Facebook in Brazilian Schools: Mobilizing to Fight Back

Monica Ferreira Lemos & Fernando Rezende da Cunha Júnior

To cite this article: Monica Ferreira Lemos & Fernando Rezende da Cunha Júnior (2018) Facebook in Brazilian Schools: Mobilizing to Fight Back, Mind, Culture, and Activity, 25:1, 53-67, DOI: 10.1080/10749039.2017.1379823

To link to this article: https://doi.org/10.1080/10749039.2017.1379823

Published online: 04 Oct 2017.
Facebook in Brazilian Schools: Mobilizing to Fight Back
Monica Ferreira Lemos and Fernando Rezende da Cunha Júnior

ABSTRACT
In this article, we analyse how students used social media as a form of human–technology interaction for the organization, development, and expansion of activities in 4 social movements in Brazil. We analysed 122 Facebook pages maintained by the Four Movements using the cultural-historical activity theory framework and focused on the notion of collaborative agency in the development of the movements. We performed a qualitative analysis of this data to understand both how the movements developed and the results that the students obtained. Our findings suggest that by acting collaboratively, students expanded activities to other contexts.

Introduction
Throughout the course of history, communication has played a central role in every kind of human activity. The evolution from oral to written communication, and more recently to communication using digital tools, has changed how human beings interact with one another (Brunsting & Postmes, 2002; González-Bailón, Borge-Holthoefer, & Moreno, 2013; Micó & Casero-Ripollés, 2014). The use of human–technology interaction tools, such as social media, has become a means to transform public spaces (Cunha & Lemos, 2017; Frenzel, Feigenbaum, & McCurdy, 2014) by communicating, sharing information, and mobilizing people (Mercea, 2013; Vromen, Xenos, & Loader, 2015). In addition, social media provides opportunities to engage in collective activism and activities (Velasquez & Larose, 2015; Yates, 2015), especially in a context of wildfire expansive activities (Cunha & Lemos, 2017).

This article therefore seeks to analyse how secondary school students used social media, more specifically Facebook pages, to organize and develop (and expand) activities in four different but intertwined social protest movements: Do not close my school, Free pass, Snack scandal, and Occupy everything (hereinafter, the Four Movements). These movements were organized by secondary school students in public schools to fight top-down government measures that would have prevented an improvement in educational conditions.

The Four Movements differ from other social movements around the globe, such as the Five Star Movement in Italy (Bailo, 2015) and the Occupy protests in London, New York, and Madrid (Guzman-Concha, 2012), where organizers mobilized their participants online before the protests (Jaworsky, 2015). Students participating in the Four Movements used social media as a form of human–technology interaction to organize protests, assemblies, school occupations, and other events and to report results.

The use of Occupy-type protests and demonstrations has the potential to encourage participants to reflect on their collective actions and to collaborate more closely with their peers (Krinsky & Crossley, 2014; Pickerill & Krinsky, 2012). By using social media, participants can also engage politically in their communities (Maireder & Schwarzenegger, 2012).
The Four Movements presented in this study show how students fought to secure at least the basic conditions necessary for learning at schools in the public educational system in Brazil, which faces a variety of problems that interfere in students’ and teachers’ lives at school.

Among these problems, four issues stand out. First, teachers are underpaid and work long hours (often working two or even three shifts) at several schools. Second, classrooms are overcrowded. The number of students per class should be between 30 to 40, but this number may reach between 80 and 95 in some schools (Barbara, 2015). Third, violence is always present in different forms at school. As most public schools are in urban peripheries, students and teachers need to handle several types of violence, including violence that is generated outside of the school and moves into the classroom and violence generated by the educational system itself. As a result, although students have the right to attend public and free schools, they do not learn half of what is expected of them (Freitas, 2009). Fourth, schools lack infrastructure including basic materials and facilities such as toilet paper and educational material. Finally, there is excessive bureaucracy, which demotivates those who work at schools, as well as students and communities as a whole (Freitas, 2009).

Considering the preceding problems, we analysed how the object of a movement expanded and transformed into another object. Using the cultural-historical activity theory (CHAT; Engeström, 1987; Leontiev, 1978; Vygotsky, 1999), we focused on how one social movement triggered another and how the Four Movements were intertwined. We used the newsfeed of 122 Facebook pages that were related to the Four Movements as our data, and we analysed them from a qualitative perspective. This made it possible to understand the evolution of the Four Movements. In the following sections, we present our theoretical framework, the context of the Four Movements, and the results obtained by the students by then.

**Theoretical background**

From a general perspective, our lives are organized by activities, through which humans develop consciousness and transform social conditions (Leontiev, 1978), producing and transforming tools, and consequently transforming our own lives and the lives of others. Such transformation demands an expansive learning process that puts primacy on communities as learners, on transformation and creation of culture, on horizontal movement and hybridization, and on the formation of theoretical concepts (Rantavuori, Engeström, & Lipponen, 2016, p. 3).

Expansive learning focuses on the learning of something that is not yet there (Engeström, 1987; Rantavuori et al., 2016). Because the students involved in the Four Movements were not used to participating in and organizing social movements, they learned how to produce and use tools to improve their activities in the making. Such an expansive learning process is important in the context of this study, considering that government imposes decisions that directly impact students, without any prior consultation. From a student perspective, those changes hinder educational improvements, as conditions are impaired by the high number of students per classroom and by not having proper food or adequate transportation.

Therefore, every new improvement or new form of action and production emerges from a deviation of previously accepted norms (Engeström, 2009b) or from a crisis in the process of development (Dafermos, 2014; Vygotsky, 1998). The crisis, in the case of the Four Movements, can be seen in the desire to break the boundaries of the relationship between the oppressor and the oppressed (Freire, 1970). According to Freire, subjects can move beyond their situations only when they recognize their importance in the world, not only as objects who receive top-down orders but also as agents constantly searching for transformational actions to create and re-create new possibilities for their given realities.

Thus, transformation of an activity is never an isolated process; it also means redefinition of its boundaries and thus renegotiation of its external relationships (Engeström, 2009b, p. 16). In addition, Freire (2014) suggested that it is essential to respect the knowledge socially produced in communities; outside of the classroom; school offices, as in those running the schools; or cabinets, as in the
government. He also suggests a close discussion with students in order to use their experience of living and moving in the city to make education more horizontal and less defined by the oppressor and oppressed paradigm.

From a CHAT perspective, the multiple activity systems composing the Four Movements can be seen as a form of expansive learning (Engeström, 2009a; Leontiev, 1978; Rantavuori et al., 2016), where an object is strictly connected to the needs of subjects (Engeström, Engeström, & Suntio, 2002), motivating power and hope (Freire, 1970).

In this study, we consider CHAT and Freirean critical perspectives in order to understand how crisis is overcome in a context in which activities are strongly influenced by power relations between stakeholders—in our case, students and the government. Both Freirean and CHAT traditions are based on Marxist concepts. However, Freire’s studies concern the insertion of the subject in the world, whereas CHAT contributes to understanding how the subject acts during different activities. Considering the Brazilian context of corruption, social inequality (that dates back to the colonial period) and cultural diversity, educational systems are struggling to obtain the basic conditions necessary for operation. Therefore, the crisis that triggers a social movement is the major catalyst for mobilizing schools and communities to obtain the rights that, despite being assured by law, are not fulfilled by the authorities.

As for the notion of needs, Leontiev (1978) defined it as the impulse for the subject to act. According to Leontiev, needs can be substantial or functional and are things that must be satisfied. Hunger, for example, can be satisfied by food. Fatigue can be satisfied by rest. Another type of need produced by culture in social relations is addressed in this work within the Vygotskian discussion of drama as an act of volition, a human decision about the conduction of one’s historicity (Delari Junior, 2011).

In this study, the object of the activity is crucial in understanding the development of the Four Movements. The need, triggered by the motive to carry out an activity which directs the object, is essential for the projection and development of activities in order to overcome different types of crises. Therefore, activity must not be conceived only as a group of actions but also as the relations between subjects with needs that motivate and determine objects. These relations refer to the desire to transform the need into concreteness through the organization of various activities (Nardi, 2005). Objects define the horizon of possible actions; they embody the motive and the meaning of collective activity (Engeström, 1994; Engeström et al., 2002).

Objects seem to have lives of their own (Engeström, 1995). Yet the object is both resistant raw material and the future-oriented purpose of an activity (Rantavuori et al., 2016, p. 3). In expansive learning activities, the object to be transformed and expanded has both a motive and motivation. In the Four Movements, the motivation is produced through a collective need arising from the crisis, and triggered by top-down impositions.

In complex activity systems and complex organizations, as described in earlier literature (Bardram & Doryab, 2011; Blackler, Crump, & McDonald, 2000; Marsh & Nardi, 2016; Spasser, 2002), the development and transformation of activities derive from a relatively stable environment mediated by human–technology interactions. In addition, development and transformations can be seen in studies involving the use of social media as a form of human–technology interaction in educational settings (Chen, Liao, Chen, & Lee, 2011; Cunha, van Kruistum, & van Oers, 2016; Hou, 2015; Tseng & Kuo, 2014; Yeh, 2010).

In contrast to the studies just described, the Four Movements analysed in this study emerged from the needs of agents (students) who were not expected to act upon government decisions. In addition, due to the instability of the context, activities may evolve and possible fade away due to the constraints imposed by a certain system or institution. Thus, it is difficult for practitioners to construct a connection between the goals of the students’ ongoing actions and the more durable motive/object of the collective activity systems.

To reach the object created by the collective need, the promotion of creative encounters plays a central role in enabling collaborative agency, where participants engage toward a joint object
The reasons for the encounters mostly relate to the need to expand an expertise by finding a new product, raw material, or market, or solving a specific problem. Similarly, Lemos (2015) understood collaborative agency as a process through which participants become subjects of an activity by collaboratively constructing and envisioning new possibilities toward a joint object. Consequently, subjects transform not only their activities or a working setting but also people’s lives.

In our understanding, collaborative agency is a phenomenon in which participants get involved in different activities, raising questions and acting critically to overcome a crisis in order to transform a given context. Through such a phenomenon, participants also consider ways of solving future problems rather than seeing them as inexorable and predetermined facts. Using this perspective, we identified collaborative agency in three aspects of the Four Movements. First, in the connections established among Facebook pages; second, in the expansion of the activities; and third, in the results obtained by the Four Movements.

Therefore, by experiencing, creating, re-creating, and integrating themselves into their contexts, subjects transform their cultural and historical experiences (Freire, 1967). By acting collaboratively, students engaged in a movement of not accepting a given context that would interfere in their day-to-day lives at school and organized themselves to envision new possibilities for their present and later on for their future. This engagement emerged from the struggle to overcome a crisis imposed by top-down measures and took the students from being passive recipients to becoming agents.

Such a collaborative agentive approach goes in the same direction as that suggested by Spinuzzi (2014), that is, the application of CHAT in deinstitutionalized contexts. Consequently, the hierarchical boundaries that permeate institutionalized activities tend to be blurred in social movements, which requires researchers to develop new analytical tools for understanding such networks (Engeström, 2009a).

**The Four Movements**

In this section, we briefly describe the Four Movements: *Do not close my school, Free pass, Snack scandal*, and *Occupy everything*.

**Do not close my school**

In October 2015, the State Secretariat of Education of São Paulo announced a reorganization of its educational system, through which 94 schools would be closed, and students and teachers would be reallocated to other schools (Deus, 2015). The reorganization meant that students had to walk more than 5 km to reach their new schools, whereas by law students have the right to go to a school within a radius of 1.5 km from their homes (Cunha & Lemos, 2017). In addition, the reorganization, which was imposed top-down and without any prior consultation or negotiation with students, would increase the number of students in the classrooms.

It is important to note that in Brazil there are no safe bicycle paths to be used as a means of transportation. In addition, public transport is inefficient or is not provided in most places. In some cases, walking can be dangerous due to poor safety on the roads and criminality, especially for girls, who may even be raped.

To block the short notice change, students organized the movement *Do not close my school*, through which they occupied more than 200 schools across the state of São Paulo. Students also created Facebook pages and organized demonstrations on the streets in different cities of the state for more than 3 months. It is important to highlight that there was no official support from teachers and school managers in the decision making, organization, or in any of the activities of the movement itself, so Facebook pages were created by the students (Cunha & Lemos, 2016). During occupations and demonstrations, excessive police force was used against students, and 33 of them were arrested. Despite the fact that the government made an informal announcement on
the news in November 2015 that they would keep the 94 schools open, students continued to occupy the schools until the government officially declared they would not be closed, in December 2015.

**Free pass**

In December 2015 the municipality of São Paulo announced a rise in public transportation fares. To protest this measure, students organized the *Free pass* movement. The movement aimed at avoiding fare increases and campaigning for students’ right to free transportation in the city of São Paulo. Students protested by maintaining *Do not close my school* Facebook pages and organizing demonstrations on the streets, blocking important avenues and metro stations in the city. However, in contrast to what happened during the previous movement, police were used during the *Free pass* demonstrations to ensure participants’ safety and not as a way of repression. *Free pass* started at the beginning of December 2015 and ended 2 weeks later, when students were given the right to free public transportation in the city of São Paulo.

**Snack scandal**

Schools that are part of the state educational system in Brazil have a duty to provide snacks or meals supplied by the state government to students. However, following a complaint to the public ministry in January 2016, investigators revealed a corrupt scheme in the distribution of food to schools in the state of São Paulo. As part of that scheme, food providers were delivering less food than necessary, food below the specified quality standards, and in some cases no food at all (Alessi & Rossi, 2016).

Again, students used the same Facebook pages to protest against the state government and to campaign for their right to good quality food at school. It is important to highlight that due to social inequalities, school meals are the only food that some students have all day. Although investigations are still in progress (by March 2017), the quality of food has improved and school meals were reestablished.

**Occupy everything**

In February 2016, teachers working in the state of Rio de Janeiro’s public education sector went on strike (Dia, 2016). Following the example of the students from São Paulo (*Do not close my school, Free pass, and Snack scandal* movements), students from Rio de Janeiro started the movement *Occupy everything* to support their teachers.

Students occupied 75 schools in the state of Rio de Janeiro and used Facebook pages as described in the *Do not close my school* movement. Although teachers were protesting for better working conditions and salary increases, students also protested in support of their teachers to improve school infrastructures, as well as teaching and learning conditions. As a result of *Occupy everything*, some of the occupied schools had some requests fulfilled. However, since mid-2016 the state of Rio de Janeiro has been under state of emergency due to unrelated corruption schemes, compromising the outcomes of *Occupy everything*.

*Figure 1* provides an overview of the Four Movements, depicting why, where, when, and how they were organized.

**Methods**

**Data sources**

The data analysed in this study was drawn from posts on the timelines of 122 Facebook pages related to the Four Movements: 56 relating to the movements in São Paulo and 66 from Rio de Janeiro. The
posts were analysed in Portuguese and the results translated into English. We analysed posts from October 9, 2015, when the first movement started, to April 30, 2016, when data collection for this article ended. To protect the privacy of participants, the real names of schools and students were not used in this study.

**Procedures and methods of analysis**

In this study, we performed a qualitative analysis of the Facebook pages, combining content analysis of the posts (Leech & Onwuegbuzie, 2007), multimodal analysis of the pages (Forceville, 2011; Kress, 2003), and network analysis (Bailo, 2015; Van Dijk, 2006). The content and multimodal analysis provided a way to understand images, texts, and the other features of the Facebook pages, such as the number of posts, comments, and likes. In addition, the network analysis provided an understanding of how participants were related to one another.

Because *Do not close my school* was the first of the Four Movements, we used a list of all occupied schools in the state of São Paulo (Globo, 2015). That list was organized in an .xls file and used as a starting point in order to identify Facebook pages related to the movements. Subsequently, we performed a search on Facebook for all of the schools on the list. Most of the names of the relevant Facebook pages began with the tag “Occupy School X” or “Occupation School Y” [*Ocupa Escola X* or *Ocupação Escola Y*, in Portuguese].

As many state schools in São Paulo have long names, such as State School Francisco Bernardo Coelho da Silva (fictitious name), we had to use different name combinations to find Facebook pages. In the case of the aforementioned school, for example, we would have searched for Occupy School Francisco Bernardo Coelho da Silva, Occupy Bernardo, Occupation Francisco Bernardo, among other combinations. From the list of occupied schools in São Paulo, we identified 56 pages linked to schools and one page that had information about the movement, named *Do not close my school* [*Não fechem minha escola*, in Portuguese].

Data for the analysis of the other two movements from São Paulo—*Free pass* and *Snack scandal*—were obtained from the same Facebook pages as students continued using those pages in the subsequent movements. However, only 30 pages were active after January 2016. Data for the *Occupy everything* movement were obtained using the same procedure described for the *Do not close my school* movement, starting with a list of schools available on the Facebook page Schools from Rio in Fight. The list was updated every week as school occupations in Rio de Janeiro were still in progress at the time of our data collection.

From the .pdf files, we performed a multimodal analysis of the pages, that is to say, we considered different features of the Facebook pages. Posts and pages were analysed using Atlas.ti. First, we analysed the profile and cover pictures of each page by identifying the pictures that were related directly to schools or to the Four Movements. Second, we counted the number of posts and likes.
Table 1. Categories of Analysis of the Pages and Posts.

<table>
<thead>
<tr>
<th>Multimodal analysis of the pages</th>
<th>(1) Who posted: page organizers, other people</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(2) Number of page followers (Facebook counter)</td>
</tr>
<tr>
<td></td>
<td>(3) Profile pictures: school-related items</td>
</tr>
<tr>
<td></td>
<td>(4) Cover pictures: school- and movement-related items</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Content analysis of the posts</th>
<th>(1) Reporting activities</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(2) Requesting external support</td>
</tr>
<tr>
<td></td>
<td>(3) Reporting activities</td>
</tr>
<tr>
<td></td>
<td>(4) Live broadcasting</td>
</tr>
</tbody>
</table>

(page followers) that each page had during the period observed in this study. Third, we analysed who posted on each page.

The next step was to perform a content analysis of the posts. By deductively coding the posts (Leech & Onwuegbuzie, 2007), the topics that emerged were *invitation to join the Four Movements*, *request for external support*, *live broadcasting of events*, and *reporting activities of the Four Movements*. The content analysis of the posts also enabled, in the cases from São Paulo, the identification of the transition from one movement to another and how the movements themselves developed over time. Table 1 depicts an overview of the analysis used in this study.

In addition to the .pdf files, we used .xls files imported from Facebook pages using NodeXL plugin (https://nodexl.codeplex.com/), which provided tools for performing network analysis using Microsoft Excel. The files imported from Facebook using NodeXL were structured into two columns in Microsoft Excel, in which the relationships were built. For instance, if a link to a website was posted on School 1’s page, School 1 would be placed in column A, whereas the link would be displayed in column B. Where the same link was also posted on School 2’s timeline, the same relationship to the link would be established. Thus, where this occurred, there would be a School A → Link ← School B relationship, so both schools would be connected by a link to a website. This network analysis enhanced our understanding of the transformation of the object of the activities and how Facebook pages related to such activities.

Results

Describing the Facebook pages

The Facebook pages used in the Four Movements, both in São Paulo and in Rio de Janeiro, had a similar structure. From the multimodal analysis, we identified that most of the profile pictures (see Figure 2.1) of the Facebook pages were a photo of the school or simply the name of the school. The use of such pictures suggested that schools were the main topic of students’ interests. In addition, the cover pictures (see Figure 2.2) used were either another picture of the school or banners such as “The school is ours,” “School X is occupied,” or “The fight has just begun.” The banners suggested that students were determined to fight for their objectives, which could also be associated with the objectives of the Four Movements.

Profile and cover pictures play an important role on Facebook pages. All the followers of a page see the profile picture of the author of a post on their personal newsfeed (see Figure 2.3), and every time people navigate to the group page, they see the cover picture at the top of the screen. Therefore, profile and cover pictures (Figure 2.1 and 2.2) can be understood as an indication of collaboration, because by using such pictures, students intend to connect themselves to the school collective.

Another interesting finding from the pages’ newsfeed is that posts were mainly made by page organizers. There were only posts in favor of the Four Movements on Facebook pages. It is important to highlight that a person who is in charge of a Facebook page needs to authorize the publication of a message from another Facebook user on its timeline. Thus, page organizers can block or deny the publication of any message that goes against their objectives. There were a few
cases in which we observed posts from other people, but those were also supporting the Four Movements.

Although the various Facebook pages had similar visuals, the number of followers (a counter can be seen at the left side of a page on Facebook; see Figure 2.4) varied from page to page and between the two states—São Paulo and Rio de Janeiro. The number of followers of a page from São Paulo ranged from 61 to 10,290 ($M = 1,102$), whereas in Rio de Janeiro the followers varied from 100 to 8,938 ($M = 1,686$). However, because Facebook pages were still in use during the time the data were collected, the number of followers may change over time.

It is important to note that Facebook pages were used to report actions developed by students inside and outside of the schools, to invite other students to join the movement, to ask for support, and to live broadcast situations in which students were threatened by authorities. Thus, the number of followers could be an indicator of collaboration. A higher number of followers increases the possibility of sharing the movements’ posts, consequently providing more opportunities for acting collaboratively through social media.

**Organization of the online network**

Using the content analysis of the posts and the network analysis, we identified how the Four Movements were organized. The first social movement from São Paulo, *Do not close my school*, presented little connection among Facebook pages, that is, pages of the movement were not directly connected to (or mentioned by) other pages of the movement. However, we could observe a connection by the content they were sharing on those pages.

Thus, the connection between the various Facebook pages of the movement was indirectly made by the links they shared on their time line. In that sense we observed a decentralized network of schools, connected both by the content they shared and by the object of the movements. In the subsequent movements, *Free pass* and *Snack scandal*, besides the links they were sharing, Facebook pages were also connected to what became the central page of the movements, named *Do not close my school*.

By contrast, the movement organized in Rio de Janeiro, *Occupy everything*, departed from one Facebook page, named *Schools from Rio in Fight*, from which they shared information about demonstrations and manifestations. The pages organized by students of individual schools were connected through that main page, presenting a more centralized network. That central page played two roles. First, it was a source of new information for the groups of students, allowing them to share...
links and other content from it on their pages. Second, it enabled everyone involved in the movement to have an overview of what was happening in other occupied schools, because the main page also shared what other pages of the movement were publishing.

Thus, the Facebook pages from the São Paulo movements were linked by a common object that transformed over time, whereas the Facebook pages from Rio de Janeiro were connected both by their object and by the central Facebook page.

Object in expansion and transformation

From the Four Movements analysed in this study, we observed a process of expansion of the activities and transformation of the objects, which led to the reorganization of the activities and to new objects.

Starting with Do not close my school, we considered three activities: school occupations, streets demonstrations, and the use of online communicative tools. Those activities presented the same expansive process. First, occupations started with students from only one school and then reached more than 200 schools. Second, Demonstrations started in the city of São Paulo and spread to other cities. Third, by using Facebook pages as a communicative tool, students could coordinate demonstrations occurring at the same time in different cities, which was possible due to the expansion in the number of Facebook pages.

Once students achieved the object of the activity—in the first case, to avoid the closure of the schools—they focused the protests on another object: free public transportation for students in the city of São Paulo. The announcement of an increase in public transport fares in the city of São Paulo triggered that social movement. Again, the movement started with one single school and was followed by other groups of students. In that case, students utilized the same Facebook network that was already available from the previous movement to organize demonstrations and protests in the city of São Paulo. Only students from the metropolitan area of São Paulo participated in the Free pass protests. That time, students achieved free public transportation for students within 2 weeks.

Following the first two movements, Do not close my school and Free pass, the object of the protests transformed again, and students focused on the snack scandal revealed by the public ministry. Because only students from the city of São Paulo had been involved in the previous movement, Free pass, we could observe once more the expansion of the movement to other cities in the state of São Paulo. Again, the use of Facebook as a communicative tool was essential to coordinate the protests in different cities.

After the three movements in São Paulo, students from Rio de Janeiro considered the results obtained by students in São Paulo in order to organize their own protests. In that case, we observed more expressive transformations in the organization of the activities. First, students used a main page on Facebook where they shared information about all of the other occupied schools and coordinated demonstrations on the streets. Second, school occupations in Rio did not prevent classes and other activities from happening. It is important to note that students in Rio de Janeiro were connected to the students in São Paulo through the Facebook pages Schools from Rio in fight and Do not close my school.

Considering the Four Movements as a whole, we observed the transformation of the object into three activities and how the transformation of such activities led to the reorganization of the activities and to different objects. Figure 3 summarizes how the objects evolved and how the various groups of students were related.

The reorganization of activities also led to an increase in the use of the page Do not close my school and its relation to other Facebook pages created by students. That process can be observed in Figure 3. Facebook pages (small circles) were connected only by a common object of the activity (central spheres), and the page Do not close my school (diamond shape) had a more peripheral positioning on the network in the first two movements. With the progression from one movement to
another, that page occupied a more central positioning in the networks, which can be associated with an increase in agentive collaboration among the students.

The model of centrality and coordination, which represented the *Snack scandal* movement, was adopted by the students from Rio de Janeiro. From the last group depicted in Figure 3, we observed that Facebook pages were related to one another both by the object of the activity (central sphere) and by a central page, named Schools from Rio in fight (triangle).

**Discussions**

In this article, we reported on an exploratory study of how students used social media as a mediational communicative tool for the organization, development, and expansion of four intertwined social movements.

**Facebook pages as a collaborative space**

The Facebook pages arose out of a collective need that the students had in a given moment of crisis. That could be observed in the visual aspects presented by most pages, mainly from profile and cover pictures, which changed according to the object of the social movement. From the perspective of human–technology interaction, mediational tools, such as Facebook, enable the use of different media to spread and share content. According to Sannino and her colleagues (2009), subjects consciously organize activities to transform social contexts by using and transforming tools—in this case, social media. This transformation may be explained by the horizontal development of the Four Movements, as suggested by Rantavuori and colleagues (2016).

From the posts analysed in this study, we observed that page organizers authorized only posts that supported the Four Movements, blocking or deleting posts that were against them. However, it was not possible to have access to the number of posts blocked by the page organizers, nor to the criteria they used to accept or deny such posts. That can be a downside of Facebook as a communicative tool. Despite being comprehensive—many people have access to it—Facebook can be controlled by a few people. Thus, the posts on Facebook pages suggest that the activities inside the pages are strongly connected to the relations between subjects and the needs that motivate and determine the objects of the activity, as suggested by Leontiev (1978).

In addition, activities developed on Facebook pages connected people who were not directly involved with the schools. The number of followers (between 61 and more than 10,000) of each page also strengthened the motive and the meaning of the collaborative activities. Starting out as a collective drama, as defined by Vygotsky (1998), the need to act was not only personal/individual

---

**Figure 3.** Network from the groups on Facebook. Note. Mov. = movement. Central spheres: object of the movement; Small circles: pages on Facebook created by students; Diamond: Facebook page “Do not close my school”; Triangle: Facebook page “Schools from Rio in fight.”
but of all in the community. Having a motive and motivation, as suggested by Rantavuori and colleagues (2016), the use of Facebook pages as a form of human–technology interaction strengthened the collaborative aspect of the activities and enabled new ways of envisioning the future, which potentializes collaborative agency.

**Transforming the organization of different networks**

Each of the Four Movements analysed in this study had a distinct network structure. The movements in São Paulo, *Do not close my school*, *Free pass*, and *Snack scandal*, revealed a stronger connection among Facebook pages only in the last movement, which constrained students’ knowledge of what the other students were doing in their schools during the first two movements. Taking that failure into consideration, students from Rio de Janeiro started their movement on Facebook on a main page, named *Schools from Rio in Fight*, and all the other individual school pages were connected to that main page.

We understand the reorganization of activities as an indication of an expansive learning process, in which all the students were agents and responsible for the activities. As suggested by Engeström (2009b), the improvement or transformation of an activity emerges from a deviation of prior norms, in a way such that subjects are required to negotiate the external relationships of their activities. In contrast to previous research on human–technology interaction (Bardram & Doryab, 2011; Cunha Jr., Van Oers, & Kontopodis, 2016), the instability faced by the Four Movements led to the adequacy of the instrument, and to the transformation of the object.

As was the case in São Paulo, students from Rio de Janeiro started out by using social media as a communicative tool. However, they changed the network structure to ensure more comprehensive communication among the groups. In addition, the model adopted by students from Rio de Janeiro enabled a higher number of interactions with each post, which can be understood as a sign of collaborative agency.

**Expanding, transforming and envisioning the future**

The Four Movements described in this study all had similar organizational structures. They were triggered by a collective need, comprised different activities connected by a shared object, and used Facebook as a form of human–technology interaction to organize movements.

Of the activities involved in the Four Movements, two processes were relevant for the understanding of how activities developed: the expansion and transformation of the activities, and the transformation of the objects. The expansion of activities could be observed, for instance, in the increase in the number of posts and online interactions, in the number of demonstrations on streets, and in the number of occupied schools. We believe that such an expansive process would not be possible without collaborative agency. By getting involved in the contexts and envisioning ways to solve the crisis, students intervened in their reality to become part of it, as described by Freire (1967, 2014).

With regard to the notion of needs, as described by Leontiev (1978), we observed different impulses for the students to act: first, to avoid the closure of schools; second, to prevent the rise in public transportation fares and to have the right to free pass; third, to have the right to high-quality school meals; finally, to obtain the right to a better school infrastructure and better education. The transformation from one object to another, and subsequently to the reorganization of the whole activity system, was possible due to the success of overcoming the crisis behind each object.

However, because the needs and objects were collective, transformation from one object to another, that is, the emergence of new motives to maintain the social movements, would not have been possible if only one student or only a small number of students participated in the movements. Thus, transformation of the objects was again influenced by collaborative agency. According to Miettinen (2013), and as mentioned in this study by promoting creative encounters, including virtual ones, which permeate collaboration, subjects were able to work on solutions for a specific problem.
We also noticed the emergence of collaborative agency in the increasing number of connections among Facebook pages, as described in Figure 3. That can be understood as a process in which students, by experiencing, creating, and re-creating their activities, were able to transform their contexts through historical experiences (Freire, 1967). In this study, we observed that when networks were more centrally connected, students were more empowered to organize the social movement activities, which according to Freire (1970) also motivates and gives hope to participants to achieve their goals.

In summary, students started the first social movement with the emergence of a collective need. By acting collaboratively, they were able to expand, reorganize, and transform the social movement activities in order to overcome the crisis they were facing. The success obtained by acting collaboratively in one movement empowered students to start other new ones.

Conclusions
In this study, we discussed how students used social media, more specifically Facebook pages, as a mediational communicative tool for organizing, developing, and expanding the Four Movements. The expansive learning process demonstrated by the students and the transformation of the object of the protest was enhanced by using these networks as a form of human–technology interaction.

In the context of the Four Movements, using Freirean critical pedagogy is important to understand the context of crisis and uncertainties. In addition, CHAT foundations enable the analysis of initiatives that aim to overcome crisis. Moreover, the use of network analysis allowed us to understand how the use of social media as a form of human–technology interaction intertwines with concrete actions, highlighting the importance of the discussion in this paper on the topic of human–technology interaction. Because social media is a recent field of study, which involves multimodal aspects, the activity systems in each of the Four Movements went beyond what can be explained by using single or multiple activity systems.

In addition, data collection for this type of study is still challenging. As there was no formal organization of the students, searching the online pages was time-consuming and required that the researchers have a certain degree of contextual knowledge, for instance, to discover the names of the relevant Facebook pages. Another issue that arises when dealing with activities on social media is the fast pace at which things happen and the huge proportions they can reach. After the first social movement of students started in 2015 in São Paulo, simultaneous students’ movements arose in three other Brazilian states—Minas Gerais, Goiás, and Bahia.

In the Four Movements, collaborative agency was essential in potentializing agents, who in collaboration with others became more empowered to overcome the crisis. Given their experiences and historicity in activities, such as social movements, they were able to transform oppressed–oppressor relations into collaborative agency.

In conclusion, the expansion of the previous model of CHAT through the addition of tools such as network analysis can be an alternative way to explore how activities expand, transform, and evolve arising out of an online communicative environment. Despite having no relative stability, as would be the case in an institutional contexts (Blackler et al., 2000; Cunha, van Kruistum, et al., 2016; Marsh & Nardi, 2016), such expansion provides the possibility of a grassroots envisioning and reorganizing of the educational systems. By mobilizing and organizing themselves in multiple and expansive social movements, students planted the seeds for a new way of conceiving educational transformations and political decisions in order to improve studying conditions for themselves and working conditions for their teachers.

Acknowledgments
We express our gratitude to the reviewers, editors, and Juhanna Rantavuori for their valuable comments, which were essential for the development of this article. We also thank Corinna Lotz and Robbie Griffiths for proofreading the manuscript.
Funding

The first author of this work was funded by a CIMO scholarship (TM-12-8554), and Academy of Finland grant for the project “Concept formation and volition in collaborative work” (No. 253804).

The second author of this work was funded by Coordination for the Improvement of Higher Education Personnel, grant BEX 9581-138.

ORCID

Monica Ferreira Lemos http://orcid.org/0000-0001-8846-718X
Fernando Rezende da Cunha Júnior http://orcid.org/0000-0003-3134-436X

References

Alessi, G., & Rossi, M. (2016). Escândalo da merenda, rastilho de pólvora para aliados de Alckmin [Snack scandal, a wildfire for Alckmin’s allies]. El País, Brazil.


Globo. (2015, March). Veja a lista das escolas ocupadas no estado de São Paulo [Check the list of occupied schools in the state of São Paulo]. São Paulo, Brazil: Author.


