

43 - SCIENTIFIC INITIATION OF HIGH SCHOOL: WHERE IS PHYSICAL EDUCATION?ALAN RODRIGO ANTUNES
MÁRCIA REGINA CANHOTO DE LIMAInstituto Federal de Educação, Ciência e Tecnologia de Mato Grosso do Sul - IFMS, Três Lagoas/MS, Brasil,
Faculdade de Ciências e Tecnologia – UNESP, Campus de Presidente Prudente/SP, Brasil
alan.antunes@ifms.edu.br

doi:10.16887/90.a1.43

1. Introduction

This article has as a premise that students' perspectives and aspirations influence mobilization, and in order for creative learning to take place, young students need to mobilize themselves, since without mobilization there is no entry into meaning / learning. This prerogative is linked to the bias that there is in the relation of being with the world a kind of ambiguity, which makes being not pure consciousness or absolute existence, but present in the world, finding itself in a lived situation. Therefore, to perceive / analyze the young is to understand this ambiguity and relationship.

Subsequently, we seek to strengthen the discussion of new practices and experiences in schools, with young people as actors involved in a process with a semiotic and self-organized perspective of the educational process in school Physical Education. Therefore, we seek to exalt research / investigation in the school environment, relating it to teaching and providing a discussion about the role that teachers potentially have in this field. For Stenhouse (1993), the fragile link of research within the school is its disconnection from the reality of the class and its lack of proof in action, and since for him research is a systematic and self-critical inquiry, nothing more coherent that happens in the classroom. own teaching pedagogical practice, and thereafter be useful to teachers and impact on an improvement in educational quality. Thus, employing an investigation in the teaching pedagogical practice supposes its accomplishment by the teacher, and no longer delegated to a "pure researcher", who would do a disconnected work with reality and the teacher the passive consumer of an academic product.

Indeed, a self-organized, semiotic perspective would contribute to a work away from the shackles of unilateral viewpoints and absolute truths and open space for new ways of approaching school knowledge, which would fill the gap between school and university, already that the roles of teacher and researcher / researcher would be confused (in terms of complexity rather than dichotomy) and the space for a transformative praxis, in which the knowledge produced could contribute to the search for alternatives to existing problems in the school context.

Linked to the questions of teacher / researcher and Physical Education research from the students' perspectives, this proposal considers what has been analyzed today in terms of school Physical Education research. Betti, Ferraz and Dantas (2011) characterized and problematized the theme considering the area as professional practice and research subarea in educational investigations. These authors understand scientific research in school Physical Education that allows new arguments and discussions of the principles, concepts, statements and interpretations inherent in their analysis and findings resulting from the scientific method. Another issue is the focus of the research, since many researches have as subjects students or education professionals, but they do not have the phenomenon "school education".

Tied to this, Betti, Ferraz and Dantas (2011) present another point in the debate, the distinction between research on education and research on education. The authors cite Lawrence Stenhouse, and when searching in the author's own work "La investigación as a base de la enseñanza", one finds a debate about a type of research that would only secondarily contribute to educational action in the school environment. opposed to one that would allow relationships with the practice of education.

In this sense, the research in Physical Education would be the one with comprehensive or interpretive descriptive characteristics, and not just descriptive ones:

[...] to say that high school students are disinterested and evade from Physical Education classes and presenting their justifications for this ("does not like the class", "does not know how to play", etc.) is mere description of data produced by students' answers to questionnaires or interviews that are based on certain evaluative assumptions (not participating in the class is "bad"), and ends by not allowing a deep understanding of the "disinterested and evading" behavioral relationships "With the school practices that produced it. As it is necessary to present an "interpretation" of the data, sometimes the authors make inferences without base on the own data they generated. There are many studies in school Physical Education crossed by this theoretical-methodological mistake. (BETTI; FERRAZ; DANTAS, 2011, p. 108).

In short, the investigative data need an association of students, research subjects, in the game of complex and dynamic social relations that involve "Physical Education" in the school context. Given these concerns, the challenge is to reconcile the role of the teacher as a researcher and the integration of the student, which will be investigated in the context of CI in High School. For this, we seek theoretical support with the intention of valuing one of the aspects commonly relegated in the background, the perspectives of students in relation to school and classes.

The theme presented here is present in the professional trajectory of the present researcher, since his performance as a Physical Education teacher at the Federal Education Network has always been linked to CI with high school youths, in TCCs, in PIBIC-EM programs and, consequently, participation in scientific fairs such as FECITEL, FETEC and FEBRACE. In this type of action, the potential of bringing schools, whether public or private, the Universities and Federal Institutes of Education, Science and Technology (FIs), stands out, which can be expected to understand the roles of these institutions in teaching, research and extension.

Interest in the theme of CI arose from the realization that the results resulting from the orientation process were not limited to the production of scientific texts, but to the growth of both students in terms of understanding the method of scientific research, as well as the figure of the teacher. researcher. Added to this, the challenge of guiding students in high school, since in the early years of working with CI, there was the concern and need to develop specific orientation and research methods for the

public in question, which was made difficult by little bibliography on the subject.

Theoretical subsidies intended to value one of the commonly relegated aspects in the background, the students' perspectives regarding school and classes, was initially in the Theory of Meaningful Learning (AUSUBEL; NOVAK; HANESIAN, 1980), which led to notes to what was later possible to conjecture with other theories.

One of the theories that contributed to broaden the vision of what would be a teaching and learning relationship rather than cognitive aspects, and which considers the complex relationships that involve the human being, was Bernard Charlot's theory of the relationship with knowledge. (2000, 2001, 2005), which addresses, in other words, issues usually treated as school failure in its relations with social origin and sociocultural disabilities. The theory of the relationship with knowledge (translated in terms of a relationship with learning) has an anthroposociological basis in proposing the idea of a sociology of the subject and an approach to the condition of the son of man - it is essential for man to be educated and educated. if - and for this both the presence of the other is necessary as well as a work of oneself upon oneself. In short, the concrete relationship that a student establishes with school knowledge, and in this specific case with HF, is conditioned by social, epistemic and identity dimensions.

Then, there were possibilities of theoretical-methodological referral in the dialogue with Charles S. Peirce's Semiotics or General Logic of Signs (PEIRCE, 1974, 2012), which allowed us to rethink the scientific method hitherto used to investigate the universe of experience in HF. MS, and later an organizational form of horizontal interaction between mentor and mentor, as proposed in the works of Michel Debrun (DEBRUN, 1996), which can happen in the learning environment with the meeting between students with the teacher as "supervisor" but not omnipotent, but one that enables the novelty and creativity needed in the scientific field of knowledge.

Supported from this point of view, studies and research that contribute to unveiling HF in high school is necessary, since the contribution of the figure of the teacher / researcher and the research from the perspective of students supported by a semiotic and self-organized view may bring new looks and future directions to technical and technological high school. Therefore, to verify how professional knowledge intervenes in this process, how innovations have proven improvements in the educational field, presenting as important points the autonomy of teachers and educational institutions, as well as the teaching and student knowledge to analyze the quality of education. learning that is being offered.

For Pais (1990), the Sociology of Youth emerges with the urgency and need to break with the dominant representations of youth - which he calls the dominant doxa -, seeking to represent this conception more closely to the social reality lived by youth. since this is a historical invention that changes in line with its time. The author denounces that this category is referred to as a "social unit" composed of people of the same age group and with the same interests, a fact in itself already characterized as "conceptual manipulation".

In this sense, Pais's (1990) complaint points to the fact that youth is not homogeneous and needs to be deconstructed / demystified as it is closely linked to the social ideologies of a "homogeneous entity". Given the epistemological reflection exposed, the Sociology of Youth as a social category is understood, according to the interests of this research, within a context of historical and scientific production. Mannheim's conception of "generation" is adopted, from which Weller (2010) explains that such a "generational" phenomenon occurs as members of a certain group of people cease to exist and new members coexist. Consequently, there is continuous and uninterrupted transmission of historical and cultural knowledge and within a specific time frame. Thus, there is an unprecedented cultural and social experience across generations, as they share a historical moment in a unique symbolic universe.

However, Mannheim, according to Weller (2010), draws attention to the fact that gender, social-class, ethnic-racial, cultural and historical aspects cause similar age groups to share experiences and experiences at a historical moment, and that also pass between generations. Thus, for the author such factors contribute to the social construction of youth also happen by political positions neither progressive nor conservative, but open to any opportunity.

This changing, flexible, dynamic, heterogeneous aspect of youth is clearly noticeable in the ideas of Feixa (2003) in the text "Del reloj de arena al reloj digital", when he talks about youth's access to adulthood, reporting that there were different conceptions of time using the clock metaphor. It compares the sand clock to a natural or cyclical conception of time in preindustrial societies, where information and exchange between subjects were more restricted. Already in industrial societies, it uses the idea of an analog clock where a linear or progressive conception of time occurred, in which the belief in progress and industrialization was something impactful. And finally, the digital clock in digital society, which corresponds to a virtual or relative understanding of time, characteristic of post-industrial societies that allow greater access to information and freedom of thought in a sense.

Thus, Villas and Nonato (2014) report that future projects should take into account the plans that young people dream / build for life in a short and long term perspective. Thus, the school institution, understood as democratic, should provide young people with favorable situations to build future projects, which the CI has to be more positive. Finally, the CI opens a gap for the educational institution's initiative to dialogue with young people, allowing them to discuss and show the community their ideas, aspirations, thoughts, feelings and subjectivities, which contributes to a more humane formation.

2. Objectives

Characterize and problematize the impact of High School Scientific Initiation (CI) on the formation of young students.

3. Methodology

This research, of quantitative and qualitative nature, was built through the study and analysis of texts to delimit the problem in a semiotic and self-organized view, and to conceptualize the Sociology of Youth as a valid theoretical current to understand the social phenomena specifically situated in MS Education and CI.

In this sense, the CI, which is usually carried out by students linked to higher education institutions, began to receive IC scholarships by CNPq in 1951, while the Junior Scientific Initiation Scholarships (PIBIC) in 2003, and in 2010 began the offering of high school scholarships, PIBIC-EM, to students interested in conducting research in higher education institutions. And data provided by CNPq show that the number of PIBIC-EM scholarships is 4,811.

Students engaged in these programs seek, in addition to scholarships, something more than that available in the classroom, and aims, according to the focus of this project, the scientific and technological development based on three pillars: a) provide students with the basic knowledge of science and technology; b) encourage young people to become researchers in the various fields of knowledge; and c) contribute to the increase of information to the population and to the various sectors of the economy and life in society.

Thus, CI programs have been implemented and developed in several educational institutions. To analyze the publications related to the theme, in a preliminary exploratory research, we analyzed 09 articles characterized as research on MS HF, published in 7 journals, selected from 425 articles, 4 dissertations and 3 theses published between 2004 and 2019. articles have not been restricted in the areas of Capes Qualis System and in the field. For the dissertations and theses there was also no

restriction in the field of action.

For the searches, the terms "scientific initiation", "high school", "PIBIC-EM" and "Physical Education" were used and few studies were found that dealt with the problem. The terms "scientific initiation" and "high school", "scientific initiation" and "PIBIC-EM" and "scientific initiation" and "physical education" were combined. For each combination of the terms, 100 (100) scientific papers were listed on the search site scholar.google.com.

For the search engine scielo.br we obtained: scientific initiation and high school: no results; scientific initiation: 190 works; scientific initiation and PIBIC-EM: 16 papers; scientific initiation and physical education: 5 papers. Regarding the tool bdtd.ibict.br we found: scientific initiation and high school: 86 publications; scientific initiation and PIBIC-EM: 34 publications; scientific initiation and physical education: 94 publications.

Subsequently, these numbers were reduced to 09 in relation to the scientific articles found for the terms "scientific initiation", "high school" and "PIBIC", considering that the others were not related to the criterion of scientific initiation in high school and / or physical education, as well as online or print accessibility in UNESP and IFMS libraries.

5. Results and Discussions

From the criteria established and presented in the methodology, the following articles were selected:

Table 1: MS of CI Related Publications

Table 1: MS of CI Related Publications

Authors	Titles	Cientific Magazine	Year
CIVIERO, P. A. G.; Marilaine de Fraga SANTANA, M. F	Roteiros de aprendizagem a partir da transposição didática reflexiva	Bolema: Boletim de Educação Matemática	2013
FERREIRA, C. A.	Concepções da iniciação científica no ensino médio: uma proposta de pesquisa	Trabalho, educação e saúde.	2003
FILIFECKI, A.; BARROS, S. S.; ELIA, M. F	A visão dos pesquisadores-orientadores de um programa de vocação científica sobre a iniciação científica de estudantes de ensino médio	Ciência e Educação.	2006
HECK, T. G. et al.	Iniciação científica no ensino médio: um modelo de aproximação da escola com a universidade por meio do método científico.	Revista Brasileira de Pós-Graduação, Ensino de Ciências e da Matemática.	2012
MASSOLA, G. M. et al.	Pré-Iniciação Científica em Psicologia: Contribuição para a Formação Científica no Ensino Médio.	Psicologia: ciência e profissão.	2016
NASCIMENTO, F. A. M. et al.	Preparando lideranças científicas para o futuro: ensino médio e fundamental	Revista do Colégio Brasileiro de Cirurgiões.	2015
NORONHA, S. A. C. et al.	Inserção social e solidariedade na pós-graduação stricto sensu: vivenciando o laboratório "despertar científico para o futuro" (ensino médio e fundamental).	Revista do Colégio Brasileiro de Cirurgiões.	2015
OLIVEIRA, A. LUCÍDIO BIANCHETTI, L.	Iniciação Científica Júnior: desafios à materialização de um círculo virtuoso.	Ensaio: avaliação e políticas públicas em educação.	2018 a
OLIVEIRA, A. LUCÍDIO BIANCHETTI, L.	Os desafios e limites da inserção dos bolsistas do PIBIC – Ensino Médio no campo acadêmico.	Educação e pesquisa.	2018 b

Source: Author Source, 2019.

An important initial data was that in most research that dealt with undergraduate research in high school (HECK, 2012; FILIFECKI, BARROS and ELIA, 2006; OLIVEIRA and BIANCHETTI, 2018; MASSOLA, 2016; NORONHA et al., 2015; BIRTH et al., 2015; FERREIRA, 2003) the advisors were not the teachers of the students / researchers, but university professors who are not in direct contact with the students and / or make available the PIBIC-EM scholarships obtained through calls from CNPq in partnership with higher education institutions. They also present important descriptive data, but it does not provide a critical understanding that allows us to analyze how professional knowledge intervenes in this process, how innovations have proven improvements in the educational field, which is contrary to the objectives of the present proposal.

From the articles found in the initial exploratory survey stand out 03 papers that present results that draw attention to key points in the initial researcher training in MS: orientation, writing, presentation, data collection and analysis, scholarships for initiation, publication and approach of schools. with academia.

In the first article by Oliveira and Biachetti (2018b), we analyzed the process of concretization and recontextualization of PIBIC-EM from the Federal University of Santa Catarina (UFSC), through interviews with fellows, advisors and coorientadores. The theoretical framework used was the concepts of habitus, collective intellectual and academic field from Bourdieu's reflections, as well as Vygotsky's concept of proximal development zone. As a result the authors present as decisive the praxis of the advisors and research groups for the initial formation of the researcher in high school, from elements such as: project writing; choice of research theme; data collection and analysis of the research object; preparation for presentation in scientific initiation seminars; awakening of scholars to the academic career. However, they highlight some limitations, namely: outsourcing of orientation to research groups and / or undergraduate and graduate students; the predominance of virtual orientations; the inexperience and reduced training of (co) supervisors for this function; the excess of activities to which the counselors are subjected in the university. Finally, they point out the need for counselor training programs to work in Basic Education.

The other research also conducted at UFSC analyzed the trajectory of the institutionalization of Scientific Initiation and Junior Scientific Initiation in the country. The authors, Oliveira and Biachetti (2018a), performed the documentary analysis of laws, indicators and reports of CNPq and UFSC itself, and pointed out that the reasons for the policy of approximation between Higher Education and Basic Education are the improvement of levels. permanence and success of students and the development of a taste for science. However, they indicated that in the UFSC itself the high school CI scholarships are not used in their entirety, which indicates the tendency of the program to ebb.

In the third research by Filifecki, Barros and Elia (2006), with the theme of academic orientation of high school students in Fiocruz's Scientific Vocation Program (Provoc), it was verified that the general principles that guided the institutionalization of Provoc were verified. , the search to understand how, why and in what specific cultural contexts are built the conceptions of scientific initiation in high school. However, the research does not present qualitative data on the results of the relationship between HF and school, but points out this need that meets the proposed in this article, so data related to the impact of HF for MS students remain in need of analysis, as: "the academic-professional trajectory of the students; relations between the Program and the school of origin [...]". (FILIFECKI, BARROS and ELIA, p. 215, 2006).

In addition to the above, it was identified in the work the concern with the training of both counselors and students, whether in the 09 articles selected, as in the project of Dutra (Org., 2014) of the Ministry of Education, which presents a proposal for l work with CI for 15-17 year olds in elementary school. However, the proposal does not have the concern and a theoretical framework to allow those involved in the process to reflect and build knowledge through the necessary autonomy, since there is clearly a rigid direction to the research method presented as a work tool, even allowing to students to choose the research topics. This is due to the absence of closely important elements for a self-organized process, such as the identification of attractors, the presence of an interlocutor (not a driver) and finally a beginning and limits of work with a temporal cut (DEBRUN, 1996).), that is,

without the conceptual bias of truths already established, but with limits of roles.

In this sense, one of the challenges that arises is the deconstruction of the view that the autonomy provided by CI can only be achieved in higher education. As an illustrative form, we present the understanding of an author much cited in the works on CI, Bazin (1983), who reports on the contribution of CI in the development of autonomy, but presents an already rooted view that in MS the student is extremely dependent and obedient, and that this break would happen only in higher education, since only at this level would the student have access to CI. Therefore, the role of CI in MS, among the several positive arguments for its implementation and / or growth and strengthening, is the contribution to an autonomous and creative learning so desired and announced in academia.

Regarding dissertations and theses, no studies were found that met the criteria established for the research. We found only papers on teaching initiation in higher education and only one on junior scientific initiation:

a) Dissertations: 1 - O PIBID e a formação docente em educação física para a educação infantil. 2 - Percursos formativos, profissionais e as práticas dos docentes coordenadores do Programa Institucional de Bolsa de Iniciação à Docência – PIBID. 3 - PIBID: construindo caminhos para prática docente em educação física. A produção do conhecimento sobre PIBID na pós-graduação em educação física e educação: limites e potencialidades

b) Theses: 1 - A formação dos formadores do programa institucional de Bolsa de Iniciação à Docência (PIBID). 2 - Mobilizações de narrativas na (e para a) formação de professores: potencialidades no (e a partir do) Programa Institucional de Bolsas de Iniciação à Docência. 3 - A iniciação científica júnior (ICJ): aproximações da educação superior com a educação básica.

Likewise, with regard to scientific initiation and physical education, there were no works in high school, only related to the scientific initiation of undergraduate or bachelor students in Physical Education.

a - BOTELHO, R. G.; OLIVEIRA, C. C. Iniciação científica e formação de professores na universidade do estado do rio de janeiro: a produção na área da educação física. Revista Brasileira de Educação Física, Esporte, Lazer e Dança, 2006.

b - BOTELHO, R. G.; OLIVEIRA, C. C. Lista de trabalhos de iniciação científica na área da Educação Física na Universidade do Estado do Rio de Janeiro: 1992 – 2005. Revista Digital Efdeportes, 2005.

c - BOTH, J.; MALAVASI, L. M. Pesquisa e formação inicial na Educação Física: algumas considerações. Revista Digital Efdeportes, 2019.

d - CAMPOS, F. G. G.; SANTOS, R. F.; PINTO E SANTOS, F. C. A importância da pesquisa científica na formação profissional dos alunos do curso de educação física do UNILESTE-MG. MOVIMENTUM - Revista Digital de Educação Física – Ipatinga, 2009.

e - RAMOS, G. N. S. et al. Egressos do curso de educação física da universidade federal de são Carlos (1997-2003): formação e atuação. Movimento & Percepção, 2008.

Therefore, the articles on MS of CI analyzed draw attention to the fact that the themes of the projects are those of the researchers themselves and not of the students' interests, guidance given by university professors or researchers and not the students' teachers themselves, as well as the absence of a specific theoretical framework for this level of education, that is, a methodological theoretical framework that takes into account the scientific method integrated with students' cultural interests and values that allow them to discuss and show society uses ideas and subjectivities.

7. Conclusions

Attention is drawn to the study of the impact of MS of CI on student education because it is believed that MS of CI can contribute to the following points in student education: a) persistence and ability to undertake one's own life; b) determination and dedication to study and want to learn new things and more about what is known; c) resilience through the formulation of thinking about what is put, the responses that are given through the ability to adapt to change.

In addition, there is the perception that fairs are constituted as self-organized systems by the existence of three main characteristics. The first is the fact that evaluation among young researchers is customary and commonplace, and makes them learn to deal with criticism and use it to improve their work, that is, an exercise in exposure to the other of what has been produced. that contributes to resilience. Linked to this, the way the award happens is valued by all, and does not become something like a destructor, but as a reward for those who performed better and who stood out before the others for prominence and achievement. Second, MS of CI is intrinsic to the potential of creative thinking, which requires the student to be able to detect problems and use collaborative resolution. And thirdly, there is a cultural and scientific flexibility at the fairs that stands out, which contributes to multicultural enrichment. So, if you ask: What is the biggest contribution of CI to young researchers? One would answer: intellectual autonomy.

Therefore, in view of the above, there is a need for research to analyze the impact of MS on a global scale, as well as on research involving Physical Education topics, as there are many such researches, especially in the fairs held by FIs and not You know the impact of studies of this level on sports, fighting, dance, games, technologies in sports, among many topics in the formation of students. In addition, existing research does not detail important key points in the initial researcher training of MS: orientation, writing, presentation, data collection and analysis, initiation scholarships, and publication. Finally, it is up to the teacher / researcher to provide reflective experiences that lead the integration between teacher, student and school by strengthening the complex relationships that are present in the educational field.

8. Bibliographic References

- AUSUBEL, D. P.; NOVAK, J. D.; HANESIAN, H. Psicologia educacional. Rio de Janeiro: Interamericana, 1980.
- BAZIN, M. J. O Que é a iniciação científica. Revista de Ensino de Física, São Paulo, v.5, n. 1, p.81-88, jun. 1983.
- BETTI, M.; FERRAZ, O. L.; DANTAS, L. E. P. B. T. Educação Física escolar: estado da arte e direções futuras. Revista Brasileira de Educação Física e Esporte, São Paulo, v. 25, p. 105-15, dez. 2011.
- CHARLOT, B. Da relação com o saber: elementos para uma teoria. Porto Alegre: Artmed, 2000.
- CHARLOT, B. Os jovens e o saber: perspectivas mundiais. Porto Alegre: Artmed, 2001.
- CHARLOT, B. Relação com o saber, formação dos professores e globalização: questões para a educação hoje. Porto Alegre: Artmed, 2005.
- CIVIERO, P. A. G.; Marilaine de Fraga SANT'ANA, M. F. Roteiros de aprendizagem a partir da transposição didática reflexiva. Boletim de Educação Matemática, Rio Claro, vol. 27, n. 46, ago. 2013. Disponível em: <<http://dx.doi.org/10.1590/0100-69912015S01015>>. Acesso em: 06 jul. 2019.
- DEBRUN, M. 1) A ideia da auto-organização. 2) A dinâmica da auto-organização primária. In: DEBRUN, M.; GONZALES, M. E. Q. PESSOA JR., O. (orgs.). Auto-organização: estudos interdisciplinares. Campinas: UNICAMP - Coleção CLE, v.18, 1996.

- DUTRA, I. M. (Org.) et al. *Trajetórias criativas: jovens de 15 a 17 anos no ensino fundamental: uma proposta metodológica que promove autoria, criação, protagonismo e autonomia*. Caderno 7: iniciação científica. Brasília: Ministério da Educação, 2014.
- FEIXA, C. *Del reloj de arena al reloj digital: SOBRE LAS TEMPORALIDADES JUVENILES*. JOVENES, Revista de Estudios sobre Juventud, México, ano 7, n. 19, p. 6-27, jul./dez., 2003.
- FERREIRA, C. A. *Concepções da iniciação científica no ensino médio: uma proposta de pesquisa*. Trabalho, educação e saúde, Rio de Janeiro, v.1, n. 1, mar. 2003. Disponível em: <<http://dx.doi.org/10.1590/S1981-77462003000100009>>. Acesso em: 06 jul. 2019.
- FILIPPECKI, A.; BARROS, S. S.; ELIA, M. F. *A visão dos pesquisadores-orientadores de um programa de vocação científica sobre a iniciação científica de estudantes de ensino médio*. Ciência e Educação, v. 12, n. 2, p. 199-217, 2006. Disponível em: <<http://dx.doi.org/10.1590/S1516-73132006000200007>>. Acesso em: 06 jul. 2019.
- HECK, T. G. et al. *Iniciação científica no ensino médio: um modelo de aproximação da escola com a universidade por meio do método científico*. Revista Brasileira de Pós-Graduação, Ensino de Ciências e da Matemática. Brasília, supl. 2, v. 8, p. 447 - 465, março de 2012. Disponível em: <<http://dx.doi.org/10.21713/2358-2332.2012.v8.245>>. Acesso em: 06 jul. 2019.
- MASSOLA, G. M. et al. *Pré-Iniciação Científica em Psicologia: Contribuição para a Formação Científica no Ensino Médio*. Psicologia: ciência e profissão, Brasília, vol. 36, n. 3, jul./set. 2016. Disponível em: <<http://dx.doi.org/10.1590/1982-3703001262014>>. Acesso em: 06 jul. 2019.
- NASCIMENTO, F. A. M. et al. *Preparando lideranças científicas para o futuro: ensino médio e fundamental*. Revista do Colégio Brasileiro de Cirurgiões, Rio de Janeiro, vol. 42, (Sp. 1): 40-43, 2015. Disponível em: <<http://dx.doi.org/10.1590/0100-69912015S01015>>. Acesso em: 06 jul. 2019.
- NORONHA, S. A. C. et al. *Inserção social e solidariedade na pós-graduação stricto sensu: vivenciando o laboratório "despertar científico para o futuro" (ensino médio e fundamental)*. Revista do Colégio Brasileiro de Cirurgiões, Rio de Janeiro, vol. 42, (Suplemento 1): 44-47, 2015. Disponível em: <<http://dx.doi.org/10.1590/0100-69912015S01016>>. Acesso em: 06 jul. 2019.
- OLIVEIRA, A. LUCÍDIO BIANCHETTI, L. *Iniciação Científica Júnior: desafios à materialização de um círculo virtuoso*. Ensaio: avaliação e políticas públicas em educação. Rio de Janeiro, vol. 26, n. 98, jan./mar., 2018a. Disponível em: <<http://dx.doi.org/10.1590/s0104-40362018002600952>>. Acesso em: 06 jul. 2019.
- OLIVEIRA, A. LUCÍDIO BIANCHETTI, L. *Os desafios e limites da inserção dos bolsistas do PIBIC – Ensino Médio no campo acadêmico*. Educação e pesquisa. São Paulo, vol. 44, e168239, maio, 2018b. Disponível em: <<http://dx.doi.org/10.1590/s1678-4634201844168239>>. Acesso em: 06 jul. 2019.
- PAIS, J. M. *A construção sociológica da juventude – alguns contributos*. Análise Social. Lisboa, vol. XXV (105-106), p. 139-165, 1990. Disponível em: <<http://www.jstor.org/stable/41010794>>. Acesso em: 04 nov. 2019.
- PEIRCE, C. S. *Escritos coligidos*. Tradução de Armando Mora D'Oliveira e Sergio Pomeranblum. São Paulo: Abril Cultural, 1974.
- PEIRCE, C. S. *Semiótica: charles sanders peirce*. Tradução de José Teixeira Coelho Neto. 4. ed. São Paulo: Perspectiva, 2012.
- STENHOUSE, L. *La investigación como base de la enseñanza*. 2. ed. Tradução para fins didáticos: Mauro Betti. Madrid: Morata, 1993.
- VILLAS, S.; NONATO, S. *Juventude e projetos de futuro*. Belo Horizonte: UFMG, 2014.
- WELLER, Wivian. *A atualidade do conceito de gerações de Karl Mannheim*. Sociedade e Estado, v. 25, n. 2, p. 205-224, 2010.

SUMMARY

The aim of this article is to characterize and problematize the impact of High School Scientific Initiation (CI) on student education with the purpose of strengthening the discussion of new practices and experiences in schools, with young people as actors involved in this process. In addition, it points out the need for studies on the possible contributions of this level of research to the Physical Education area. To this end, the problem is initially delimited in a semiotic and self-organized view, and the concept of Youth Sociology is conceptualized as a valid theoretical current for understanding social phenomena specifically situated in MS Education and HF. It then analyzes 09 articles characterized as research on MS HF, published in 7 journals, selected from 425 articles, 4 dissertations and 3 theses. The results draw attention to key points in the initial formation of the researcher in the MS: orientation, writing, presentation, data collection and analysis, initiation scholarships, publication and approximation of schools with the academic environment. In conclusion, it was found that there are no studies on this subject in Physical Education and that the studies on the impact of MS on student education are incipient and have important descriptive data, but do not allow a detailed understanding to analyze how professional knowledge intervenes in this process and how innovations have proven improvements in the educational field. Therefore, there is a need for research that analyzes the impact of MS on a global scale as well as on research involving Physical Education topics, as there is a lot of such research, especially at the fairs held by FIs and it is not known what impact of studies of this level on sport, fight, dance, game, technologies in sport, among many themes in the formation of students.

Keywords: physical education; youth; scientific research.

RÉSUMÉ

Le but de cet article est de caractériser et de problématiser l'impact de l'initiation scientifique (IC) au secondaire sur la formation des élèves afin de renforcer la discussion sur les nouvelles pratiques et expériences dans les écoles, avec les jeunes comme acteurs impliqués dans ce processus. En outre, il souligne la nécessité d'études sur les contributions possibles de ce niveau de recherche au domaine de l'éducation physique. À cette fin, le problème est initialement défini dans une vision sémiotique et auto-organisée, et le concept de sociologie de la jeunesse est conceptualisé comme un courant théorique valide pour comprendre les phénomènes sociaux spécifiquement localisés dans MS Education et HF. Il analyse ensuite 09 articles qualifiés de recherche sur MS HF, publiés dans 7 revues choisies parmi 425 articles, 4 mémoires et 3 thèses. Les résultats attirent l'attention sur les points clés de la formation initiale du chercheur dans les États membres: orientation, rédaction, présentation, collecte et analyse de données, bourses d'initiation, publication et rapprochement des écoles avec l'environnement universitaire. En conclusion, il a été constaté qu'il n'existe pas d'études sur ce sujet en éducation physique et que les études sur l'impact de la SEP sur l'éducation des élèves sont naissantes et disposent de données descriptives importantes, mais ne permettent pas une compréhension détaillée pour analyser comment les connaissances professionnelles

interviennent dans ce processus et comment les innovations ont prouvé des améliorations dans le domaine de l'éducation. Des recherches sont nécessaires pour analyser les impacts de MS of CI à l'échelle mondiale, ainsi que des recherches portant sur des sujets liés à l'éducation physique, car elles sont en grande partie consacrées, en particulier aux foires organisées par les instituts fédéraux, et leur impact n'est pas connu. études sur l'expérience de la culture corporelle du mouvement dans la formation des étudiants.

Mots-clés: éducation physique; les jeunes; initiation scientifique.

RESUMEN

El objetivo de este artículo es caracterizar y problematizar el impacto de High School Scientific Initiation (CI) en la educación de los estudiantes con el propósito de fortalecer la discusión de nuevas prácticas y experiencias en las escuelas, con los jóvenes como actores involucrados en este proceso. Además, señala la necesidad de realizar estudios sobre las posibles contribuciones de este nivel de investigación al área de Educación Física. Con este fin, el problema se delimita inicialmente en una visión semiótica y autoorganizada, y el concepto de Sociología Juvenil se conceptualiza como una corriente teórica válida para comprender los fenómenos sociales ubicados específicamente en la Educación MS y la IC. Luego analiza 09 artículos caracterizados como investigación sobre MS HF, publicados en 7 revistas, seleccionados de 425 artículos, 4 disertaciones y 3 tesis. Los resultados llaman la atención sobre puntos clave en la formación inicial del investigador en la EM: orientación, redacción, presentación, recopilación y análisis de datos, becas de iniciación, publicación y aproximación de escuelas con el entorno académico. En conclusión, se encontró que no hay estudios sobre este tema en Educación Física y que los estudios sobre el impacto de la EM en la educación de los estudiantes son incipientes y tienen datos descriptivos importantes, pero no permiten una comprensión detallada para analizar cómo interviene el conocimiento profesional en este proceso y cómo las innovaciones han demostrado mejoras en el campo educativo. Por lo tanto, existe una necesidad de investigación para analizar los impactos de MS of CI a escala mundial, así como de investigaciones que involucren temas de Educación Física, ya que existe mucha investigación de este tipo, especialmente en ferias organizadas por IF (Institutos Federales) y no conoce el impacto de estos estudios en la experiencia en / con la cultura corporal del movimiento en la formación de estudiantes.

Palabras clave: educación física; juventud; iniciación científica.

RESUMO

O objetivo deste artigo é caracterizar e problematizar o impacto da Iniciação Científica (IC) de Ensino Médio (EM) na formação dos estudantes com o propósito de fortalecer a discussão de novas práticas e vivências nas escolas, tendo os jovens como atores envolvidos nesse processo. Além disso, aponta a necessidade de estudos sobre as possíveis contribuições desse nível de pesquisa para a área da Educação Física. Para tal, inicialmente delimita-se a problemática em uma visão semiótica e auto-organizada, e conceitua-se a Sociologia da Juventude enquanto corrente teórica válida para compreender os fenômenos sociais situados especificamente na Educação e na IC de EM. A seguir, analisa as publicações sobre o tema por meio de 09 artigos caracterizados como pesquisas sobre a IC de EM, publicados em 7 periódicos, selecionados de 425 artigos, 4 dissertações e 3 teses. Os resultados chamam atenção para pontos chaves na formação inicial do pesquisador no EM: orientação, escrita, apresentação, coleta e análise de dados, bolsas de iniciação, publicação e aproximação das escolas com o meio acadêmico. Em conclusão, verificou-se que não há trabalhos sobre essa temática na Educação Física e de que os trabalhos sobre os impactos da IC de EM na formação dos estudantes são incipientes e apresentam dados descritivos, importantes, porém não permitem uma compreensão detalhada que permita analisar como os saberes profissionais intervêm nesse processo e como as inovações têm provado melhorias no âmbito educacional. Portanto, há necessidade de pesquisas que analisem os impactos da IC de EM em uma amplitude global como também em pesquisas que envolvam temas sobre a Educação Física, já que há muitas dessas pesquisas, principalmente nas feiras realizadas pelos (Institutos Federais) IFs e não se sabe qual o impacto desses estudos sobre a vivência na/com a cultura corporal de movimento na formação dos estudantes.

Palavras-chave: educação física; juventude; iniciação científica.