

# Staff development and performance appraisal in a brazilian research centre

[Business](#), [Management](#)



The current issue and full text archive of this journal is available at [www.emeraldinsight.com/1460-1060.htm](http://www.emeraldinsight.com/1460-1060.htm) Staff development and performance appraisal in a Brazilian research centre Cristina Lourenco Ubeda and Fernando Cesar Almada Santos ? Staff development and appraisal 109 ? ? University of Sao Paulo, Sao Paulo, Brazil Abstract Purpose - The aim of this paper is to analyse the staff development and performance appraisal in a Brazilian research centre.

Design/methodology/approach - The key issues of this case study are: the main organisational changes which have taken place over the last decades; the aspects of the organisational structure that have either contributed to or hindered competence-based management; the development of necessary researchers' competences related to main projects and processes and the way of appraising the development of their competences.

The analysis of this paper was carried out considering the following phases: strategic planning, specifications of projects and processes, competence-based management and performance appraisal of researchers. Findings - Although integration was found between the performance measurement and strategic plans defined by the research centre, competence-based management is still centred on individuals and based on their tasks. The link between researchers' competences and their social context is not considered.

Originality/value - Feedback from the results of research projects and recycling of organisational processes would allow the studied organisation not only to identify the individual competences necessary for each activity,

but also to improve the relationship between professional growth and innovation brought about by competitive strategies of companies. Keywords Competences, Innovation, Human resource management, Performance appraisal, Research organizations, Brazil Paper type Case study Introduction

Current competitive markets are highly influenced by the markets being globalised, technological innovation and stiff competition. Competence-based management appears in this scenario as an approach to human resource management which provides interaction between human resource systems and a company's strategy (Santos, 2000; Schuler and Jackson, 1995; Meshoulam and Baird, 1987). Technological changes require companies to develop human competences as an important factor to achieve success and have competitive advantage (Drejer and Riis, 1999).

The main objective of developing competences is to enable people to assimilate the skills, knowledge and attitudes necessary for their jobs (Sandberg, 2000). Strategic human resource management has attempted to link its practices to innovation strategies of companies which deal with changing, unpredictable and demanding markets (Hagan, 1996; Huselid et al. , 1997; Mills et al. , 1998; Jayaram et al. , 1999; Drejer, 2000a; Ray et al. , 2004). Human resource management consists of systems such as selection, staff's performance appraisal, careermanagement, compensation and motivation practices.

European Journal of Innovation Management Vol. 10 No. 1, 2007 pp. 109-125  
q Emerald Group Publishing Limited 1460-1060 DOI 10.1108/14601060710720573 EJIM 10, 1 110 All these systems may favour or

hinder the development of competences which are necessary for a company's strategy (Sandberg, 2000). The systems in human resources may help a company to increase its competitiveness by implementing competence-based management. Models for competence-based management have been widely used in order to align individual abilities with core competences of a company.

A structure of competences is basically understood as a link between people's development and a company's strategy. Competence-based management uses a structure of competences to align its strategic objectives with its key processes in human resource management (Le Deist and Winterton, 2005). The aim of this paper is to analyse a Brazilian research centre by reinforcing the main challenges of implementing competence-based management in this centre which deals with innovation.

Its mission is to develop solutions for sustainable development of Brazilian agribusinesses by creating, adapting and transferring knowledge and technology to benefit society (Ubeda, 2003, p. 50). This research is relevant because: . it highlights the production and transfer of technology as a distinct factor in terms of innovation which allows companies to achieve a leading position in international markets (Fleury and Fleury, 2004); and . the development of competences which is directly linked to market demands is analysed (Mansfield, 2004; Schroeder et al. , 2002; Hagan, 1996; Drejer, 2000a; Drejer and Riis, 1999). As a consequence, this analysis is based on a theoretical proposal concerning the development of individual competences which reinforces performance appraisal as a tool to identify and monitor

staff's competences, as well as taking into account a company's core competence and external demands. The paper is based on three relevant topics: (1) Working competitively involves placing high value on people, considering their experiences, ideas and preferences.

Their participation in organisations is necessary because employees and managers have to discuss a company's objectives together. (2) Encouraging employees' participation means creating opportunities to offer people a collective perspective concerning the significance of their professional practice and a way of being part of the future. (3) It is fundamental to consider not only the staff's specific qualifications needed for the positions in the organisational structure, but also their knowledge, experiences, skills and results for future innovations. Individual competences which are identified by performance appraisal in all the hierarchical levels of an organisation are important aspects concerning the success of a company's competitive strategy. Once the company is aware of the individual competences needed for each process, it can identify new ways of developing its human resources by changing the focus of its human resource systems. An integrated model for human resource management with a business-oriented strategy uses individual competences as a reference for the systems in human resource management, such as selection, training and development, compensation and career management.

Taking this into account, Dutra (2001, p. 27) says that: . . . organisations and people, side by side, create a continuous process of competence exchange. A company transfers its assets to the people, enriching and preparing them

to face new professional and personal situations, inside or outside of the organisation. Its staff, in turn, while developing their individual abilities, transfer their learning to the organisation, providing it conditions to cope with new challenges. Competence-based management Competence-based management has a direct effect on the future performance of its human resources (employees, managers and directors).

It also considers attitudes, values, personal characteristics and relationships in teams which are necessary for innovation and not only the knowledge and skills required for completing their jobs (Conde, 2001). Therefore, competence-based management is a strategic practice which aims at increasing the global performance of a corporation by increasing the individual performance of its employees (Hagan, 1996). It is necessary to identify factors which produce differences between individuals according to the results of their jobs and experiences (Moore et al. , 2002; Drejer, 2000b).

For this reason, every company which strives for competitiveness in its market recognises that competence-based management and performance appraisal are strategic functions, as this has brought about innovation by recycling companies' processes and individuals' activities (Bitencourt, 2004; Drejer and Riis, 1999; Houtzagers, 1999; Baker et al. , 1997). Competence-based management creates opportunities for effective strategic human resource management. However, without performance appraisals, both for individuals and teams, a company can neither monitor its own development nor the progress of its staff's performance.

As a consequence, it cannot develop or manage its individual competences (Ritter et al. , 2002; Robotham and Jubb, 1996). Therefore, the main objectives of competence-based management are: . to guide managerial decisions related to providing employees with the resources necessary for them to carry out their work satisfactorily, as well as to meet their training needs; . to plan staff's activities and identify the work conditions that influence their performance; . to guide the company's human resource policies and guidelines; and . to reward, promote and even punish, warn or ? e employees. Development of individual competences When considering social interaction between people and objectives, competitive strategy makes use of a formal structure to exchange information and human resource management that provides guidelines for selection, job design and evaluation, performance appraisal and rewards (Devanna et al. , 1984). A competitive strategy formulation must be based on the strongest competences of a company. Constant progress of competences creates opportunities for systematic Staff development and appraisal 111 EJIM 10, 1 112 re? ement and reformulation of competitive strategy and, by doing so, new ways can be identi? ed to develop competences (Fleury and Fleury, 2004). Developing individual competences is cyclical. According to environmental demands, companies de? ne their competitive strategy and core competences in order to channel their energy into their speci? c characteristics and, consequently, to adopt human resource systems that support the identi? cation and management of their individual competences. In this paper, development of individual competences is considered as a way of supplying information to other systems and processes.

First of all, the company must: . establish what the strategy and organisational competences are; . define the specifications of products and processes; . study the perspectives of necessary individual competences for each specific process; and . plan and carry out performance appraisal (Figure 1). When competence-based management is integrated into a company's strategy, one can observe the relationship between identifying personal competences and main human resource systems: selection, training and development, compensation and career management.

Companies which integrate competence-based management into strategic planning become able to make use of some tools, such as a balanced scorecard in order to measure the organisational performance in four balanced perspectives: finance, customers, internal processes and staff's learning and growth. Kaplan and Norton (1997) highlight the importance of creating a strategic feedback system to test, validate and modify the hypotheses which are incorporated into strategic business units. When cause and effect relations are incorporated into the balanced scorecard, they allow executives to establish short term goals which reflect their best expectations in deficiencies and impacts and consequently affect performance measurements. From the feedback obtained by performance appraisal, supervisors and employees can identify what the necessary skills and knowledge are for activities to be developed, and what type of training is necessary to improve project management. Competence and human performance Individual competence associates explicit knowledge, personal skills and experiences with individuals' results and judgement of organisational values which are obtained in their social context (Hipolito,



2001, p. 1; Fleury and Fleury, 2000; Zari? an, 2001; Sveiby, 1998). It considers the production and handing in of results which are linked to employees' mobilisation, that is to say, it incorporates the value added by them to business, as shown in Figure 2. Ubeda (2003) emphasises that competence involves the individuals working closely in a team by doing practical activities, as well as their daily routine which results in a constant "know how to learn". The individuals must be apt to take the initiative and assume responsibilities to cope with professional situations which they come across.

This responsibility is undoubtedly the counterpart of decentralising decision making. Individuals will not give orders anymore, but they will individually assume the Staff development and appraisal INNOVATION 113 STRATEGY F F Mission Objectives E E E CORE COMPETENCES D B D SPECIFICATIONS OF PRODUCT AND PROCESSES A C E B A INDIVIDUAL COMPETENCES K C K PERFORMANCE APPRAISAL Figure 1. The competence development process Source: Ubeda (2003, p. 50) responsibility for evaluating a situation, the required initiative and the effects that will inevitably arise from this situation.

Therefore, a person or a team (when accepting responsibilities) accepts to be judged and be appraised for the achieved results in terms of performance for which they are responsible. They commit themselves to producing and handing in results of their activities. Thus, it is not possible to consider competence without presenting the logic behind human performance, as performance appraisal guides the development of individual competences according to business needs (Moore et al. , 2002; Lawler, 1995). The use of

competences means rethinking the procedures of staff's appraisal because: . . . each individual becomes aware of which result must be reached and how it can be achieved. The competences form the basis of the language used to define the expected behaviour which enables performance and improvement to be carried out (Conde, 2001, p. 80). EJIM 10, 1 114

INDIVIDUAL COMPETENCE	SKILL	Know how to do something	PRODUCTION AND DELIVERY	Results	ATTITUDE	Intend to do something	POTENTIAL
Knowledge	Figure 2. The individual competence concept	Source: Hipolito (2001, p. 81)	According to Dutra (2001, p. 33), one of the most difficult issues concerning people management is to define and appraise performance in terms of the results to be handed in by a determined person, company or business. Performance appraisal makes it possible to identify three individual aspects that interact between themselves: development, effort and behaviour (Figure 3): Each aspect must be dealt with in a different way, concerning not only the way to appraise, but also the actions which follow the appraisal. In general, companies mix these three aspects and emphasise effort and behaviour.				

At the current moment, staff's professional growth is the most important aspect of performance and it is worthy of special attention (Dutra, 2001, p. 35). Dejourn (1997, p. 54) highlights performance appraisal as evaluating a job that can take place in two ways: evaluating usefulness and social relationships. Evaluating the technical, social or economic usefulness of the individual is linked to the workplace and the person who does it is generally in a hierarchical position (boss, manager or organiser) to appraise the usefulness.

Evaluating social relationships is related to the alignment of the job and production with standards which have been socially established by peers in the same hierarchical level which enables the individual to belong to a collective group. This evaluation is related to the job and its activities. What is appraised and evaluated is the job and not the individual. From the perspective of the human factor theory proposed by Dejours (1997, p. 55), this is an essential point because an individual's contribution to the job effectiveness makes recognition and compensation possible.

PERFORMANCE APPRAISAL BEHAVIOUR DEVELOPMENT EFFORT Figure 3. The three aspects of performance appraisal Source: Dutra (2001, p. 35) Recent studies point out models of performance appraisal based on behaviour and attitudes, but not only the ones focused on the analysis of functional features of each job (Moore et al. , 2002). They reinforce the increasing influence of technology, functional requisites and organisational learning in terms of developing competences (Drejer and Riis, 1999). According to Zari?an (2001, p. 121), nobody can compel individuals to be competent.

A company can only create favourable conditions for their development. Thus, motivation becomes a key element in terms of developing competences. It is necessary for the employees to feel useful and be able to assume responsibilities. The individuals will be more motivated as they consider that the practice of their competences also contributes to the development of their projects and perspectives. Performance appraisal as an instrument to identify employees' competences Competence-based management is supported by organisational competences that directly in?

ence an individual's competences, which are necessary for carrying out tasks and processes and, then are considered in performance appraisals. Consequently, the feedback concerning the data from these appraisals enables the whole organisation to recycle strategies and competences. Many authors highlight the difficulty of measuring the impact of developing competences regarding a company's performance (Mansfield, 2004; Moore et al. , 2002; Ritter et al. , 2002; Drejer, 2000a; Sandberg, 2000; Hagan, 1996). This situation is worsened if the individual metrics of each work process are thought to be measured.

Becker et al. (2001) emphasise that performance appraisal systems are incoherent in terms of what is measured and what is important. When implementing a company's strategy, human resource managers have to be able to understand exactly how people contribute to a company's results by being valuable and how to measure this contribution. This situation only takes place if these managers really participate in the development of a company's strategy. These authors state that satisfactory performance appraisal produces two types of results: 1) it improves the decision-making processes of the sector responsible for human resource management by focusing its activities on the aspects of the organisation that contribute to the development of a company's strategy; and (2) it provides a better allocation of resources, defining direct relations between human resource investments and strategic assets of a company. Developing competences in a research centre Aiming at evaluating competence-based management in practice, a case study in a research centre located in Brazil was carried out.

This organisation is a unit of a Federal public research corporation which consists of 37 research centres, three national service centres and 11 central units and is present in almost all the States of the Brazilian Federation. This corporation has invested in training and qualifications of its staff since it was founded. In 2003, there were a total number of 8,619 employees. Out of 2,221 researchers who work in this corporation, 45 per cent have a master's degree and 53 per cent a PhD. Staff development and appraisal 115 EJIM 10, 1-16 The studied research centre is responsible for developing new technology which can facilitate the life of producers and agricultural workers in the country. The organisation was chosen because it has implemented a performance appraisal system which aligns the development of its products and processes with human resource management. Methodology An empirical study was undertaken from February to November, 2003 using the following data collection instruments: interviews with opportunities for participants' comments and analysis of documents.

Seven professionals from this research centre were interviewed: four employees of the human resource area, the associate head of the research centre and two researchers. The participative observation of the researchers, the interviewees' comments and the documental analysis provided a personal and close contact with the organisation identifying institutional materials, norms, routines and programs developed by the professionals. The key questions of this case study focus on: . the main organisational changes which have taken place over the last decades; . the aspects of the organisational structure that have either contributed to or hindered competence-based management; . the development of necessary

researchers' competences related to main projects and processes; and . the way of appraising the development of researchers' competences. The case study The studied research corporation experienced some organisational changes over time that had clearly de? ned its business-oriented strategy. There is a real concern about integrating this strategy with human resource management, however, the performance appraisal system shows an irregular historical background.

The investigated corporation was founded in the 1970s, a period of outstanding economic growth in Brazil. Moreover, the Brazilian government supported the training of experts in research in public organs and in the agricultural sector (Ubeda, 2003). At that time, the corporation did not experience either ? nancial or human resource problems because the objective of the Federal government was to form a vanguard institution in its ? eld. The research guidelines of research were de? ned by the corporation's headquarters and then followed by the research centres.

The corporation's concern about integrating strategies with human resource management increased from the 1990s onwards, as well as plans to implement a structured performance appraisal system (Table I). The research centres were regionally located according to product lines and were set up to solve local problems. These units followed and carried out nationwide policies, as well as guidelines de? ned by the corporation's headquarters. At this moment, there was no concern about performance appraisal.

From 1988 onwards, due to the current Federal Constitution being approved, public institutions became more concerned about the strategic management of the appraisal of processes and results, not only of the organisation but also of the individuals. Period Institution's organisational scenario 1970s Development and consolidation of the studied corporation Employment and development of human resources Availability of ? nancial resources for project development Modernisation of management Application of strategic planning Focus on results

Analysis of global scenarios Rede? nition of the research centre's mission and vision Formulation of a global policy for the organisation consisting of research policy, businesses' policy, and businesscommunicationpolicy Focus on the customers Organisational re-structuring of processes and projects 1988-1992 1994-1998 1999-2003 Source: Ubeda (2003, p. 69) Aiming to follow these changes of organisational and technological paradigms, the studied organisation started to adopt strategic planning principles in its institutionalcultureand drew up its ? st corporate plan for 1988-1992. In 1991, the corporation initiated a process of organisational change, using strategic planning techniques, focusing on their operations and processes in the market, guiding research projects towards solving social problems, and not only exclusively towards the progress of purescience, attempting to ? nd an increase in ef? ciency and effectiveness to continue being competitive and to guarantee its sustainability (Nader et al. , 1998).

From 1994 onwards, a new system to appraise individual job performance was created and integrated with both strategic planning and the institutional

management system of the whole corporation, as well as with the operational plan of each research centre. To remain competitive and to guarantee sustainability, the corporation adopted a process of organisational change based on a management model drawn on results and customers' requirements, as well as having been supported by the balanced scorecard methodology (Kaplan and Norton, 1997).

From 1997 to 1999, the institution started implementing a new strategic management model in order to provide guidelines which really showed what was demanded by the corporation. Therefore, the entire organisation's staff would work in favour of the demanded goals (Sentanin, 2003). Within its job structure, the institution manages its human resources by linking the achievement of the proposed goals of its annual operational plan to negotiating the proposed activities for each employee in the performance appraisal system.

The performance appraisal system, besides being an instrument to recognise achieved results, is also used to identify human competences, which are important for research, and is a basis for selection, training and compensation practices in research centres. Concerned about meeting the needs of its customers, the corporation defines its strategic objectives and conveys them to its research centres that incorporate them into the annual operational plan. These units establish important processes to fulfil the proposed goals in the performance appraisal systems of researchers, and consequently, researchers develop new practices and technology (Figure 4).  
Staff development and appraisal 117 Table I. Organisational scenario of the



studied corporation EJIM 10, 1 118 Corporate Strategic Plan Plan of Each Unit Annual Operational Plan Figure 4. Performance strategic management process in the organisation studied Performance Measurement Strategic Planning F E E D B A C K Strategic Management Model Based on Processes Performance Appraisal Source: Ubeda (2003, p. 82)

In each research centre, there is an internal technical committee which co-ordinates research regarding themes and developed projects. This committee analyses pre-proposals and proposals of projects and processes of its unit with technical, operational and financial criteria. Thus, each new project undergoes evaluation and approval of the committee. Once a project is approved, it can be developed, and after it is concluded, it is evaluated once again to reflect on the results, assuring both the commitment of its staff and the quality of its technical projects and processes.

The units' type of structure is ad hococratic, according to Mintzberg's (1983) terminology, because it consists of teams which develop the approved projects, as well as them being concerned with innovation and always centred on the development of new products and processes. The head of research of each unit co-ordinates and appraises the performance of the projects which are carried out. The structure of this centre is the reflection of its strategies, since it attempts to create an integration of specialties using its project teams with the aim of competitiveness and customer satisfaction.

As for the job structure, there are two functional careers: research and support for research. Data analysis, results and implication of this research Research on competence-based management was focused on performance

appraisal because it is an important instrument to identify human competences based on the innovation strategy of the studied centre. In this performance appraisal system there is explicit planning of the following activities: . what the results of the jobs are expected to be; . how the product should be presented and what the standard of performance is expected to be; . . when the deadline for the product to be presented is; and feedback of the results of the jobs. However, since 1994 when it was implemented, the performance appraisal system has undergone modifications to improve its methodology, attempting to make its participants aware of the need for periodic dialogue and monitoring the activities, as well as for the impartial and specific appraisal of the activities planned in relation to the availability of means to carry out these activities.

The planning of employees' activities must be made according to the goals of its unit, area or sector, and to the projects under the responsibility of the studied research centre (Ubeda, 2003, p. 82). Performance appraisal must consider the employee's individual competences and the results of the job which were defined in strategic planning. Competence-based management aims at guiding managerial decisions, the processes of professional development, as well as planning the human resource systems.

An analysis of the development of competences in the Brazilian research centre was carried out by comparing the main theoretical issues of the literature with practices of the organisation which was studied (Figure 5). Firstly, the strategic objectives (item 1 of Figure 5) of the studied organisation were formulated according to the corporation and unit's

missions and the corporation's objectives. A synthesis of the theoretical issues concerning organisational competences (item 2 of Figure 5) is presented as follows: . eveloping organisational competences is based on the internal abilities of companies (Wernerfelt, 1984); . these competences consist of skills, abilities and technology which enable a company to meet the speci? c needs of its customers, that is to say, to achieve a competitive advantage superior to competitors (Hamel and Prahalad, 1994); Staff development and appraisal 119 FORMULATION OF STRATEGY (1) Objectives are defined according to the corporation and unit's missions and the corporation's objectives PRACTICES OF THE STUDIED ORGANISATION OF ORGANIZATIONAL COMPETENCES (3) ISSUES OF LITERATURE ON ORGANIZATIONAL COMPETENCES (2) ISSUES OF LITERATURE ON INDIVIDUAL COMPETENCES (4) ISSUES OF LITERATURE ON PERFORMANCE APPRAISAL (6) F E E D B A C K PRACTICES OF INDIVIDUAL COMPETENCES OF THE STUDIED ORGANISATION (5) ITEMS OF PERFORMANCE APPRAISAL IN THE STUDIED ORGANISATION (7) Core of this analysis: researchers Focus of the performance appraisal: researchers'university degree qualifications Figure 5. Analysis of the development of competences in the research centre EJIM 10, 1 . . 120 they require an understanding of competitive advantage mechanisms which may be used over time.

When competitive strategies are being developed, companies have to make the best use of their speci? c features (Grant, 1991); and a competence can be de? ned by considering four elements and their relationships: technology, people, organisational structure and organisational context (Drejer and Riis,

1999). The main features of organisational competences practised in the researched company (item 3 of Figure 5) were: . focus on the internal ability of research in agriculture and breeding; . support for competitive agribusinesses development in the global economy; . encouraging the development of agribusinesses with the sustainability of economical activities and environmental balance; . diminishing environmental imbalanced aspects of agribusinesses; and . supplying raw materials and food which encourage the population's health, improving the nutritional level and quality of life. Individual competence issues in the literature (item 4 of Figure 5) may be summarised as follows: . individual competence links explicit knowledge, skills and experiences of individuals to the results and judgements of value built within their social network (Hipolito, 2001; Fleury and Fleury, 2000; Zari? an, 2001; Sveiby, 1998); . individual competence can be explained altogether by the skills (to know how to do something), attitudes (to intend to do something), knowledge (to understand why to do something and search for solutions) and results (to produce and come ? up with the solution) (Hipolito, 2001); and . in order to develop complex competences, complex systems involve not only many people in different areas of the organisation, but also interlocking technology.

It is very dif? cult to understand and imitate them because they are very dependent on people and technology (Drejer and Riis, 1999). To develop individual competences in the research centre (item 5 of Figure 5), the following initiatives were carried out: . stimulating and rewarding creativity; . seeking effectiveness, developing actions with a focus on the achievement of results and solutions with compatible and competitive costs; . planning the

company for the future by strategically positioning its resources and abilities; . being committed to honesty and ethical posture by placing high value on human beings and dealing with all groups of society with respect; . attempting to meet the particularities of customers' demands by following the principles of total quality; . stimulating leadership when creating, adapting and transferring knowledge, products, services and technology; . . . . encouraging partnerships with other organisations and individuals; developing partnerships in terms of science and technology in agribusinesses; striving for scientific rigour, using scientific methods in research, caring about the exactness and precision of procedures in all the phases of the process, and not tolerating bias in results; and supporting teams which deal with problems in a systemic way in order to attain the ?nal objectives of their jobs. With regards to the issues presented in the literature on performance appraisal (item 6 of Figure 5): . the three main aspects of performance appraisal are people's development, effort and behaviour (Dutra, 2001); . models for performance appraisal are based on behaviour and attitudes, and not only on the specific functional analysis of each job (Moore et al. , 2002); and . technology, functional requisites and organisational learning influence the development of competences (Drejer and Riis, 1999). However, the main items of performance appraisal in the studied organisation (item 7 of Figure 5) are limited to: . researchers' ability of monitoring the projects being carried out; . researchers' scientific publications, such as articles, proceedings of congresses and scientific journals, books and chapters of books; . production and transfer of technology; and . publicising the research centre's image.

Although there is integration between performance appraisal and strategic plans defined by the research centre, competence-based management is still centred on the individuals, and it is also based on their tasks and not on the individuals linked to their social context, as previously pointed out by Moore et al. (2002), Zari? an (2001), Drejer and Riis (1999) and Dejours (1997). The previous fact is also a result of the dif? culty in measuring innovation and the degree of the development of a research project. Until the moment the research project does not achieve the proposed objective, it is dif? ult to quantify how much this research has progressed over time. All the risks are assumed and the decisions are centralised by researchers who coordinate the project teams. These facts took place because of the studied organisation which did not manage to deal with complex competences in a decentralised way. Although this research centre is a reference in Brazil, the competence notion of this institution recognises only the scope of skills (to know how to do it) and knowledge (information and experiences), not considering the scope of the attitudes (to intend to do it).

The organisation only recognises competences based on a university degree quali? cation, and does not include the initiative and the responsibilities necessary to cope with complex situations. It does not centre the development of individual competences either on speci? c projects or on integration and team work. Staff development and appraisal 121 EJIM 10, 1 122 Project management and performance appraisal are centred on the main researchers' skills and knowledge, minimising the importance of the competences of the other members of the research project team.

However, it is important to mention that the quantitative criteria of performance appraisal do not only reflect the concern about customers' satisfaction, but also guide the distribution of resources and the human resource policies of the studied institution. Performance appraisal does not consider either the team aspect or the concept of feedback structured by 360 degrees appraisal in which all the staff appraise and are appraised by their superiors, subordinates and colleagues (Borman, 1997). Employees are appraised by their superiors in the studied centre.

The results of the performance appraisal system contribute to strategic planning, however, the organisation and superiors are not appraised by the employees. In addition, an investigation into the organisational atmosphere was not made. There is not a channel for the feedback of performance appraisals which could result in both the development of researchers' competences and the innovation process of this centre. The processes in which technology is transferred and research is carried out are not defined according to the guidelines and parameters of this research centre, but they are defined by the corporation. Regarding cultural aspects, there is a great resistance and incredulity of the performance appraisal systems and the development of competences, despite the employees being already familiar with the appraisal systems of the research projects. Considering this incredulity, the appraisers do not take the role of planning and monitoring individual jobs. " There is always something more important and more urgent to do than ' to sit down with somebody to plan actions related to the individuals' job and his/her respective performance" (Nader et al. 1998, p. 17). In Table II some theoretical references are compared with the

investigated institution's practice. This is an approach combining the presence of the aspects of: competence (skills, attitudes, knowledge, production and handing in), Competence-based management elements in the studied organisation Table II. Elements of competence-based management in the organisation studied Performance appraisal integrated with strategic planning Performance appraisal integrated with human resource systems Development of skills

Development of knowledge Development of attitudes Consideration of the social context of project teams Development of competences according to production and delivery Performance appraisal based on results Use of balanced scorecard to establish and rede? ne goals Participation of all members of a research project team in the performance appraisal through 360 degrees performance appraisal Concern about employees and researchers' professional growth considering all the elements of competence Feedback of appraisals in terms of attitudes, opportunities of professional growth and social context to develop new strategies Source: Adapted from Ubeda (2003, p. 95) Present Absent X X X X X X X X X X X X the performance appraisal model, and the strategic integration of processes with human resource management. Conclusions When dealing with current competitive markets and needs for technological innovation, as well as stiff competition for new market niches, competence-based management is really a strategic practice adopted by companies to attain competitive advantage in order to serve the customers quickly and ef? iently. As a consequence, the alignment of human resource management practices and business strategies is of



fundamental importance to company's competitiveness, and it emphasises people as a distinct resource for success. Thus, competence and human performance help the development of projects and internal processes. Competence-based management is carried out based on identifying individual competences, using performance appraisal of results from an individual's job.

It is based not only on the competitive strategy and the organisational structure, but also on processes and projects of a company. It is also a reference for managers' decisions concerning the selection, training and compensation policies of a company's staff. To implement a consistent performance appraisal system which is capable of appraising the competences of each employee, it is necessary to check which knowledge, skills and attitudes should be developed in order to improve the internal processes of the organisation, without remaining focused only on jobs and tasks.

In this case, the research centre is basically just concerned with its operational plans whose main reference is striving for productivity. However, it was observed in practice that the development of individual competences does not link the performance appraisal system to the collective and social approach of competence-based management, and it also does not include the scope of attitudes in order to integrate strategic planning, its monitoring, performance appraisal, the feedback of results of a research project and the improvement of processes.

It is exactly this feedback, if well managed, that makes a difference, not only when identifying individual competences necessary for each activity, but also in the possibility of sharing professional growth concurrently with innovation and competitive strategy of companies. Feedback linked to the organisation's strategy could increase the integration between all its organisational units and levels possible. New research to obtain greater understanding of the relationship between competence-based management and performance appraisal is necessary because the existing literature does not specifically examine the development of individual competences. The main contribution of this paper is to present not only the difficulty of managing human competences, but also a vision of the process of developing competences in a research centre by analysing its particularities and limitations.

References Baker, J. C. , Mapes, J. , New, C. C. and Szwejcowski, N. (1997), " A hierarchical model of business competence", *Integrated Manufacturing Systems*, Vol. 8 No. 5, pp. 265-72. ? ? Becker, B. E. , Huselid, M. A. and Ulrich, D. (2001), *Gestao estrategica de pessoas com scorecard: ? nterligando pessoas, estrategia e performance*, Campus, Rio de janeiro. ? ? Bitencourt, C. C. (2004), " A gestao de competencias gerenciais e a contribuicao da aprendizagem ?? organizacional", *Revista de Administracao de Empresas*, Vol. 44 No. 1, pp. 58-69. ?? Staff development and appraisal 123 *EJIM* 10, 1 124 Borman, W. C. (1997), " 360 ratings: an analysis of assumption and research agenda for appraising their validity", *Human Resource Management Review*, Vol. 7 No. 3, pp. 299-315. ? ? ? Conde, L. P. (2001), " Gestao de competencias como pratica de recursos humanos nas organizacoes: ?? estudo de caso em uma empresa de tecnologia

da informacao”, masters thesis, Faculty of Economics and Administration, University of Sao Paulo, Sao Paulo. ? Dejours, C. (1997), O fator humano, Fundacao Getulio Vargas, Rio de Janeiro. ?? Devanna, M. A. , Fombrun, C. J. and Tichy, N. M. (1984), “ A framework for strategic human resource management”, Strategic Human Resource Management, Wiley, New York, NY, in Fombrun, C. J. , Tichy, N. M. and Devanna, M. A. (Coords. ). Drejer, A. (2000a), “ Organizational learning and competence development”, The Learning Organization, Vol. 7 No. , pp. 206-20. Drejer, A. (2000b), “ How can we define and understand competencies and their development? ”, Technovation, Vol. 21 No. 3, pp. 135-46. Drejer, A. and Riis, J. O. (1999), “ Competence development and technology: how learning and technology can be meaningfully integrated”, Technovation, Vol. 19 No. 10, pp. 631-44. ? ? ? ? Dutra, J. S. (2001), “ Gestao de pessoas com base em competencias”, Gestao por competencias, ? Gente, Sao Paulo, in Dutra, J. S. (Coord. ). ? ? Fleury, A. and Fleury, M. T. L. (2000), Estrategias empresariais e formacao de competencias, Atlas, ?? ?

Sao Paulo. Fleury, M. T. L. and Fleury, A. (2004), “ Competitive strategies and core competencies: perspective for the internationalisation of industry in Brazil”, Integrated Manufacturing Systems, Vol. 14 No. 1, pp. 16-25. Grant, R. M. (1991), “ The resource-based theory of competitive advantage: implications for strategy formulation”, California Management Review, Vol. 33 No. 3, pp. 114-35. Hagan, C. M. (1996), “ The core competence organization: implications for human resource practices”, Human Resources Management Review, Vol. 6 No. 2, pp. 147-64. Hamel, G. and Prahalad, C. K. (1994), Competing for the Future, Harvard Business School, Boston, MA. ? ? ? ?

Hipolito, J. A. M. (2001), "Tendências No. campo da remuneração para o novo milênio", *Gestão por competências*, Gente, São Paulo, in Dutra, J. S. (Coord. ). Houtzagers, G. (1999), "Empowerment, using skills and competence management", *Participation & Empowerment: An International Journal*, Vol. 7 No. 2, pp. 27-32. Huselid, M. A. , Jackson, S. E. and Schuler, R. S. (1997), "Technical and strategic human resource management effectiveness as determinants of firm performance", *Academy of Management Journal*, Vol. 40 No. , pp. 171-88. Jayaram, J. , Droge, C. and Vickery, S. K. (1999), "The impact of human resource management practices on manufacturing performance", *Journal of Operations Management*, Vol. 18 No. 1, pp. 1-20. Kaplan, R. S. and Norton, D. (1997), *A estratégia em ação: balanced scorecard*, Campus, Rio de Janeiro. Lawler, E. E. III (1995), "From job-based to competency-based organizations", *Journal of Organizational Behavior*, Vol. 15, pp. 3-15. Le Deist, F. D. and Winterton, J. (2005), "What is competence?", *Human Resource Development International Journal*, Vol. 8 No. 1, pp. 27-46. Mansfeld, B. (2004), "Competence in transition", *Journal of European Industrial Training*, Vol. 28 Nos 2/3/4, pp. 296-309. Meshoulam, I. and Baird, L. (1987), "Proactive human resource management", *Human Resource Management*, Vol. 26 No. 4, pp. 483-502. Mills, J. , Neely, A. , Platts, K. , Richards, H. and Gregory, M. (1998), "The manufacturing strategy process: incorporating a learning perspective", *Integrated Manufacturing Systems*, Vol. 9 No. 3, pp. 148-55. Mintzberg, H. (1983), *Structure in Fives: Designing Effective Organizations*, Prentice-Hall, Englewood Cliffs, NJ. Moore, D. R. , Cheng, M. and Dainty, A. R. F. (2002), "Competence, competency and competencies:

performance assessment in organizations”, *Work Study*, Vol. 51 No. 6, pp. 314-9. ? ? Nader, R. M. , Guimaraes, T. A. and Ramagem, S. P. (1998), *Da avaliacao para a gestao do ?? desempenho individual: a implantacao de uma metodologia baseada no planejamento ?? ? ? empresarial*, Escola Nacional de Administracao Publica, Bras? lia. ?? Ray, G. , Barney, J. B. and Muhanna, W. A. (2004), “ Capabilities, business process, and competitive advantage: choosing the dependent variable in empirical tests of the resource-based view”, *Strategic Management Journal*, Vol. 5 No. 1, pp. 23-37. Ritter, T. , Wilkinson, I. F. and Johnston, W. J. (2002), “ Measuring network competence: some internacional evidence”, *Journal of Business & Industrial Marketing*, Vol. 17 Nos 2/3, pp. 119-38. Robotham, D. and Jubb, R. (1996), “ Competence: measuring the unmeasurable”, *Management Development Review*, Vol. 9 No. 5, pp. 25-9. Sandberg, J. (2000), “ Understanding human competence at work: an interpretative approach”, *Academy of Management Journal*, Vol. 43 No. 1, pp. 9-25. Santos, F. C. A. (2000), “ Integration of human resource management and competitive priorities of manufacturing strategy”, *International Journal of Operations & Production Management*, Vol. 20 No. 5, pp. 610-28. Schroeder, R. G. , Bates, K. A. and Juntilla, M. A. (2002), “ A resource-based view of manufacturing strategy and the relationship to manufacturing performance”, *Strategic Management Journal*, Vol. 23 No. 2, pp. 105-17. Schuler, R. S. and Jackson, S. E. (1995), “ Linking competitive strategies with human resource management”, *Advances in the Practice, Theory and Research of Strategic Human Resource Management*, Harper Collins, New York, NY, in Miner, J.

B. and Crane, D. P. (Coords. ). ? ? Sentanin, F. S. (2003), “ A gestao por processos dentro do planejamento estrategico de uma empresa de P&D”, XXI Encontro Nacional de Engenharia de Producao, Proceedings, Ouro Preto. ?? ? Sveiby, K. E. (1998), A nova riqueza das organizacoes: gerenciando e avaliando patrimonios de ?? conhecimento, Campus, Rio de Janeiro. ? ? Ubeda, C. L. (2003), “ A gestao de competencias em uma empresa de pesquisa e desenvolvimento: ? um estudo de caso”, masters thesis, Engineering School of Sao Carlos, University of ? Sao Paulo, Sao Carlos. Wernerfelt, B. (1984), “ A resource-based view of the ? rm”, Strategic Management Journal, Vol. 5 No. 2, pp. 171-80. ? ? ? Zari? an, P. (2001), Objetivo competencia: por uma nova logica, Atlas, Sao Paulo. Corresponding author Cristina Lourenco Ubeda can be contacted at:[email protected]com.br ? To purchase reprints of this article please e-mail:[email protected]com Or visit our web site for further details: [www. emeraldinsight. com/reprints](http://www.emeraldinsight.com/reprints)

Staff development and appraisal 125