77 - DIFFUSION AND SOCIAL IMPACT OF THE KNOWLEDGE IN PHYSICAL EDUCATION AND IN SPORTS SCIENCES

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INTRODUCTION

At the present moment lived by modern society, there is an acknowledgement that science, technology and innovation are formed by differed factors of the social and economical of countries and regions.

Brazil and most of the Latin-American countries are supplied by indicators that able a greater knowledge about the position of States and Districts in the economic site, having the Gross National Product (GNP) per Capita income as a model, as well as in the general ambit of Human Development, the IDH.

However, in the science and technology areas, the Country does not own yet an information instrument able to characterize and measure the state systems of science, technology and innovation. Not meaning the lack of considerable efforts about the subject (VELHO, 2001).

The world experience, when referred to the construction of science, technology and innovation indicators, it is not limited to specialists' interpretations for knowledge area, once that in these situations the vision and professionals experience about scientific information is relevant, specially the ones who deal with bibliog. metrics, science metrics, info metrics (MOYA; HERNÁNDEZ, 1997; SPINAK, 1998; MACIAS CHAPULA, 1988; CAMOOS, 2001; STREHL; SANTOS, 2002; NASCIMENTO, 2003; MUGNAINI; JANNUZZI; QUONIAM, 2004).

A recent research made by Rocha and Ferreira (2004), searched for a science, technology and innovation index that made possible the characterization and comparison of the innovation system in the southeast and south regions. For such, four dimensions of the operation of science and technology systems were taken into consideration:

1. Governmental priority to science and technology, what includes knowing THE GOVERNMENTAL PER CAPITA COST IN SCIENCE AND TECHNOLOGY. This indicator can be calculated by the sum of federal expense in the State, by the National Council of the Technological and Scientific Development (CNPq), and the state Government expenditure also in science and technology, divided by the State population. This operation let us know the amount of real expenses for each inhabitant.

2. Scientific and technological production, analyzed by the researchers creative capacity, detected through articles published by State residents and registered in indicators (ISI for instance [TARGINO; GARCIA, 2000]), related to the total of Brazilian articles in the same indicator. Another indicator took into consideration is the percentage of State residents patents in relation to the sum of Brazilian patents deposited in the Intellectual Propriety National Institute (Ipni).

3. Educational base and availability of qualified human resources, taking into consideration that the socioeconomic development tends to base, each time more, on the mobilization of technical and scientific knowledge capital and in cognitive abilities, which are directly associated to the educational level of the society and the availability of graduated professionals equally compared to technological development demands. That being so, it is important to be aware of the schooling rate of young people aged up to seventeen years old; the amount of researchers for million of inhabitants; and the percentage of graduated people for company or with a certain social aim to be reached.

4. Amplitude and business innovations diffusion. It aims at having as indicators the number of innovator companies located in the State among the total number of companies in the State.; the number of incubating companies existent in the State among the Country total and the percentage of sophisticated technological products exported in relation to the Country's exportation.

Recent studies focused on these variations have been constantly showing different levels of development of the science, technology and innovations system in the Southeast and South. The state of São Paulo is in the highest level, followed by Rio de Janeiro, Rio Grande do Sul and Santa Catarina; while Paraná and Minas Gerais are in a not so comfortable position; and the state of Espírito Santo rehearse its first initiatives.

This typology of methodological instrumental is useful and really necessary. Although, in the Physical Education area, its transference, with the right substantial adequacies, is about to happen and maybe it is not priority yet, once what is to be considered priority, according to my working terms, at least in the last ten years, is based on what has been accomplished through the publications of the area, which searched on the sedimentation of Physical Education as school subject in the Brazilian social context in the last 150 years. It is obvious and fair that the temporal distinction must be done and the publication goals must be identified so that some chances to know that diffusion and social impact of knowledge in Physical Education and sports science is being talked about appears. This way, the Catalogue and Physical Education and sports Periodicals (1930-2000) was considered the main source for what I am going to talk about.

THE DIFFUSION AND SOCIAL IMPACT OF KNOWLEDGE IN PHYSICAL EDUCATION AND SPORTS SCIENCE: A PERIODICAL PRESS EXPERIENCE (1930-2005)

I start by doing two affirmations: 1) the teaching and technical publication sponsored by the State and approved by universities is extinct, what has caused and broads a gap, with no precedents, in the productive chain of the knowledge in diffusion and social impact in Physical Education and in he Brazilian sports sciences in the last twenty years; 2) the scientific publication is still restrict to small parts of the scientific community of the area, that is already small by itself, for the lack of financial resources for pile constructions in libraries, for reduced circulations, for the language and for the format of the scientific publication, for the access viability by informative technologies. To support the affirmations above, I discourse on every periodical typology.

Origins and Definitions The press revolution is still present in the twentieth century, because it fast forward technological advances and broads the variety and uses of prints in the dissemination of culture, news, languages, arts and science. Especially in the last area mentioned, the printed periodical information forms, above all, a way to produce and legitimate knowledge. In one of its segments, named Physical Education, such process in Brazil has been turned from varieties press into sports press; into military and teaching press; into Physical Education teaching press; into technical Physical Education and Sports teaching press; into Physical Education scientific press; and, finally, into magazine. Only recently such changes has been seen as target of Brazilian researchers' attention that have been checking how such changes are being processed.

Varieties Press - developed during the Empire, had its climax in the turn of XIX to XX century. It was printed in the newspaper format and the generalized content was about politics, culture, literature, news, and it used to include articles about sports practices and events.

Sports Press It came out in second half of XIX century. It was printed in the newspaper format and its content was exclusively related to teams, sports practices, gymnastics, clothes, sports events (considered very important social events), and mood. Nowadays it is consolidated in sports editorials of big printed, televise and internet media.

Military and Teaching Press it is typical of the turn of XIX to XX century. It has magazine shape. It talks about, through articles, organizations, administrations, physical installations, the materials, the doctrines and methodologies, the recruitment and human resources formation for the military and educational institutions. It also includes some hygiene, physical exercises, gymnastic methods, sports, professional formation and courses creation articles.

Physical Education Teaching Press it was found in the thirties with magazine shape, in book and A4 size. It works hard in the fight of school education, for professional formation, for specific legislation definition, for methods definition, for contents that stood out gymnastics and sports. It form the base for the understanding of the Physical Education publications in the twentieth century.

Physical Education and Sports Teaching Techniques Press it is developed within the Physical Education teaching press. Its mark is the presence of articles or sessions about installations, materials, technical detailing of sports and news about sports organizations. Nowadays, it is characterized by being a magazine specialized in only or several modalities. However, its content is more about procedures, products, techniques, teaching methodologies and the search for the improvement in the sports performance (FERREIRA NETO, 2005).

The teaching and technical press, by assuming such features, is unified by the “cause of national physical education”. That is the reason why it is mostly prescriptive, modeling, suggestive, and also coherent in language and format, aiming at being materialized by social impact through confronting, “without going around the bush”, the present problems in every day life practices of Physical education in implantation/consolidation in schools, but also in diversity in the Brazilian society environments.

As indicator and illustration of the diffusion and social impact in Physical Education, it was verified that, in nine magazines edited between 1932 and 2000, 8.885 articles were published (FERREIRA NETO et al., 2004) and consumed at the very time as the only model, particularly and afterwards, as encyclopedias (SCHENEIDER< FERREIRA NETO, 2004) by the reunion of models in institutional and personal piles.

Still as a potent indicator and illustration, I would like to affirm that the highest printed intellectual productivity in periodical in the XX century in the area, was accomplished between 1932 and 1945, in the Physica Magazine, that transmitted 88 numbers with 2.843 articles. Followed by the Physical Education Magazine, that transmitted 2.216 articles between 1932 and 2000, in 224 numbers. The Physical Education Brazilian Magazine, deserves distinction, by the transmission of 1.352 articles between 1944 and 1952, in 82 numbers (FERREIRA NETO et al., 2002).

would like to emphasize two other relevant ascertaining: 1) Physical education Magazine and the Brazilian Physical Education Magazine are commercial periodicals, that is, they do not have any financing and approval by the State. They represent editorial projects controlled by the intellectuality acting in the area and mainly coordinated by Hollanda Loyola and Inezil Penna Marinho, respectively. This publication met with success because it knew exactly how to be located, find the State publication gaps represented at that time by the Physical Education Magazine and by the Physical Education Bulletin , so later, to be effectuated as continuity and discontinuity, as homogeneity and heterogeneity, this movement was only captured by the study of materiality of cultural objects of circulation, what also admits the notion of ordinary culture; 2) the teaching and technical publication productive chain is very complex, involving the graphical production technology domain in its every steps, also the human resources contingent able to accomplish the composition of each magazine cover. At this period, more than ever, the saying “if you want to do, do it yourself” is valued, and to do so, it is necessary to understand well the productive process that goes from the manuscript to the reader/consumer.

Physical Education and Sport scientific publications talking about scientific community, national and international bibliography is consensual. The scientific publication comes from the XVII century. It emerges in England, France, Italy, Scotland, Germany, initially emphasizing in languages, arts, politics and finally science. Around 1660, appears in the Académie des Sciences in Paris , the Journal des Savans and the Philosophical Transactions (MARTINS, 2001) in the London Royal Society. From this moment on, the printed research report gains scientific authority of publication. IN Brazil, the scientific publication has its own pillars, specially, in the XIX century, placed in cultural and scientific societies, school coterie, isolated graduated schools, and bachelor degree courses.

However, the bases which our institutional scientific publication was raised up, is linked to Medicine magazines, Legal Medicine and Criminology, Pharmacology, Deontology, Agronomical Sciences, Engineering, Law, History and Geography from the Museology (MARTINS, 2001). The scientific Physical Education magazines appear in the last quarter of the XX century, associated to graduated courses, to post-graduated *stricto sensu* and to scientific society's creation and professional category associations in the end of the seventies.

This scientific publication is a descendent from the varieties, sports, military interest, teaching, Physical Education teaching and technical interest in Physical education and Sports press, and it is also tributary from universities accumulated experience, foreigners and Brazilian scientific societies and professional category associations (FERREIRA NETO, 2005ab).

One more time, I present some indicators aiming at illustrating the diffusion and the social impact of the publication. From the data collected by my team, between 1999 and 2002, we got close to 20.209 articles (FERREIRA NETO et al., 2002). All these findings, when receiving estimative, taking the Scielo criteria into consideration, may achieve, in 2005, the number of 23.000 articles. From this total, the articles transmitted in Sprint magazine and in FIEP Bulletin must be subtracted; those together formed the amount of 2.500 articles, and with their specific characteristics deserve a particularized look.

As the literature about scientific publication upholds this kind of publication, it is characterized by transmitting mainly ORIGINAL ARTICLE. It was possible to detect in our data base approximately 13.000 articles in the scientific press that was investigated. When it is taken from there events abstracts, dissertation and theses abstracts, summaries, letters, manifest, ads, editorials, publication rules and similarities , by estimative it is certified that only 8.000 articles were published in the last 25 years (FERREIRA NETO, et al., 2002).

Besides being reduced the production, in majority can only be accessed printed support. The new technologies of the scientific information management based on informatics are of incipient use in the area and corroborate the difficulties the diffusion and the knowledge social impact produced and transmitted that, in productive chain, always aims at reaching readers/consumer levels each time broader.

These production indicators pointed by me simply disappear, if the Brazilian population is taken into consideration, the GNP and IDH, or more specifically, the amount of over 400 Physical Education graduated courses implanted in Country at the present time.

As I had already assured, the Physical Education scientific publication is made by few people to few and this situation will last for a long time. But I want to say that, in the last five years, some signs of improvement are arising. However, in this reduced context and of low impact, it is possible to detect that Physical Education and Sports scientific publications live a time of expansion with no precedents, but the arising and death of a magazine go together (ALVES, 2005). A scientific authority crisis is present, generate by new production and quality demands, according to academic indicators acknowledged national and internationally (TARGINO, 2000; NASCIMENTO; FERREIRA NETO, 2002; VANTI, 2002). The visible face of this

problematic can be observed by the difficulty expressed in the lack of appropriate infra-structure for editing and printing, low financing, distribution channels deficiency, reduced copies among five hundred and a thousand models (MEADOWS, 1999). These difficulties are associated, pretentiously, with specific matters about scientific community maturity.

FINAL CONSIDERATIONS

To conclude, there is an availability and access with no measure documents, informatics resources, and technological instruments of other knowledge fields that the Physical Education has been allotting to.

However, it is important to recognize the consumer role of products available in other fields is not enough to our own area acknowledgement. The domain where we work on requires of location, access, availability and access in material resources and versatile structures, in away to favor mobility, agility and the use low cost of generated and transmitted knowledge.

To do so, it is worthy to simultaneously interfere in five actions:

making available, trough transference from printed to electronic support, the most possible production transmitted in the XX century, specially books and periodicals;

returning the production of teaching and technical periodicals;

interfering in the productive chain of the area scientific publication, what can only be possible by the refined understanding of dominant surviving practices within the scientific community;

enlarging the academic *stricto sensus* post-graduated courses base (Master and Doctor's degree) and making possible the professionalizing Master's degree creation;

creating mechanisms that make possible to newly-doctors the access the productive scholarship and financing through universal edictal, without limiting the post-graduated formation work, once, without financing, what raises the power is the transference through the teaching course (when it happens) and not the creation of new knowledge having the research as a fundamental instrument.

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DIFFUSION AND SOCIAL IMPACT OF THE KNOWLEDGE IN PHYSICAL EDUCATION AND IN SPORTS SCIENCES

ABSTRACT

It talks about the diffusion and the social impact of the knowledge in Physical Education and in sports sciences, from the periodical press, during 1930 and 2005. The main source was the Physical Education and Sport Periodical Catalogue (1930-2000). The results indicate the extinction of teaching and technical periodicals, the low impact of scientific periodicals and it also presents some suggestions for improving the availability and the accessibility to the produced and transmitted knowledge.

Keywords: Physical Education. Periodical press. Knowledge impact.

LA DIFFUSION ET L´IMPACT SOCIAL DU SAVOIR DANS L´EDUCATION PHYSIQUE ET DANS LES SCIENCES DU SPORT, À PARTIR D´EXTRAITS DE PRESSE, SUR LA PÉRIODE ALLANT DE 1930 À 2005

RESUMÉ

Discuter de la diffusion et l´impact social du savoir dans l´Education Physique et dans les sciences du sport, à partir d´extraits de presse, sur la période allant de 1930 à 2005. La source principale a été le Catalogue des Journeaux de l´Éducation Physique et du Sport (1930-2000). Les résultats montrent la disparition des journeaux d´enseignement et des journeaux techniques, le faible impact des journeaux scientifiques et présente également des suggestions dans le but d´améliorer la disponibilité et l´accessibilité du savoir produit et véhiculé.

Mots-clés: Éducation Physique. Presse. Impacte du savoir.

LA DIFUSIÓN Y EL IMPACTO SOCIAL DEL CONOCIMIENTO EN LA EDUCACIÓN FÍSICA Y EN LAS CIENCIAS DEL DEPORTE, A PARTIR DE LA PRENSA, EN EL PERÍODO DE 1930 A 2005

RESUMEN

Discute la difusión y el impacto social del conocimiento en la Educación Física y en las ciencias del deporte, a partir de la prensa, en el período de 1930 a 2005. La fuente principal ha sido el Catálogo de Periódicos de Educación Física y Deporte (1930-2000). Los resultados enfocan la extinción de los periódicos de enseñaza y los periódicos técnicas, el bajo impacto de los periódicos científicos y también presenta sugestiones para perfeccionar la disponibilidad y accesibilidad del conocimiento producido y conducido.

Palabras claves: Educación Física. Prensa. Impacto del conocimiento.

A DIFUSÃO E O IMPACTO SOCIAL DO CONHECIMENTO NA EDUCAÇÃO FÍSICA E NAS CIÊNCIAS DO ESPORTE

RESUMO

Discute a difusão e o impacto social do conhecimento na Educação Física e nas ciências do esporte, a partir da imprensa periódica, no período entre 1930 e 2005. A fonte principal foi o Catálogo de Periódicos da Educação Física e Esporte (1930-2000). Os resultados apontam a extinção dos periódicos de ensino e periódicos técnicos, o baixo impacto dos periódicos científicos e também apresenta sugestões para aperfeiçoar a disponibilidade e acessibilidade do conhecimento produzido e veiculado.

Palavras-chave: Educação Física. Imprensa periódica. Impacto do conhecimento.