

Educational sciences and research: the nightmare of the present

JOSÉ AUGUSTO PACHECO

jpacheco@ie.uminho.pt

University of Minho

ABSTRACT:

At a time when the role of educational science as producer of pragmatic perspectives on ways of conceiving education is being called into question in forums ranging from the liberal to the conservative¹, the present is something of a nightmare² whose origins lie in external factors and the models imposed on research — although it is also imperative to cast a critical eye on the inner workings of educational science.

In this article I shall i) examine research funding as part of international policies on innovation and research, ii) discuss research evaluation criteria, iii) reflect upon procedures and findings in external evaluation of R&D units and iv) find possible causes for the nightmare of the present in educational science and research.

I argue that the direction being taken by educational research, as it is evaluated and funded, can be viewed as a regression to models defined in earlier decades. This can be described as the affirmation of a productivist research model, i.e. a process consisting in the application of an apparently technical model for evaluation, based on quantitative indicators. I also examine the quality of educational research drawing on the work of the principal Portuguese authors who have identified the fragilities in this field.

KEYWORDS:

Education, Research, R&D units, Funding.

RESEARCH FUNDING

The organization and operation of universities as places where knowledge is produced is a complex process, and current research policy contributes to the adoption of funding mechanisms which accord with the promotion of a knowledge-based economy. If on the one hand globalization establishes conceptual frontiers on the social, cultural and economic levels (Ritzer, 2007), on the other it becomes a pragmatic process for the definition of standards for the investment in innovation and research products by national economies.

This last issue is well illustrated in a report by the OECD which acknowledges that rapid change is occurring in the global paradigms of science, technology and innovation, as “research and innovation policy is evolving in response to broader reforms aimed at increasing productivity and economic growth, to national concerns (e.g. employment, education, health) and, increasingly, to global challenges such as energy sufficiency and climate change” (OCDE, 2008, p. 4).

It’s in this competitive framework that national governments are adopting policies to reinforce their R&D budgets via the acceptance and implementation of international recommendations, as noted by Anthony Giddens (2007), for the case of the European Union, whereby a commitment is pledged to attempt to balance public and private funding. This moreover constitutes one of the indicators of national competitiveness, expressed by the capacity

to increase revenues which do not only derive from the national budget, in so far as the modernization of a country depends, *grosso modo*, on its policy on scientific and technological development.

Again according to the OECD report, this research-centred innovation agenda leads governments to improve the coordination of research and work together in the aim of adopting policy on an international level. The creation of the European Research Area³ is a good example of this integration. Among the reasons given for its creation, which occurred within the framework of the Lisbon Agenda⁴, the European Union cites scientific and technological development as the driver of social and economic growth in its hopes of establishing a common, frontier-less research area, i.e. an *internal research market*. It recognizes, however, that no European research policy exists, not only because many countries have their own national or regional programmes but also because member states remain deeply divided over the degree of priority they should accord this objective.

In the input it gives to decision-making and as a springboard for the promotion of a competitive scenario for stimulating growth and employment, research is seen as a key factor in the creation of the Europe of Knowledge. One effect of this orientation is that research funding now obeys new rules, based on criteria of scientific productivity and social relevance, for at the base of the construction of Europe there lie postulates of an economic and social nature which are becoming ever more relevant

in the context of globalization. At the same time, universities tend to boost their budgets via research funding, a policy which can even have its effects on their organizational culture, as noted in a study conducted in the United Kingdom (Yokoyoma, 2006, p. 321) whose conclusions point to the existence of a management-based culture whose principal orientation is research.

This economically-biased perspective leads to the adoption of funding models more focussed on certain areas, given that “knowledge of the new economy is partly scientific and technological — as the impact of information technology demonstrates” (Yokoyoma, 2006, p. 215). This situation implies “close relations between corporations and universities or other higher educational establishments” (Giddens, 2007, p. 215), something which is clearly visible in Portugal in the foundational models of the universities. Therefore, securing budgetary allowance via research projects funded by national and international agencies becomes crucial within the new university funding model, and this gives more visibility to R&D units.

And yet, notwithstanding the strategic objectives enshrined in the Lisbon Agenda in 2000, the target set for 2010 whereby the European Union was to allocate 3% of its GDP to R&D funding is not going to be reached, for it is clear that the increased value attached to research, for all the efforts towards convergence, depends not only on national measures but above all on national political will (Giddens, 2007, p. 203). It’s all the more difficult to turn this political will into reality when the European Union stipulates that of the 3% assigned to R&D funding, 1% should come from the state and 2% from private investment.

EVALUATION OF RESEARCH

In an attempt to give more value to research, with the increase in funds available from national and international bodies research is now evaluated not only in a more benchmarked form by standards designed to cultivate excellence, but also by the application of criteria less suited to certain areas of learning.

No matter how strategic a factor education is in the development of a country, as seen by those who

advocate the implementation on a global scale of the theory of human capital, researchers in such areas do not have the same financial resources as those available in other areas, and neither do the evaluation criteria safeguard their specific character.

At present, one of the key criteria for the evaluation of the productivity and relevance of research is the bibliometric index⁵.

With this index, devised by the *Institute for Scientific Information* (ISI), the body responsible for publication of the *Social Science Citation Index* (1973) and the *Arts & Humanities Citation Index* (1980), journals gain international visibility via the application of inter alia the impact factor, i.e. a factor related with the frequency of citations from papers as referenced in designated databases.

In the general table of citations of the *Social Science Citation Index*, and by way of example if nothing else (*and considering that 1,866 reviewed are registered on the index*), the top-ranking educational journal comes in 88th place (the *Journal of Engineering Education*) with an impact factor of 3,000 — light years away from the 1st-placed journal, *Brain Research Reviews*, with an impact factor of 17,462 (Table I).

Quantifying the journals into impact factor intervals, we can see that very few rate highly, with the vast majority situated in the lowest interval.

TABLE I
ISI IMPACT FACTOR FOR JOURNALS

INTERVAL	RANKING
17.462 — 10.000	4
9.999 — 5.000	14
4.999 — 3.000	73
2.999 — 0.001	1775
TOTAL	1866

Source: ISI, 2009.

Restricting our analysis to educational journals, the same pattern emerges (Table II), i.e. just 3.8% of the indexed journals are ranked in the 1st interval, with 15.2% in the 2nd and 81% in the 3rd. The low impact ratings of these journals is worth noting, although only 4.8% of journals in other areas are ranked above the highest-scoring journal in the area of education.

TABLE II
EDUCATIONAL JOURNALS BY ISI IMPACT FACTOR

INTERVAL	RANKING
3,000 — 2,100	4
2,999 — 1,000	16
0.999 — 0.001	85
TOTAL	105

SOURCE: ISI, 2009.

Of the 105 educational journals listed in the *Index*, many — and primarily those which score highest — actually belong to areas *related* with education (for example engineering, management, computing and medicine). No journal in Portuguese or French is included in the Index, although it does list three titles in languages other than English. This emphasis on the bibliometric criterion would be acceptable if it was apparently neutral in its basic formulations, and if all areas of learning partook of the same conceptual and methodological procedures for scientific production.

The internationalization of learning is easier in some areas than in others, especially those which lack a clearly specified regional or national orientation. And not all areas can be neatly grouped together, either paradigmatically or in their visible impact on the production of economic growth. Furthermore, publication in international journals — preferably English-language ones — does not always square with quality criteria in various areas of learning, where publication in book form is also valued⁶.

To assert that the quality of research depends above all on the impact factor of the journal in which we are obliged to publish, where the aim is to maintain or increase funding, is to allow that this quality is produced and processed in a closed circuit, where we only know and cite what is included in previously-compiled databases and ignore the enormous contribution of other factors. Thus the quality of research is confined within the frontiers of international journals, with evaluation indicators limited to the quantitative side of bibliographic output — and no thought for its quality. In support of this assertion we can cite the claim that peer reviews do not achieve the desired increase in quality — and especially when the validation of articles occurs in a closed academic circuit and when they are released over restricted channels.

EVALUATION OF R&D UNITS

In terms of policy guidelines for the national scientific system, late in 2008 Portugal's *Fundação para a Ciência e a Tecnologia* (FCT) released the results of its evaluation of R&D institutes for the period 2003-2006.

Of the 378 units evaluated⁷, and without taking into account appeal verdicts, 84% received a positive assessment, with funding withheld from those ranked merely *Sufficient* or *Insufficient* (Table III):

TABLE III
EVALUATION BY SCIENTIFIC AREA

	EXCELLENT	VERY GOOD	GOOD	SUFFICIENT	INSUFFICIENT
ALL AREAS	20%	38%	27%	13%	2%
ARTS AND HUMANITIES	17%	44%	26%	12%	1%
SOCIAL SCIENCES	16%	26%	33%	22%	3%
EDUCATIONAL SCIENCES AND POLICY	0%	13%	54%	33%	0%

Source: FCT, 2008.

Globally, the 15 units from educational sciences and policy performed worst in comparison with other areas⁸. Note the total absence of “Excellent” ratings — a feat only equalled by agrarian science, civil engineering, linguistic science, history, and African studies — as well as poor representation in the *Very Good* category, with higher percentages in *Good* and *Sufficient* and no unit evaluated as *Insufficient*.

Evaluations in exact science, natural science, biomedical science and engineering science and technology tended towards *Excellent* and *Very Good*, which is revelatory of their “different” capacity for securing funds — although these scores must also be seen in the light of the evaluation methodology adopted by the FCT.

For the six areas specific to the social science⁹,

excluding economy and management for which no units were evaluated in the period under review, we can see a diversity of results across the five areas, with the area most often evaluated as *Excellent* (and

well above the national average) that of Sociology/ Anthropology/ Demography/Geography, although this is also the area which records most *Sufficient* and *Insufficient* scores.

TABLE IV
EVALUATION OF R&D UNITS IN THE SOCIAL SCIENCES

	EXCELENTE	MUITO BOM	BOM	SUFICIENTE	INSUFICIENTE
ALL AREAS	20%	38%	27%	13%	2%
EDUCATIONAL SCIENCES AND POLICY	0%	14%	42%	39%	0%
LEGAL/POLITICAL SCIENCES	33%	40%	5%	7%	50%
SOCIOL./ANTHROP./DEMOG./GEOG.	56%	20%	37%	54%	50%
LINGUISTICS	0%	13%	16%	0%	0%
COMMUNICATION SCIENCES	11%	13%	0%	0%	0%
TOTAL (WITHOUT NATIONAL)	100%	100%	100%	100%	100%

Source: *FCT*, 2008.

As the table shows, there is no substance in the assertion that the external evaluation of R&D units means a negative evaluation of the social sciences and of the arts and humanities, or that we are faced with discretionary evaluation in terms of the dichotomy of the so-called sciences of explanation vs. the sciences of comprehension. What we can in fact question is the evaluation methodology, such as the procedures followed in the appointment of the panels of evaluators.

The methodology adopted by the FCT was for the unit to draw up a report covering the 2003-2006 period, containing information on the activity of the research teams and a research proposal for the period 2007-2010.

At a later stage, the evaluators visited the units to interview leaders of research teams, non-doctoral students, scholarship holders/doctoral students, gathering information for the compilation of their report in accordance with the following parameters and weightings: *productivity* (0.40); *relevance* (0.20); *training* (0.20); *feasibility* (0.20).

The scores of each unit were released in a brief announcement, but we are unable to know how near or far research is to/from the evaluation indicators which perhaps should have been used, and examination of the evaluation texts for the specific area of educational sciences and policy reveals the emphasis which the evaluators placed both on the internationalization of research and on the quantitative side of research.

According to the FCT, “the evaluation criteria were based on the quality of scientific production (...) with reference to international quality

standards”¹⁰. However, the specific nature of the educational sciences was not sufficiently taken into account, for not only was the jury constituted entirely of foreign evaluators¹¹, none of whom spoke Portuguese (the regulations stipulated that “evaluation panels [be] constituted, predominantly, of foreign experts”¹²), but neither were the recommendations of the external evaluators in the previous period taken into account — recommendations which could have been incorporated into the operation of the units, for example at the level of the restructuring of research teams.

With regard to international publications, the external evaluators¹³ in the 2001-2003 period recommended that the scientific community promote more cooperation with Brazil¹⁴. In Portugal, the identity of the educational sciences cannot be dissociated from the Portuguese-speaking sphere, especially the partnerships which have been established with Brazil, in whose journals many Portuguese authors have been published.

This question has to do with the application by the external evaluators of the criterion of publication in English, even where the language used is “not only Portuguese”, for the notices sent to each unit stated a preference for articles included in the *ISI database*.

Another evaluatory bone of contention has to do with methodology. Although the criterion is not explicitly stated, and even if mentioned by the evaluators of the panels appointed to the different units, a quantitative methodology is preferred over a

qualitative. Without embroiling ourselves in a quantitative vs. qualitative debate, we might note that the external evaluators seemed to view the quantitative aspect in terms of some kind of colour bias: as if quantitative researchers, in the image used by De Landsheere (1986, p. 55), associated qualitative researchers with a vaguely suspicious pink. It is to be hoped that some of the options followed by the evaluators are justified in the global assessment report on the scientific area to be published by the FCT.

Confining ourselves to black and white, research in education follows a methodological trajectory which is designed to provide an understanding of the educational phenomenon in the most diverse contexts, using different approaches, both quantitative and qualitative, chosen on the strength not of the reigning paradigm but the nature of the object of research. In this way we will see “the coexistence of various types of research within the disciplinary field

of educational science”, in accordance with “the variety of connections with the scientific disciplines and the variety of practices pursued by those working in the educational sciences” (Estrela, 2008, p. 26).

In short, the findings of external evaluation of R&D units point to a model with widely diverse parameters, although supposedly the quality of the research conducted strongly depends on publications in English and on the use of a quantitative methodology.

More than looking for and finding a justification for the delegitimization of the educational sciences, erroneously designated “educational sciences and policy”, via an external evaluation process, we need to recognize that there has been a clear repositioning of R&D units (Table V), in terms both of the number of units receiving funding (13 in 2003 and 10 in 2007), and of the fall in *Excellent* and *Very Good* rankings and a consequent rise in *Good* and *Sufficient* rankings.

TABLE V
COMPARATIVE EXTERNAL EVALUATION SCORES

PERIOD OF EVALUATION	EXCELLENT	VERY GOOD	GOOD	SUFFICIENT	INSUFFICIENT
EXTERNAL EVALUATION-2003	33%	33%	17%	17%	0%
EXTERNAL EVALUATION-2007	0%	13%	54%	33%	0%
DIFERENCE	<33%	<20%	>37%	>16%	=

Source: FCT, 2003, 2008.

EDUCATIONAL RESEARCH

In Portugal, the educational sciences form a large scientific community, although this community’s sense of belonging to the educational sphere is in some cases fragile — a reflection of the difficulties it has encountered in its attempts to forge its own identity¹⁵.

The lack of cohesiveness of this community (like that of other scientific communities in Portugal, which operate as part of a constellation of disciplines “with diffuse frontiers and doubtless scant cross-disciplinary communication” (Jesuino, 1995, p. 185)) is the result of the absence of an epistemological consolidation of its objectives, as Albano Estrela noted on the errors of the educational sciences:

These are the consequence on the one hand of the failure to elucidate the issue that the term involves and, on the other, of its widespread dissemination as a substitute for the term education. Therefore (...) [it is] necessary to have a debate which makes possible

not only a definition of the theoretical corpus of the educational sciences, but also determines their scope of validity in scientific studies whose field is education (Estrela, 1992, p. 11).

We should note here that the consolidation of the educational sciences has occurred on their frontiers with hybrid fields which have emerged in response to issues of a professional and institutional nature and to conceptual questions, as is demonstrated by their connection with specific social problems. In this respect the educational sciences become a scientific area in their own right via the conjugation of results relative to “a set of professional skills and practices” and “previously established scientific disciplines”, with their field of operation conceptually defined as the “interface between imperatives of a professional and a scientific order”. Which means the institutional legitimation of the educational sciences in Portugal is

bound up with teacher training, in its more technical dimension, and with psychology. As Steve Stoer and José Alberto Correia (1995, p. 35) put it:

In Portugal, in their efforts to be recognized or tolerated in the university institution, the educational sciences have followed an epistemological trajectory characterized in its early stages by a re-evaluation of their technological valencies, which led in its later stages, in an ambiguous manner, to the reinforcement of their privileged or even exclusive ties with psychology.

Thus the absence of epistemological stature at the time of the emergence of the educational sciences in Portuguese universities led them to be included in faculties or institutes of psychology or education, a situation which is only now beginning to change¹⁶.

According to FCT data, in 2007 the 15 R&D units comprised 538 full-time researchers, i.e. researchers with doctorates working with public or private higher institutes of higher education. This near-exponential increase seems a positive factor in the affirmation of the educational sciences as a community. In a closer analysis, however, this situation may reveal something of its own conceptual fragility, especially since the community asserts itself more in terms of the academicism¹⁷ that has characterized it and less in terms of its social relevance. This argument makes even more sense when we consider that in recent years funding for the implementation of many educational studies has been awarded to research groups and units from other scientific areas.

Meanwhile, the objectives of educational science in Portugal exhibit a marked tendency to change with changing political orientations¹⁸, with the administrative component often decisive in the definition of the content of research. This means many researchers have a reactive agenda — especially when they choose as the focus of their research subjects connected with educational reform, or when they apply for funding from agencies, which are increasingly permeable to issues defined on the political level, as in the competitions held by the Calouste Gulbenkian Foundation and the FCT. For Licínio Lima (2003, p. 8) writing on educational sciences:

Academic research and production reveal a tendency to stick to the agendas defined by educational policy and are highly dependent, in terms of their objectives and their subject matter, on legally-sanctioned and centrally-ordained changes in the educational system and in schools, which makes it difficult to maintain *critical detachment*.

Another weakness is the supposed stigmatization of the educational science community in its tendency to “waffle”, a stigmatization which we can detect in the media (in some periods rather than others¹⁹) — as if political measures had their roots in the studies implemented in the field of education. The abstruse linguistic register which characterizes much educational debate has fed “grave indictments of the educational sciences”, in the words of Maria Teresa Estrela. However, the same author also notes:

Looking back, they bring nothing new apart from their media visibility in this world (un)governed by (mis) information technology; [they generate an immense mistrust which is] cyclically renewed and exacerbated whenever educational systems or reforms enter a period of crisis, or whenever societies are faced with serious problems which they blame on education and the malevolent influence of educational theorists²⁰.

Even so, and in answer to the question — is the persistence or aggravation of the problems which affect education an indicator of the inefficiency of the educational sciences? — Rui Canário asserts that the efficiency of this field can be seen in a series of responses which now exist and which allow us to discover the reasons for the failure of educational reforms, the origins and persistence of failure at school, the context in which professional teaching practices are produced, the ways adults learn, non-school educational contexts etc. The potential of the educational sciences lies in how efficiently they “critically examine educational practice”.

The diagnosis by Bártoolo Paiva Campos in 1995 is still relevant today, as the first decade of the new millennium draws to a close:

- Educational research is still not a clear political objective, and even though education is proclaimed as a priority political issue, research in

this area is not considered relevant for the development of education, so far as can be deduced from the policies adopted;

- Educational research in Portugal has yet to gain the recognition of education professionals, political decision-makers, social partners (employers and unions) and public opinion in general;
- The educational research which does take place is still very academic, for in most cases it is directed at obtaining university qualifications (...) or takes place in preparation for promotion examinations in higher education teaching careers²¹.

Nevertheless, the educational sciences have achieved something, as Licínio Lima acknowledges (2003, p. 8):

Research activity grew significantly but continuously [and the same can be said of the situation at the close of the first decade of the 21st century], depending, although now to a lesser degree, on working projects miscellaneously devised in the scope of master's degree courses and doctoral theses; in many cases there is no collective logic, no medium or long-term objectives, no lines of research which would confer unity and meaning to individual endeavours.

Another criticism which Paiva Campos levels at research is that it often fails to take as its point of departure “the problems observed in the world of education, while its findings do not seem relevant to the conduct of policy-makers or professional educators” (Campos, 1995, p. 62). The absence of social relevance in educational research stems from what may still be one of its great weaknesses, and which demands reflection. This weakness has its roots in the “difficulties experienced by the educational sciences in affirming themselves via their ability to produce a cumulative and scientifically endorsed body of knowledge” (Canário, 2005, p. 21), a problem which Maria Teresa Estrela also mentions:

In my view the problem of the usefulness of the educational sciences is a critical point on which there converge various contradictory factors, which I intend to polemicize. It seems clear that without some

perspective, or at least without some transferability of the knowledge obtained from one situation to another, the usefulness of the knowledge is merely sporadic and ephemeral (Estrela, 2008, p. 44).

Since educational research has the function of “producing problems” (Canário, 2005, p. 24), the work of researchers is not limited to an “instrumental function with regard to the dictates of power, but requires educational scientists to construe their scientific objectives on the basis of critiques whose point of departure are critiques of a broader, more socially-rooted point of view” (Canário, 2005, p. 24)²².

Far from desirably (Nóvoa, 2001), the educational sciences reveal fragilities that are all the more evident when we examine them from a scientific perspective, as Maria Teresa Estrela does when she enumerates the following weaknesses: ignorance of or disdain for research conducted within the traditional (quantitative) paradigm²³; emphasis on the socio-critical paradigm, which is responsible for the “ideological contamination, intentional or not, of scientific discourse on education (Estrela, 2008, p. 33); abolition of validity criteria, which “reinforces the tendency towards ideological discourse and the politicization of science (Estrela, 2008, p. 35), with the inherent scientific delegitimization of educational research; subjectivism and relativism in research, which reduce science to a rhetorical discourse whose validity depends on the argumentative powers of the individual” (Estrela, 2008, p. 36), “fragmentation and shrinkage of universes of study”; “the limited power of the theoretical”; “importation of theoretical models and even of issues which cannot be applied in the same way in the local context” (Estrela, 2008, p. 30); the lack of “distinction between the types of knowledge constructed by practitioners and by researchers (Estrela, 2007, p. 31), with the criteria of scientific validity sometimes diluted to the point that they are “alien to the internal logic of scientific development” (Estrela, 2007, p. 33).

Many of the fragilities of educational research have their origins upstream, i.e. in post-graduate studies and the lack of a “desirable rigour in the conception and execution of the respective courses” (Lima, 2003, p. 8).

THE NIGHTMARE OF THE PRESENT

Contrarian discourse has placed the educational sciences in a critical situation on which reflection is urgently needed, as we cannot accept that their consolidation as a science should depend on utopian discourse, common-sense opinion or markedly technicist agendas, which all divert them from their task of problematizing social realities.

If they are to establish themselves as a credible scientific community with the ability to obtain funding on the national and international levels, the educational sciences must look inside themselves, and look back over the recent decades of emergence, to identify those factors which are at the core of their inability to overcome the weaknesses which many authors have noted. For it is “only by being sufficiently strong, organized and consolidated that a given academic community can look at itself in a critical light, reflect on the work it produces, identify the obstacles to its development, overcome its fragilities, and raise its own levels of expectation” (Lima, 2003, p. 9).

In adopting this critical and inwardly reflective perspective, the educational science community does not need to look for external causes of its predicament; and other communities — e.g. the social sciences — have managed to overcome difficulties of academic recognition and funding to finally achieve credibility. This “credibility of educational research can only be won via a policy of strictness and rigour in research, a rigour which begins with the definition of criteria for distinguishing what is, and what isn’t, scientific research” (Estrela, 2005, p. 13).

Since the academic construction of the educational sciences has taken place in a context of cross-disciplinary conflict, where the opposing viewpoints and the many disciplines they embrace have conventionally been simplified as psychology vs. sociology, and even though its plurality is an asset when it comes to problematizing educational realities, “instead of a valedictory justification of the existence of inter-disciplinary frontiers within the borders of which any given research project is to be inscribed, it would be more productive to concentrate our efforts on the construction of scientific objects and methodologies, each of which is proper and suited to the research in question” (Canário, 2005, p. 18).

However, this is a challenge which nicely points up the fragilities of educational research — and all the more so when research becomes a prisoner of “reactive research”, with no critical detachment relative to the community of practitioners, who not only have defined themselves academically (the educational sciences contain at their institutional origins the study of the professional practices of various actors in the education system), but also contribute to their inclusion in the *sciences of opinion*.

If it is to counter the “doxa educativa”, research must play a fundamental role in the construction of knowledge, and to do so it must become a process which in its conceptual and methodological foundations are based on criteria of scientific validity which are accepted and incorporated by researchers drawing on a wide range of methodologies.

The nightmare of education is due neither to the number of researchers nor the absence of research (something has already been achieved by the educational sciences), but to the absence of a socially-consolidated academic community whose *raison d’être* lies in its ability to critically intervene in the resolution of problems, something towards which it can contribute via the implementation of research programmes. Therefore, R&D units cannot operate in a state of disconnect from post-graduate programmes, as is currently the case in Portugal where the departmental component prevails.

Much of the conflict which the educational sciences elicit has its sources primarily in the dependency of researchers on political agendas, with research increasingly funded according to its subject matter and its feasibility in terms of time, and only secondarily in criticism from the media²⁴. Without falling into the instrumental research trap, the social visibility of the scientific community depends upon its ability to interrogate reality and establish dialogue (and this includes dialogue with the political powers). Academicism cannot continue to be its dominant characteristic. Yet, as Rui Grácio noted in the 1st SPCE conference:

Nowhere is it easy to relate to policy-makers and educational administrators, who are frequently reluctant to accept intervention whose critical nature they see as a threat, which embarrasses them when they fail to see how its findings can be applied, and who become

impatient with the time it takes to come up with these findings. Portugal is no exception. In our scientific community there is, in this author's opinion, a generalized feeling that its creative potential is not tapped as it could be (Grácio, 1991, p. 21).

Notwithstanding all their reviews and publications and conferences and seminars and associations, the educational sciences find themselves at a crossroads — and the way to recognition lies not in their bibliographical output but in the credibility of the research which they conduct. The dilemma they face is summarized by Maria Teresa Estrela: “Either the educational sciences overtly come down on the side of science, with all the stringencies of rigour and immediate action which this entails, or they come out as a field of reflective study and intervention in education” (2008, p. 30).

Paradoxical as it may seem, this dilemma is exacerbated by the nightmare of research funding, and especially the domination of a productivist model in which the quantity of output prevails over its quality, with no adequate contextualization of the specificity which characterizes research in education. Productivist research is research which privileges the quantitative, both in methodology and in number of publications, with ISI-indexed journals valued most highly. No social value is attached to the examination of issues which are fundamental for the comprehension of educational realities.

International publication is one valid criterion among others, but it's debatable whether the use of

the English language is an indicator of excellence when it comes to evaluating output. However, the existence of external pressures further increases the effort which the educational science community needs to put into self-examination in its search for guidelines which allow it to overcome its weaknesses. Failure to overcome them will jeopardize its future, as Maria Teresa Estrela authoritatively warns us (2007, p. 38):

In my view we urgently need to rethink not only the social responsibility of researchers in the educational sciences, but also their scientific responsibility. And the latter can never dispense with an ethic of construction of possible truth, built on clearly-defined criteria. And if the educational sciences do not embrace a concept of research based on rigour (...) they will be condemned to a very rapid extinction (...). [I] close with this warning from one who is eminently qualified to give it, but who is also aware that there is hope on the horizon, and that each and every one of us, individually and together, must keep an open mind if we are to reach it.

Difficult as it may be to accept the truth of these words — and Maria Teresa Estrela is not a voice in the wilderness — the educational science community must use them as a springboard for the urgent reflection which it must make if it is to overcome the obstacles posed by its fragilities, and free itself of the productivist imperatives that affect its research.

ENDNOTES

1. Some of the ideas included in this text were earlier outlined in a paper presented at the 10th Congress of the Sociedade Portuguesa de Ciências da Educação — *Investigar, Avaliar, Descentralizar*, held in Bragança on 1 May 2009.

2. The expression “the nightmare of the present” is used by William Pinar in his book *O que é a Teoria do Currículo* [What is Curriculum Theory]? (2007).

3. Cf. European Union, European Research Area, http://ec.europa.eu/research/leaflets/enlargement/index_pt.html (Retrieved 4 April 2009).

4. Cf. Communication from the Commission to the Council, the European Parliament, the Economic and Social Committee of the Regions, 18 January 2000: *Towards a European research area* — <http://europa.eu/scadplus/leg/pt/lvb/i23010.htm> (Retrieved 23 April 2009).

5. For a critical analysis of the bibliometric index cf. Olivier Rey, 2009.

6. Drawing on some ideas expressed by por Anton J. Nederhof, 2006.

7. These units belong to six general areas (exact science, natural science, biomedical science, engineering science and technology, social science, arts and humanities) and 25 specific areas.

8. Subsequent to the appeals presented by the units, the results released by the FCT in February 2010 were reviewed. The FCT issued the following statement: “The FCT has decided to hold a new evaluation under a different panel, since [12] of the 15 units in the scientific area of Educational Science and Policy (...) filed an appeal and requested a new evaluation (...). (Of the) 12 units involved, 2 saw their ranking rise from Very Good to Excellent, 1 saw its ranking rise from Good to Very Good, and 2 saw their ranking rise from Satisfactory to Good”.

9. All these findings are provisional, for in light of the appeals filed the FCT has withdrawn certain rankings while continuing to publish others. Of the 15 R&D units in educational sciences, three did not appeal.

10. Cf. R&D units, results for 2007. <http://alfa.fct.mctes.pt/apoios/unidades/avaliacoes/2007/resultados> (Retrieved 26 April 2009).

11. The team of evaluators for educational sciences was constituted thus: three English, two Greeks and a Finn.

12. Cf. Point 2, Article 7 of the regulations for the evaluation of R&D units — 2007 <http://alfa.fct.mctes.pt/apoios/unidades/regulamento> (Retrieved 15 April 2009).

13. This team of evaluators had six members: two were Portuguese, one Brazilian, one Spanish and one French.

14. Cf. FCT, *Global report on the evaluation of the research units on educational sciences*, 2003. <http://www.fct.mctes.pt/unidades/relatorio2005/docs/16-Education%20Sciences.pdf> (Retrieved 2 April 2009).

15. For an overview of the educational sciences in Portugal, see José Boavida and João Amado, 2006.

16. This is the case of the universities of Lisbon and Minho, with the creation in 2009 of the Instituto de Educação and the Instituto (School, in Braga) of Psychology as distinct faculties.

17. Steve Stoer and José Alberto Correia: since it is “too tied in with implicit criteria of academic excellence, educational research in Portugal appears, in the construction of its problematics, also to be tied in with the discourses that each level of higher education produces with regard to itself” (1995, p. 37).

18. Three cycles have contributed to the definition of educational research topics: the universitized, the administrative and the institutional, cf. José Augusto Pacheco, 2004.

19. These cycles coincide with the release of certain international studies addressing the topic of school performance, for example exemplo PISA and OECD reports, with the display of national exam results for the 9th and 12th years, including the results of standardized tests, and with the publication of primary and secondary school rankings in the press.

20. Cf. Maria Teresa Estrela, 2008, p. 22. Page references are from the text as published in the book *Formação Humana e Gestão da Educação. A arte de pensar ameaçada*, Cortez Editora, S. Paulo, general editors Naura Syria Ferreira and Agueda Bittencourt.

21. Cf. Bártolo Paiva Campos, 1995, pp. 61-62. This academicism is also noted by Steve Stoer and José Alberto Correia: “Our study reveals an academic community which is closely bound to criteria of an academic nature, the reproduction of which is ensured a) internally by the post-graduate training which it offers and b) externally by more or less informal research funding policy” (1995, p. 39).

22. For the author, the educational sciences commit three cardinal sins: “the temptation of the normative and prescriptive, as if scientific knowledge could be deduced from professional knowhow; the tendency for research to subordinate itself to the political (and funding) powers that be; and the tendency to patronize working professionals, underestimating their abilities and revealing an inability to learn from them” (Canário, 2005, p. 26).

In similar fashion, in *Um olhar sobre a investigação educacional a partir dos anos 60* (p. 36), Maria Teresa Estrela identifies three key weaknesses of educational research: the ideological; the prescriptive; and the generalizing.

23. For Maria Teresa Estrela, this radicalism, “which is not found in other scientific areas where quantitative studies continue to thrive, seems to be indicative of a simplistic attitude towards the complexity of the real situation, in which different phenomena coexist on different levels” (2008, p. 33).

24. In other words, as this author acknowledged in his opening address at the SPCE conference in Madeira in 2007 (*Nota de Abertura*, p. 10), “by the school results for which the educational sciences have been so vehemently criticized in recent time, with broad support from the media. Rather than on coherent debate, the assignation of blame has fallen back on the decontextualization of discourses and texts, on the sidelining of priorities and issues, the defence of meritocracy, the legitimization of a professor who transmits knowledge and the search for an explanation-oriented research. The educational sciences are criticized as if their professional practitioners and mentors have been the ones to blame for educational policy, as if the school was a front office for educational theory”.

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