Ledoux, E., Chatigny, C. & St-Jacques, Y. (2002). *Enjeux de santé et de sécurité au travail dans la transmission des savoirs professionnels : le cas des usineurs et des cuisiniers*. IRSST, Rapport R-316, Etudes et recherches, Montréal.
- Cossalter, C. (2002) Les plateaux téléphoniques dans les banques et les assurances. Continuité et rupture dans la dynamique d'organisation. *Réseaux*, 114, pp. 23-50.
- Delgoulet, C. & Marquié, J.-C. (2002). Age differences in learning maintenance skills: a field study. *Experimental Aging research*, 01/2002, 28(1), pp. 25-37.
- Delgoulet, C. (2012). Apprendre pour et par le travail : les conditions de formation tout au long de la vie professionnelle. In C. Gaudart, A. Molinié & V. Pueyo (Eds), *La vie professionnelle : âge, expérience et santé à l'épreuve des conditions de travail* (pp. 45-74). Toulouse : Octarès,
- Delgoulet, C. & Gaudart, C. (2012). Apprendre pour se maintenir dans le monde du travail en fin de carrière. Réflexion autour d'une formation au métier de formateur. *Education Permanente*, 191, pp. 51-66.
- Delgoulet, C. (2013). La formation professionnelle des actifs vieillissants : une combinaison difficile à construire ? *Gérontologie et Société*, 147, pp. 63-73.
- Delgoulet, C. (2014). Travail et formation au fil de l'âge : des constats et quelques enjeux renouvelés. In *Travailler et se former au fil du parcours professionnel. Actes du séminaire « Ages et Travail »*, 96, pp. 9-32.
- Delgoulet, C. & Vidal-Gomel, C. (2015). The development of skills: a condition for the construction of health and performance at work. In, P. Falzon (Ed), *Constructive Ergonomics* (pp. 3-17). New-York: CRC Press, Francis & Taylor.
- Delgoulet, C., Gaudart, C., Molinié, A.-F., Volkoff, S., Cabon, P., Reboul, L., Cuvelier, L., & Toupin, C. (2020). Des fragilités individuelles aux processus de fragilisation au travail. *La Revue des conditions de travail*, n°11, octobre, pp. 30-42.

- Dubar C. (1996). *La formation professionnelle continue*, Paris : La découverte.
- Dworschack, B., Buck, H., & Schletz, A. (2006). Building workplaces in line with the ageing process. In, T. Tikkanen and B. Nyhan (Eds), *Promoting lifelong learning for older workers. An international overview* (pp. 208-223), Luxembourg: Office for Official Publications of the European Communities.
- Falzon, P. (2005). Ergonomics, knowledge development and the design of enabling environments. *Proceedings of the Humanizing Work and Work Environment HWWE'2005 Conference*, December 10-12 Guwahati, India, pp. 1-8.
- Falzon, P. (2015). Introduction - Constructive ergonomics: a manifesto. In P. Falzon (coord.), *Constructive Ergonomics*. Boca Raton (Fl): CCR Press, Taylor & Francis, pp. vii-xxii.
- Fournier, P-S. (2004). Concevoir une formation : réflexion sur une démarche d'aide à l'apprentissage sur le cours de vie. *Perspectives interdisciplinaires sur le travail et la santé*, 6(2), 17 p.
- Fournier, C., Lambert, M. & Marion-Vernoux, I. (2017) Apprentissages informels et dynamique de travail, *Sociologies pratiques*, 2017/2, n°35, pp. 73-81.
- Gaudart, C. (2000). Conditions for maintaining ageing operators at work – a case study conducted at an automobile manufacturing plant. *Applied Ergonomics*, 31(5), pp. 453-462.
- Gaudart, C. (2003). La baisse de la polyvalence avec l'âge : question de vieillissement, d'expérience, de génération ? *Perspectives interdisciplinaires sur le travail et la santé*, 5(2), 27 p.
- Gaudart, C., Delgoulet, C. & Chassaing K. (2008). La fidélisation de nouveaux dans une entreprise du BTP : Approche ergonomique des enjeux et des déterminants. *@ctivités*, 5(2), 24 p.
- Hartmann, A. (2008). Les orientations nouvelles dans le champ du coping. *Pratiques psychologiques*, 14, pp. 285-29.
- Hubault, F. (2012). Disposition, occasion, situation : quand l'âge interpelle l'organisation. In Hubault F. (coord.), *Actes du séminaire Paris 1 « Y a-t-il un âge pour travailler ? »* (pp. 3-10), Toulouse : Octarès.
- Ianeva, M. & Vacherand-Revel, J. (2015). Développement de l'activité et travail d'articulation : le cas d'un centre d'appels médico-social, *Perspectives interdisciplinaires sur le travail et la santé*, 17-1, 23 p.
- Kruse, A. & Schmitt E. (2007). Adult education. In J. E. Birren (Ed), *Encyclopedia of Gerontology* (pp. 41-49), Elsevier.
- Lacomblez, M. (2001). Analyse du travail et élaboration des programmes de formation professionnelle. *Relations Industrielles / Industrial Relations*, 56(3), pp. 543-578.
- Larquier, G. (de) & Rieucan, G. (2014). Comment les canaux de recrutement mettent en forme la sélection sur le marché du travail, *4e Congrès de l'Association française d'économie politique*, ENS-Cachan, 2014, Cachan, France
- Lazarus, R. & Folkman, S. (1984). *Stress, Appraisal and Coping*. New York: Springer.

- Ludwig, C. & Chicherio, C. (2004). Pertes et gains dans le développement adulte. La perspective des neurosciences du vieillissement. *Gérontologie et société*, 123(4), pp. 109-134.
- Marquié, J.-C. (2006). Aspects cognitifs du vieillissement, exigences de travail, et expérience : les marges de manœuvre du travailleur vieillissant. In J. C. de Crescenzo (Ed), *Changement dans les organisations*. Tome 1 : stratégies, processus, et performances (pp. 27-50). Paris : Harmattan.
- Marquié, J.-C, & Rico Duarte, L. (2007). Training older workers and long-term development needs and obstacles. In M. Kumashiro (Ed). *Promotion of work ability: towards productive aging* (pp.161-165), Proceedings of the 3<sup>rd</sup> international Symposium on Work Ability, 22-24 october 2007, Vietnam, London: Taylor & Francis, pp.161-165.
- Marquié, J.-C. & Ansiau, D. (2008). Âge et travail : les conditions du développement durable des compétences. In G. De Terssac, C. Saint Martin, & C. Thébault (Eds.), *La précarité : une relation entre travail, organisation et santé* (pp. 43-59). Toulouse : Éditions Octarès.
- Marquié, J.-C. (2010). Environnements capacitants, développement des aptitudes cognitives, et possibilité de maintien dans l'emploi. *Retraite et Société*, 59, pp.104-115.
- Marsick, V.J. & Watkins, K.E. (1990). *Informal and incidental learning in the workplace*. New York Routledge.
- Montmollin, M. de (1993). Compétences, charge mentale, stress : peut-on parler de santé « cognitive » ? *Proceedings of the XXVIII<sup>th</sup> SELF Congress*, Geneva, Switzerland, September 22-24.
- Molinié, A.-F., Gaudart, C. & Pueyo, V. (2012). *La vie professionnelle : âge, expérience et santé à l'épreuve des conditions de travail*, Toulouse : Octarès, 395 p.
- Molinié A.-F. & Pueyo V. (2012). Vie de travail et risques pour la santé. In C. Gaudart, A.-F. Molinié, V. Pueyo (eds), *La vie professionnelle - âge, expérience et santé à l'épreuve des conditions de travail* (pp. 237-255). Toulouse: Octarès.
- Paumès, D. & Marquié, J.-C. (1995). Travailleurs âgés, apprentissage et formation. In J.-C. Marquié, D. Paumès Cau-Bareille, S. Volkoff (Eds), *Le travail au fil de l'âge* (pp. 297-312). Toulouse: Octarès.
- Rogers, W.A., Fisk, A.D., Mead, S.E., Walker, N. & Fraser Cabrera, E. (1996). Training older adults to use automatic teller machines. *Human Factors*, 38(3), pp. 425-433.
- Rorive, B. & Naedenoen, F. (2005). La gestion de l'emploi dans les centres d'appels, vers une réconciliation des intérêts du client et du travailleur ? XVI<sup>e</sup> Congrès de l'AGRH, (Ré)concilier l'économie et le social ? Paris, France, 27 p.
- Salthouse, T.A. (1984). Effects of age and skill in typing. *Journal of Experimental Psychology*, 113(3), pp. 345-371.
- Santos, M. & Lacomblez, M. 2007. Que fait la peur d'apprendre dans la zone proche de développement ? *@ctivités*. 4(2), pp. 16-29.

- Santos Oliveira, S., Brito, J. & Lacomblez, M. (2012). Agir en compétence dans les centres d'appels : dilemmes entre emploi, travail et santé. *Perspectives interdisciplinaires sur le travail et la santé*, 14-2, 25 p.
- Schwarzer, R. (2000). Manage stress at work through preventive and proactive coping. In: Locke, E.A. (Ed.), *The Blackwell handbook of principles of organizational behavior* (pp. 342–355). Blackwell, Oxford, England.
- Stanton, A.L., Danoff-Burg, S., Cameron, C.L. & Ellis, A.P., (1994). Coping through emotional approach: problems of conceptualization and confounding. *Journal of Personality and Social Psychology*, 66, pp. 350–362.
- Teiger C., Lacomblez, M. & Montreuil, S. (1998). Apport de l'ergonomie à la formation des opérateurs concernés par les transformations des activités et du travail. In: M-F. Dessaigne et I. Gaillard (Editeurs), *Des évolutions en ergonomie* (pp. 97-125). Éditions Octarès, Toulouse.
- Teiger, C. & Montreuil, S. (1996). The foundations and contributions of ergonomics work analysis in training programmes. *Safety Science*, 23, n°2-3, pp.81-95.
- Thébault, J., Delgoulet C., & Zara-Meylan V. (2018). "The circulation of knowledge within work collectives: challenges for performance and health in the face of changes in the workplace", Symposium presentation at 13th European Academy of Occupational Health Psychology Conference (EAOHP); Lisbon, Portugal.
- Thébault, J., Delgoulet, C., Fournier, P.-S., Gaudart, C. & Jolivet, A. (2014). La transmission à l'épreuve des réalités du travail. *Éducation Permanente*, 198, pp. 85-99.
- Thébault, J., Gaudart, C., Cloutier, E., & Volkoff, S. (2012). Transmission of vocational skills between experienced and new hospital workers, *Work: a journal of prevention, assessment and rehabilitation*, n° 41 (2), pp. 195-204.
- Tuchszirer, C. (2017). *Enjeux et usages de la formation professionnelle dans la sécurisation des trajectoires d'emploi : des initiatives territoriales aux réformes nationales*. Document de travail du CNAM – CEET, n° 194, 29 p.
- Venco, S. (2009). Stratégies de gestion dans les centres d'appels brésiliens : omniprésence et visibilité, *Recherches sociologiques et anthropologiques*, 40-2, pp. 55-76.
- Vidal-Gomel, C., & Delgoulet, C. (2016). Des compétences aux capacités pour réinterroger les possibilités de développement du sujet, in S. Fernagu Oudet & Ch. Batal (dir.), *(R)évolution du management des ressources humaines. Des compétences aux capacités* (pp. 393-408). Villeneuve d'Ascq : Presses Universitaires du Septentrion.
- Vidal-Gomel, C. (2017). *Concevoir des formations capacitantes. Une contribution à la formation professionnelle des adultes*. HDR en Sciences de l'éducation, Université de Nantes, 305 p.
- Volkoff, S. & Gaudart, C. (2006). Vieillesse et travail. In M. Goldberg (coord.). *La place de la santé au travail dans la santé publique* (pp. 52-54), Actualité et Dossier en Santé Publique, 57, pp 52-54.
- Volkoff, S., & Delgoulet, C. (2019). L'intensification du travail, et l'intensification des changements dans le travail : quels enjeux pour les travailleurs expérimentés ? *Psychologie du Travail et des Organisations*, 25(1), pp. 28-39.

- Volkoff, S. & Molinié, A.-F. (2011). L'écheveau des liens santé travail, et le fil de l'âge. In A. Degenne, C. Marry, S. Moulin & Y. Grelet (coord.), *Les catégories sociales et leurs frontières* (pp. 323-344). Laval (Québec): Presses de l'Université.
- Wolff, L., Mardon, C., Molinié, A.-F., Volkoff, S., & Gaudart, C. (2015). Les changements de conditions de travail au fil des vies professionnelles : plus fréquents, moins favorables, *Connaissance de l'emploi*, CEE, n°124, 4p.
- Yin, R.K. (2003). *Case study research: Design and methods* (3rd ed.). Thousand Oaks, CA: Sage, 5, 53 p.