

Activators of processes of change: a proposal oriented to the transformation of educational practices and the training of health professionals

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Abstract *This paper investigates an educational proposal articulated through a policy of the Ministry of Health, which aims to promote changes in the training of health professionals. An inter-institutional partnership promoted the training of specialists as Activators of Processes of Change. This study analyzes the characteristics of a post-graduate semi-distance-learning course, examining the transformation potential of health praxis. It involves the analysis of documents and interviews published in official reports of the course addressing competency profile construction, the political-pedagogical project and management and evaluation of the proposal. The analysis of data and information used the principles of the meaning interpretation method as a reference. The educational praxis of the tutors was transformed, since students became professionals in change activation. 698 activators were qualified, with a loss of 12.9%. The characteristics of the proposal enhanced participants' involvement in the construction of new capacities, highlighting the broadening of analysis and intervention in reality. Eliciting the potential of individuals and the group, and the spaces for reflection proved to be the main achievement in the construction of educational projects, in the context of the Unified Health System.*

Key words *Health policy, Competency-based education, Problem-based learning*

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Change process activators: a proposal geared to transforming educational and training practices of health professionals

One of the challenges in Brazil to consolidate the Unified Health System – SUS – has been changing the care models, which includes transforming the ways of producing management and care. One of the most important elements of this process is changing the training of health professionals. This transformation has been present in the political agenda since the origins of the health reform movement, but gained greater substance through time. Firstly, as the result of social movements that decisively interfered in the production of the national curricular guidelines, in 2001¹, as well as in the production per se of the government's health agenda, including within this latter one the theme of health education².

Beginning in the year 2000, the first policies such as Promed, Training Poles in Family Health and Multiprofessional Residencies were followed with a thrust forward, with the creation of the Secretariat for the Management of Labor and Education in Health – SGETS, as part of the Ministry of Health – MS. Officially therefore, management of labor, the most evident, albeit as connected - and management of education in health became a permanent part of the political agenda for education in health. New initiatives, such as permanent education in health policy, AprenderSUS, ProSaúde, PetSaúde and ProResidência have supported schools in their movements towards reorienting the practice and profile of professionals, in the quest to expand commitment with health needs and the consolidation of the SUS³⁻⁷.

Thus presented in a block, due to the common agenda to foster change in training of health professionals, these policies nevertheless make up a heterogeneous set of strategies. Some present themselves as being inductors, such as ProSaúde⁵ and PetSaúde⁷, others geared to strengthening the movement and articulation of the different players involved in training, such as AprenderSUS⁴.

AprenderSUS, developed in 2004-5, included several articulated initiatives, bringing together several strategies like: *Vivência Estágio na Realidade* from SUS, VER-SUS, built in partnership with the student movement, support to the constitution and the actions of the National Forum for Education of Health Professional - FNEPAS, support and implementation of change strategies and training for change process activators, among others⁴.

Despite mobilization and work, schools found it difficult to face the disputes in the construction of change. Up to present, policies in this field have yielded limited results, as can be perceived in the present-day context, with all of the conflicts and issues that led to the proposal of the program *Mais Médicos* [More Physicians]⁸.

The interest in revealing the experience in training activators for the change process relates to at least two aspects: it was a rare moment of recognition of the importance that policies/strategies had in supporting the production of actors involved in the transformation. Also because the process and the products attained have become the foundation for other training initiatives, such as innovative agendas in the realm of the SUS.

The Specialization Course in Change Processes Activation in Graduate Training of Health Professionals was fostered by the SGETS through a partnership with the *Escola Nacional de Saúde Pública Sergio Arouca* – ENSP and the *Rede Unida*. This was a *latu sensu* graduate course, semi-face-to-face modality offered by the Distance Education Program from the ENSP, held in May 2005 to July 2006⁹.

The first innovation was the process to build the proposal itself, bringing together professionals that had lived through the production of change experiences. Ensuing this, the combination of active teaching-learning methodologies, distance education, training evaluation and reference criteria, and the drafting of intervention projects oriented to transforming practices.

What is relevant is the construction of a strategy that will contribute to strengthening the local ability to propose, activate and produce changes in training, not allowing schools to do this on their own.

Challenges in transforming educational practices in health

In the conventional health graduation curricula, fragmentation into basic and clinical cycles, associated to departmental and thematic organizations fosters a selection of content that requires a great deal of abstraction, with low learning contextualization.

According to Whitehead¹⁰, de-contextualized knowledge becomes inert and easily forgotten knowledge. On the other hand, contextualized knowledge, explored by means of a real or simulated situation, leverages interdisciplinary studying and fosters a better explanation of the phenomenon involved in that situation.

Thus, learning based on professional situations favors the construction of meaning, for longer lasting learning^{11,12}. When it comes to educational practices, the use of teaching methodologies that focus on transmission and rote or memorized knowledge also limit learning¹³.

In the health field, associated to fragmentation and de-contextualization of knowledge, the biomedical approach in health-disease situations reduces the biological dimension to the possibilities of explaining the phenomenon involved in the problem. Expanding this perspective, through the inclusion of subjective and social dimensions, inherent to the health production process, allows for the identification of needs that express the genetic interaction with the way of living life, values, culture and social and economic insertion¹⁴. Besides this expansion and the total health-disease overlap, the recognition of users as active constructors of their health, bearers of desires and knowledge, besides the needs, brings to the fore the challenge of a shared construction for therapeutic projects and the intense negotiations involved in that process^{15,16}.

For this reason, the concentration of care experiences in the clinical cycle and in hospital centers has proved to be insufficient, as each scenario has specificities for both practice and learning, not transferable among them. These specificities require that students' practice be done in different scenarios, aimed at developing cognitive, psychomotor and attitudinal capacities that, joined together, will characterize competent action when faced with professional situations^{1,17,18}.

Regarding care practices, the challenge lies in changing the care model and developing new abilities to work in integrated systems geared to health needs. Multiprofessional and intersectoral work gains relevance when we put face to face the present-day demographic and epidemiologic profile of the Brazilian population, characterized by a decline in fecundity rates and increases in life expectancy, risk factors and the occurrence of chronic diseases. Besides long-duration diseases, chronic conditions imply health care according to life cycles: maternity or motherhood and the perinatal period; and people with permanent physical disabilities, among others¹⁹⁻²³.

As we live with a triple load of disease, deriving from the overlap of (i) infections, malnutrition and reproductive health problems; (ii) chronic diseases and (iii) external causes, health systems organization will need to innovate in terms of care, considering the specificity of these

conditions²⁴⁻²⁹. When considering these challenges, the proposal for the Specialization Course prioritized the development of the participants' capacity to foster a broad reading of reality and build contextualized intervention projects, geared to activating changes in educational practices and in the training of health professionals.

Methodological path

The authors of this article took part in the conception and the evaluation of the proposal under discussion. The documents^{9,30} and course reports³¹ were used as secondary data sources. The analytical path made it possible to build the competency profile, the political-pedagogic project – PPP – and the proposal's management and evaluation.

In methodological terms, the analysis of information disseminated in the course final report used as reference the principles of the meaning interpretation method. These principles are anchored on a broad hermeneutic-dialectic perspective whose focus is the interpretation of the context, reasons and logic of what is said, the actions, correlating them to the set of inter-relations, frameworks, among other analytic bodies^{31,32}.

The construction of the competency profile

Health professionals acting on change processes took part in a workshop to research their practices in this field. These professionals had political, administrative, pedagogic and conceptual experience in change processes, particularly in the creation of democratic alternatives for management, care and health education. The workshop's product generated a competency profile in three areas: political-managerial, health care to health education, which, articulated, delimited the field for change activators⁹.

Authorship for the proposal

Partner institutions referred 29 professionals to draft up the PPP for the course, disseminated in the *Caderno do Especializando* [Journal for Specialization student]⁹ and a set of situations-problems³⁰. The authors built some terms of reference to develop the proposal and indicated a collection of books, acquired for the specialization students to consult.

Proposal management

This educational proposal was organized in three training “waves”. The first trained ten learning advisors are responsible for training the tutors-specialization students. As part of their training, tutors acted in training the specialization students, at four centers: Northeast, Rio de Janeiro, Brasilia and Sao Paulo. Academic management was decentralized in those four centers and articulated by a national coordination, with follow-up by the ENSP and the Rede Unida³¹.

Evaluation

The competency profile was the criteria used to evaluate the specialization student’s performance. Evaluation of course activities and performance of teachers was done using instruments and indicators applied at the face-to-face meetings. The KPI’s complied with a qualitative viewpoint³³, taking as reference the participants testimonies.

The educational proposal

Two assumptions guided the construction of the proposal: one regarding the dynamic and intersectoral nature of changes, and the other, conditioning factors, such as the institutional context, values and projects of organizations. Based on these assumptions, the activators development of capacities was focused on the construction of unique trajectories, instead of inducing them through a single path or a point of arrival.

The course was organized based on the authors outlook and translated into situations-problem; and that of the specialization students, translated by narratives of their practice³⁴. The pillar referring to the situations-problem^{35,36} was more structured, being that all of the specialization students had access to the same triggers³⁰. Most of the activities took place in small groups, with a tutor and up to 10 specialization students. The situations-problem and the narratives were explored by means of a constructivist learning spiral³⁷, a reference in interactionist educational theories and based on the combination of the scientific method, of learning based on problems and questioning of problems (Figure 1).

Upon identifying the problem, participants share their explanations, recognize what they have as prior knowledge and identify their learning needs. Based on the learning issues, each participant individually seeks new information in scientific literature, and shares it in the group,

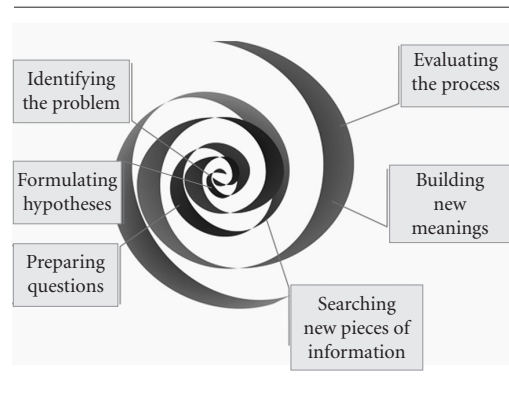


Figure 1. Scheme for constructivist learning spiral⁹.

aimed at building new meaning. The evaluation of this process fosters metacognition as a strategy to enhance the learning process¹³ and group work.

In the course, learning and accomplishments are part of the specialization student’s portfolio, deemed as individual and interactive learning and evaluation tools. The portfolio was geared to reflecting on the knowledge built, based on educational activities and the participants accomplishments, and became the foundation for the change activation project, that corresponded to the Course Conclusion Work (*Trabalho de Conclusão de Curso – TCC*)⁹. Face-to-face meetings took place on four consecutive days, with periods of concentration and dispersion. Dispersion was destined to self-directed learning – SDL and the meetings to analyze the portfolio. During those periods, computers with access to a remote database and a book collection were available to participants⁹ (Chart 1).

Twelve professionals from different institutions evaluated the process and the products attained. For the distance education – DLP, some of the virtual learning environment devices – AVA from ENSP + was adjusted to the course characteristics and the performances analyzed. The results were included systematically in partial reports and in a final account rendering report³¹.

The tutors-specialization students profile of the 286 people enrolled. 100 candidates underwent screening based on the analysis of a memorial and their professional curriculum. Of the 99 tutors enrolled, 86% were female and 89% had

a Master's or a PhD. Regarding graduation: 48% nurses, 26% physicians, 9% psychologists, 5% physical therapists, 4% dentists and 8% from other professions. In terms of the institutions, 79% were connected to the public IES's (Higher Education Institution), 17% to private ones and 4% had other connections. Ten students, with nine in medicine and one in dentistry, enrolled as co-tutors. Among the 109 tutors and co-tutors, 51% were from the Southeast, 25% from the South, 17% from the Northeast and 7% from the Center West and North³².

The specialization student profile

Among the 996 specialization student enrolled, 834 candidates were selected, with 58% from public IES. Candidates linked to the private IES's or to other institutions represented 42%. Among the 718 enrolled, the majority were women and from the Southeastern region (Table 1). Even with a predominance of nurses, there was an increase in the number of health professionals (Graphic 1)³¹.

Processes and products: change movements

Learning advisors participated in the permanent education groups-PE, destined to co-management and to reflecting upon their practices. In parallel, advisors were facilitators for the PE for tutors, training new enhancement movements³¹. As products and course indicators, what was considered was (i) loss and certification rates; (ii) incorporation of DLP; (iii) fulfillment of expectations of tutors and specialization students; (iv) broadening of change conceptions on the part of tutors; (v) setting forth proposals to activate change and (vi) institutionalization of the course at ENSP³¹.

From the total 827 activators enrolled, 12.9% were lost, being that 7 were tutors and 100 specialization students. Compared to the results of other distance education courses, with dropout rates of 25% to 31%^{31,38}, the loss in the Change Activators Course can be deemed low.

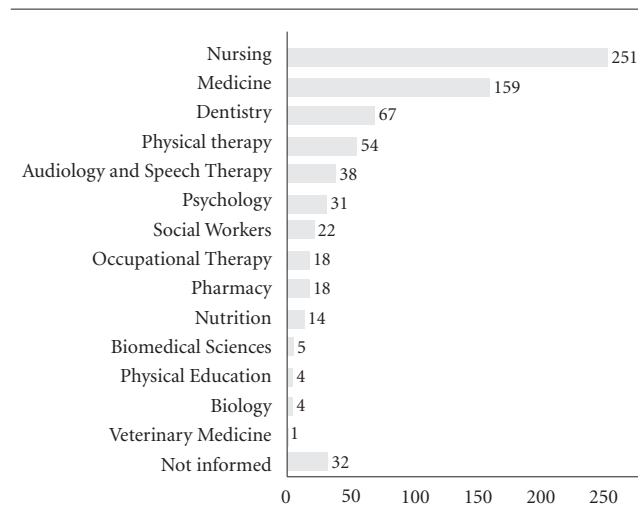
The degree of participant's satisfaction or fulfillment was measured through a questionnaire applied at the end of the face-to-face meetings. For the tutors, the meetings sequentially fulfilled 79%, 73% and 75% of expectations. For the specialization students, the degree was even higher and varied from 93.5% to 100%, being the highest at the last meeting³¹.

The DLP challenge was faced in a process, aimed at supporting the users and making

Table 1. Profile of enrolled specialization students, Course Activators, ENSP, 2005-6.

Characteristics	Profile
Number	718
Sex	81% female and 19% male
Region	60.8% Southeastern; 16.4% Northeastern; 15.4% South; 7.4% Central-western and North

Source: Fiocruz, 2005⁹.



Graphic 1. Number of specialization students according to graduation, Activators Course, ENSP, 2005-6.

Chart 1. Typical face-to-face week, Course Activators, ENSP, 2005-6.

Period	1 st day	2 nd day	3 rd day	4 th day
Morning	Small group	SDL/Portfolio	Small group	Small group
Afternoon	Small group	SDL/Portfolio	SDL/Portfolio	Small group

Key: SDL self-directed learning; Source: Fiocruz, 2005⁹.

platform adjustments. Asynchronous conversation devices, such as forums, or synchronous ones, such as chats were explored. The participations in the AVA were analyzed, focusing on the quantity, regularity and the nature of contributions, with a dialogue based on the profile expected. A closed questionnaire was applied to all tutors at the beginning and at the end of training. At the beginning, 39.7% had a relative or high number of restrictions to DLP. At the end, this percentage dropped to 12.4%, being that 74% pointed out having a high possibility of participating in other DLP courses³¹. 698 activators were certified, of which 101 were tutors and 597 specialization students. The book collection acquired for consultation was organized in 350 collections, donated to the participating institutions³¹.

Player involvement as an indicator for course success

In the set of reports from tutors and specialization students, what was observed, recurrently, is that these players showed they were involved in the course, which can be deemed a qualitative indicator of the Course positivity³¹.

Several testimonies, highlighted in the reports, point to possibilities for change, for setting up relationships with other people involved with this possibility, expanding the feasibility of activating change in training of health professionals³¹. Engagement is of fundamental importance, as it is “within people that change takes place, when they touch their subjectivity, mobilizing skills, relationships and stances and values”³⁹.

This fact alone reinforces the assumption that it is possible to foster change through interventions that will focus on individual social actions, who, by themselves, can trigger the construction and reconstruction of institutions³⁹.

The participants’ engagement in the course activities is an indicator that indeed there was significant learning, as learning takes place as a person engages globally in the learning situation.

Some explanations for the player’s engagement stand out. The first of these remits to the fact that the course proposal, in part, fulfilled the expectations of players, especially when speaking about tutors-specialization students. The latter, in their memorial, as well as in their conception of change, at the beginning of the course, already revealed their willingness to develop active methodologies and curricular changes. Once the course began, these individuals realized that

the educational concept allowed them to anchor their expectations in it, but also perceived that the course practice reflected that concept.

When it comes to specialization students, already in the first workshops there was the report from several groups that there was full identification with the change proposal. Many positive expectations were attributed to the possibility of living through this transformation process, personally as well as professionally³¹.

To sum up, perhaps it is possible to partially credit to the players expectations, especially tutors-specialization students, the motivation to have an engaging interaction, understood herein as that which “involves, engages, attracts, links, enchants, surrounds, entangles”⁴⁰.

Another possible explanation for this involvement refers to the quality of activities within the active teaching-learning methodologies. In the regional centers, in all groups in general, these meetings were recurrently evaluated by the specialization students as being quite positive³¹.

In general, the positive feeling attributed to the active methodologies are in tune with conceptions advocated by educational movements that seek to transform pedagogical practice. From this outlook, activities geared to facilitating processes of understanding, reflection and the expansion of information sources are the ones that are valued⁴¹.

In terms of the active methodologies, there is an additional observation that made the Course stand out. It not only was part of an educational conception that is innovative, but also fostered a change because of the change itself exercised. The educational activities were conceived based on a process in which the tutors were also the specialization students. Thus, tutors were chosen not only to carry out teaching activities, but also to experience a process in which they themselves would learn to play out the changes, including the experience of being apprentices. For this purpose, they had to “first make people learn and not teach”⁴².

Therefore, during the training of tutors-specialization students, as well as in the training of the specialization students, what was observed was an exercise of breaking with traditional forms centered on the professor speaking, condemning students to passiveness. The experience of living “more symmetrical professor-student relationships can represent the possibility of equal changes in power relations with the team and with the health system users or clients”³⁹.

Finally, based on inter-personal relationships, the players’ engagement in the course process

was observed. Becoming involved and relating overlap to such a point it is impossible to state which is the cause and which the consequence. In other words, there is no linearity in these actions. They occur based on synergy, in which they leverage each other mutually.

Interpersonal relationships between tutor-specialization students and specialization students and among specialization students themselves were evaluated recurrently in a positive way. These positive relationships are significant that the players in the process attribute this success to the Course methodology³¹.

In the field of interactions, players significantly valued the affective dimension. Affections were invested in these relationships and, with that, ideas flowed freely during discussions and discourses were better able to support themselves based on the anchoring of affective ties. By heading in that direction, insecurity and the fear of change, if not completely extinguished were minimized by the affection set forth between those involved in activating change³¹.

As elements facilitating the construction of ties, what stands out is the work in small groups, respect to diversity, knowing how to listen and include the opinion of others. This way, affection, instead of preventing or impeding, facilitated criticism, in terms of stating it as well as receiving it.

As a tutor observed: “activating changes demands a level of engagement rethinking the practice from a critical and propositional viewpoint”³¹. This type of involvement understood herein as the ability to transcend oneself, become interested in the other, become more sensitive to the situation being experienced, without this disabling someone from acting⁴³.

Interpersonal relationships created during the Course generated a team feeling in some of the specialization students, even if they went through conflicts. This feeling was maintained in the face-to-face and distance education moments, and became based on covenants built and nurtured during the process.

Affections become anchors for the successful interactions of most of the face-to-face moments of the course. Based on these, some moments came closer to the idea of cognitive ecologies, understood as “communities that are self-organized, maintain themselves and transform themselves through the permanent involvement of the individuals that make them up”⁴⁰.

Those face-to-face moments were not merely a stage for success. There were also difficulties

during these moments that not only related to but reflected issues referring to the proposal’s dynamic and organization in general. Such difficulties referred mainly to: (i) living with the DLP/ use of the AVA; (ii) infrastructure to hold the face-to-face workshops (iii) time management for the workshops and in the distance activities; (iv) communication between coordination-advisors-tutors-specialization students; (v) institutional-financial support³¹. Obviously, these items have a deeply synergic relationship with the course dynamic.

Among these aspects, what stand out were the difficulties of working on AVA that may reflect on the more general issues of the DLP. As properly mentioned by Costa and Franco⁴⁴, the “peculiarities of the DLP, as well as the magnitude of the possibilities with Internet, lead us to setting up a new pedagogic paradigm, which has not been fully delineated as yet. No matter how current the application on AVA is, and broadcasting with computer tools, it is still necessary to speak about novelties when we think about interactivity, from the constructivist viewpoint, based on the use of computerized environments”.

These considerations can serve as reflection so that we do not only focus on the operational issues of AVA, and move forward to epistemological bases that will offer support to AVA.

Albeit accompanied by praise, the infrastructure at the meetings was also the target of seasonal criticism by specialization students, especially geared to requests for enhancements to carry out the activities³¹.

Time management during the face-to-face workshop activities and the distance moments merits analysis, because of its strategic role in the course. The diversity of experiences of each of the group members, able to add much wealth to the debate and the sharing of knowledge, also demanded, from the specialization students’ viewpoint, more time for a more mature synthesis, built during the face-to-face moments.

Time management in the distance education activities was also mentioned, not especially as a problem in itself, but in terms of the challenge it posed to the participants day-to-day life, with the juxtaposition of many days, a decrease in resting time for professionals, besides the novelty and the difficulties of managing learning in an autonomous way³¹.

Difficulties regarding communication among individuals came about at key moments, at the beginning of the Course and during the closing phase. Reports of the first workshop indicate

that the specialization students arrived with no information whatsoever regarding which would be the Course agenda and activities, doubts relating specially to the educational approach and evaluation³¹.

Institutional-financial support was also earmarked as being a problem by some of the specialization students who mentioned having difficulties in bearing expenses with housing accommodations during workshops. Others further mentioned that some of the institutions they came from did not release them to participate in the course, which resulted in the juxtaposition of institutional chores and Course activities³¹.

Lessons learned and future steps

Specialization students' involvement during the face-to-face moments became a powerful indicator of the proposal's success. Be it during the presentation of their experiences, while drafting the learning issues, or even during the creation of ties for joint reflection, participants became engaged in the enterprise of transforming their contexts, based on their own transformation. Sharing together in democratic spaces to allow diversity to emanate was essential to achieve this degree of engagement.

The promotion of such spaces can result not only in greater participation of individuals, but also in the growth of inter-personal relationships. In this sense, we deem that the viability of change is enhanced when people not only change themselves personally but are able to set up relationships with people engaged with this process.

Participants' engagement based on fostering inclusive attitudes can be a sphere that should become a focus in other courses aimed at changing educational practices. Another highlight was the experience with active methodologies in the players' engagement process. If the purpose is to promote changes in educational practices, nothing more coherent than to confront the participants' internal logic with the experience of innovative methodologies. Thus, experiencing the learning process – from a constructivist viewpoint – and to grow in a process of engagement with partnerships among different instances can ensure greater feasibility for change.

In a parallel fashion, the proposal's evaluation took on the responsibility of adding to and of committing internally with this process. Evaluations of specialization students and of the course were part of the pedagogical process, beyond the technical tools for management and

account rendering. Considering post-graduation academic standards at ENSP, that use a grade scale for evaluation, orienting this process according to the competency profile criteria was an application to begin activating change, in this case with a positive result and consistent with the course's educational proposal, with inter-institutional partnership.

The path taken itself offered participants a great deal of learning. Beginning with the authors' group, the coordination and evaluation that had to tackle a diversity of experiences, interests, language and organizational cultures to support the construction of a collective purpose, and to articulate expectations of those requesting the proposal.

Once the inclusion of other perspective expanded with the entrance of the two waves of specialization students, at some moment of this trajectory, all were tensioned to expand their listening and to consider other points of view. Albeit committed to the collective construction, there was a need for more sharing spaces and agreements, particularly when the need to reduce the proposal's budget arose.

Among the lessons learned, having dealt with the restrictions not considered initially and with the other problems that emerged during the implementation of the proposal allowed for an exercise and an increment in our ability to read reality and activate changes. Problems are welcome when we understand that they spur new questions, foster discomfort that causes the search for alternatives to overcome, in a permanent movement of exchange of problems⁴⁵.

A greater alignment in participation in virtual learning environments to a moment of reflection, that is, that learns throughout this trajectory and incorporates this knowledge critically, still remains a challenge that needs to be fulfilled. Therefore, this is the message regarding the subjects and the strategy. To bet on the potential of subjects and of communities and in the offer of protected spaces for reflection proved to be the main accomplishment. More than the content, the techniques or the methodologies used to develop the course, the opening of that space for reflection allowed for an explosion of encounters, discoveries, feelings and the construction of an identity and collective projects, in the direction towards transforming educational practices and health care.

In the national dimension, this experience set forth a frame of reference for other educational projects developed in partnership with

the SUS. In the individual dimension, for those participants who continue identifying as change activators, the course impact can be represented metaphorically through the alteration of a genetic code, that has defined a new practice and a new profile, built based on the transformation of oneself^{46,47}.

The careful historic record of this course-movement opens the path for a better exploration of the experiences that result from this proposal. Following-up on those who graduated and on the development of the respective proposals for activation represents a relevant indicator in the medium term. More than the possibility of carrying out an evaluation of results, to recover the methodology cycle for the construction of the course, fostering new learning, based on systematizing these new experiences. This research would update and make contemporary the situations-problem, feedback into the con-

temporary change activation processes, through a spiral that, beyond the educational process, will represent the movement of changes itself.

Collaborations

VV Lima, LCM Feuerwerker, RQ Padilha, R Gomes e VA Hortale participated equally in all stages of preparation of the article.

Acknowledgment

We thank everyone who participated in this initiative and, especially, Milta Torrez and Antonia Ribeiro (EAD/ENSP) by the data provided.

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Article submitted 29/08/2013

Approved 27/10/2013

Final version submitted 31/10/2013