

Continuing Education for High School Resource Teachers and Their Sense of Self-efficacy

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Abstract This action-research project was conducted in three Quebec schools and its aim was to support resource teachers that teach high school students at risk and with learning difficulties. All participating resource teachers (N = 29) attended collaborative teachers-researchers meetings focusing on the characteristics and needs of students' with learning difficulties as well as on effective reading and writing strategies and procedures. Additionally, a test on their sense of self-efficacy was administered before and after the training. The paper also describes the mentoring and collaboration processes, the effects they had on actual classroom practices and on resource teachers' sense of self-efficacy. The facilitators and the obstacles encountered will also be presented and a few solutions will be proposed to improve this type of collaboration.

Keywords: *continuing education, collaboration, high school teaching, students with learning difficulties, sense of self-efficacy*

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1. Introduction

It is essential to encourage teachers to question their professional practices in relation to the educational aims for all students to achieve success. This would imply that teachers should take into account individual peculiarities in their classes and question the effectiveness of their teaching practices [1]. To sustain high school teachers in this educational challenge, resource teachers provide educational support for students at-risk or with learning difficulties and work together with teachers and school professionals to promote the success of all students. According to Mackay's report [2], it appears that in some Canadian provinces, few resource teachers have an adequate level of qualification to be able to assume the responsibilities entrusted to them. Additionally, a significant staff turnover seems to characterize this function for which no specific training is available.

Given the significant role resource teachers play in the challenge of achieving "inclusive school", Mackay [2] suggests to offer them high quality continuing education. Many authors consider community work constitutes a means of offering stimulating moments of sharing around issues of common concern [3,4,5]. These professional exchanges allow participants to consult each other with a view to improving their practices. This study intends to address these needs for training and consultation while questioning the approach the participating resource teachers have undertaken: How could a collaborative continuous education approach help improve teaching

practices and the sense of self-efficacy of resource teachers that work with students at risk and with learning difficulties in regular classrooms?

2. Conceptual Framework

The various educational reforms have introduced changes in educational practices of high school teachers. These changes have had several consequences particularly with regard to teaching content and teaching strategies. The adoption of these changes pose many challenges for teachers both in terms of developing their own professional skills as for the appropriation of continuing education strategies in accordance with local requirements and dominant paradigms. The gap between collective expectations and daily practices calls for a consistent reaction, including the renewal of means of support to enable teachers to favor students' success. The support teachers would receive to transform their interventions would have a positive impact on the integration of research base knowledge in their teaching practice [6,7]; it would help them overcome the challenge of translating theory into practice. According to Bandura [8], the personal sense of self-efficacy is the individual's belief regarding his or her ability to accomplish an academic task successfully. Thus, the quality of teachers' interventions is related to their personal sense of self-efficacy since it influences their thinking, their motivation and their behavior, regardless of their actual ability or level of competence. The sense of self-efficacy is an indicator of the quality or the effects of the training, since

teachers must first believe in their own abilities to modify their actions before putting changes into practice [9]. Researchers report that teachers who have a high sense of self-efficacy, among others, are more likely to innovate through the adoption of new educational and pedagogical practices that promote student success [10].

By introducing the concept of success for all students the Ministry of Education of Quebec [11] somehow redefined the role of the teacher as well as their responsibilities: "It is the responsibility of the school to offer all students, regardless of their talents, abilities or interests, the foundation for a successful social integration." To achieve this request, resource teachers should specifically support classroom teachers in their practices against changes: 1) implementing differentiated instruction; hence putting into practice a diverse set of teaching and learning strategies to enable learners to achieve, by different routes, common goals, and, subsequently, target educational success; 2) supporting teachers so that they can better accompany students in the development of their skills; 3) increasing the regulation of teaching practices based on students' needs; 4) seeking the collaboration of the different educational agents (management, teachers, resource teachers, and speech therapist) to create most favorable teaching-learning conditions and harmonize educational interventions.

Thus, the overall objective of this project is to improve teaching practices for students at risk or with difficulties in a context of inclusion. It specifically contributes to:

a) Train resource teachers to help struggling students while supporting high school teachers in creating teaching-learning activities whose aim is to help all students achieve success.

b) Ensure that classroom and resource teachers' professional practices share the same common strategies so as to help students succeed in the different school subjects.

c) Improve the collaboration between teachers and resource teachers and enhance their sense of self-efficacy.

To achieve these objectives, we offered resource teachers a two years educational support which favored the acquisition of theoretical knowledge of cognitive processes, students' at risk and with learning difficulties characteristics, and different types of pedagogy that have empirically demonstrated to be effective. A didactical support giving concrete assistance for classroom interventions was also offered. A strong element of the project was the sharing moments. Group discussions encouraged the exchange and the giving of feedback on classroom experience while both the teacher and the resource teacher were present and active in class. It also allowed the development of possible solutions to transform educational and support practices. Finally, an assessment was conducted to provide a better understanding on the impact of this collaborative training on resource and classroom teachers' personal sense of self-efficacy. The assessed tools were a questionnaire and semi-structured interviews.

3. Method

In different high schools, the effectiveness of resource teaching is often questioned due to teachers' lack of

specific training to help students at risk or with learning difficulties. In order to improve the services offered to them, we have worked with resource teachers to help them with their continuing education and thus become agents of change in their respective schools. Gathered in learning communities, resource teachers have participated in training courses on learning strategies, the characteristics of students at risk or with learning difficulties, and effective types of pedagogy to promote students' success: explicit teaching [12], strategic teaching, [13] development of graphic organizers, [14] and a work and questioning plan. In addition, they have received support and assistance to develop educational activities in the classrooms where resource and classroom teachers taught together at the same time. To address most effectively the needs of teachers and students targeted by this project, different support models were proposed. The models implemented involved organizational changes that are likely to serve as benchmarks for an innovative organization within inclusive education context. This type of training meets the iterative nature of the research-action-training, which emphasizes interactions, in depth consideration of the problem, the formulation of a need, the planning of the actions to be taken, the translation into action, and the assessment of the experience by [15] all the school team.

3.1. Participants

Our research was conducted between 2012 and 2014 in a Montreal North Shore School board in Quebec. A total of 29 resource teachers from three different high schools participated in the project. Resource teachers were divided into three groups, all of them already had between 5 and 22 years of experience. Their participation was voluntary and they all detained a regular teacher certification in their respective disciplines: mathematics, language, science, or history. In addition to teaching the discipline for which they held a university degree, their principal had assigned them the responsibility of monitoring some high school students at risk or with learning difficulties (from grade 7 to 11). This is what resource teacher do in Quebec. So it can be, for example, a history teacher who teaches 17 periods of history, civilization and contemporary world per week and works 10 periods as a resource teacher for students with learning difficulties.

3.2. Data Collection

Focus group discussions—two focus group discussions per year, for a total of four during the research project—, semi-structured interviews –for a total of eight interviews during the research project—and the researcher/trainer's logbook have been instrumental in documenting the continuous training and educational support offered to participant resource teachers. In addition, the resource and classroom teachers that participated in the research answered a questionnaire to assess their self-efficacy in terms of the teaching practices they implemented with students at risk or with learning difficulties.

3.3. Data Analysis

A content analysis of the statements collected during the focus groups and the semi-structured interviews was

performed by QDA Miner software [16]. The logbook kept by the trainer and the researcher has support the above mentioned analyzes. This data triangulation approach aimed to ensure the credibility of the research. [17] Additionally, teacher's sense of self-efficacy was measured both before and after the training and support intervention, with a French adaptation of the Ohio State teacher efficacy scale [18]. The full scale includes 24 items (Likert scale intervals 9) theoretically divided into three subscales scores to determine the efficacy in instructional practices, classroom management, and student engagement.

4. Results

The self-efficacy questionnaire was administered to obtain indicators on the evolution of the personal sense of self-efficacy of the participating teachers and resource teachers. It was also meant to complement the semi-structured interviews. Unfortunately, the total number of subjects at the pre-test and the post-test (N = 29 and N = 18) does not allow to draw statistical conclusions. However, these data permit to highlight some elements identified in the qualitative analysis. In addition, the data show that the overall resource and classroom teachers' sense of self-efficacy was already "quite high" at the beginning of the project (7.4 / 9) and it remained approximately at the same level afterwards. Similarly, the results for each of the three subscales remain 'high enough', even when we make a distinction between resource and classroom teachers (Figure 1).

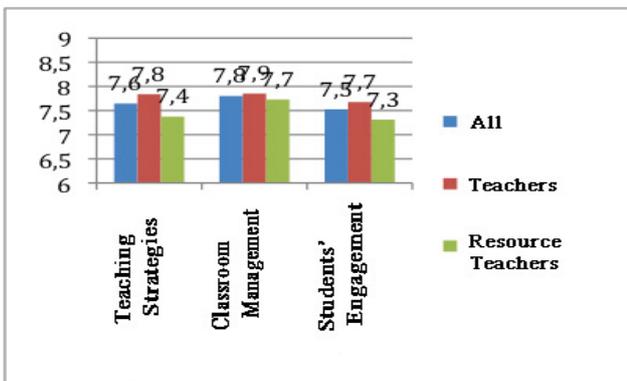


Figure 1. Self-efficacy questionnaire results (pre-test)

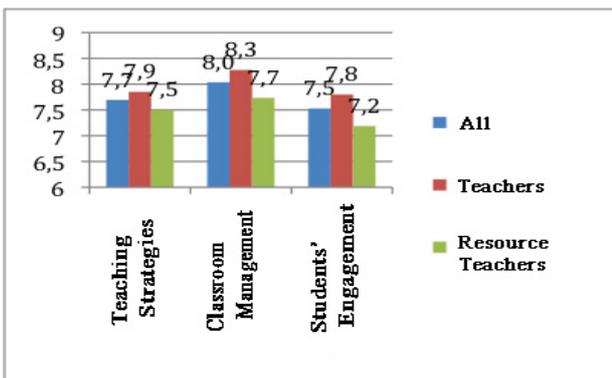


Figure 2. Self-efficacy questionnaire results (post-test)

On the other hand, it can be observed in Figure 2 that classroom teachers' averages at the pre-test and post-test

are always higher than resource teachers', especially in the post-test where the gap tends to increase up to (+0.6) for classroom management and students' engagement. For the latter, the gap shows that teachers and resource teachers' average was down 0.1.

Results analysis indicates there is a general improvement in the post-test, with the exception of the personal sense of self-efficacy to encourage students' commitment, which has remained the same. The next section analyzes and nuances the quantitative results using statements collected during the group discussions and the semi-structured interviews.

4.1. Impact of Collaborative Training Approach on Teaching Strategies

Results from the questionnaire regarding teaching strategies (Figure 2) show an increase of 4.5 –the largest between the pre-test and post-test –for the item 'Implementation of new teaching strategies' (Figure 3. Item 10) Collected qualitative data show that resource teachers would now feel more comfortable using new strategies as a result of their participation in the project: "What I understood working as a resource teacher is that there are strategies, approaches, that all school subjects share."

In general, both the resource and the classroom teachers with whom they worked proved to have an enhanced ability to "provide further explanation or other examples when students do not understand." Thus, the average for item 4 went up from 5.1 to 8.2 (+3.1). This success seems to be related to the use of graphic organizers, an innovative strategy that offers a visual representation of the subject matter, which translates ideas into text and allows metacognitive discussion with the students: "Graphic organizers were used to compare, design and study the new knowledge. They were also used to structure ideas and make summaries." "I could see the relevance of using graphic organizers in the different subjects." "I think they were a really useful tool. Students would take them out and consult them."

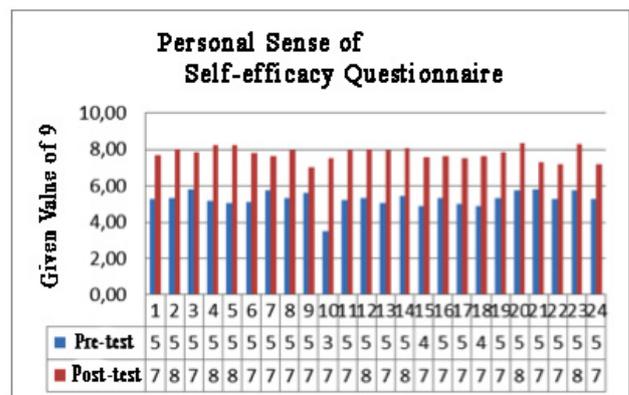


Figure 3. Self-efficacy questionnaire results by item

4.2. Impact of Collaborative Training Approach on Classroom Management

With respect to the classroom management, teachers reported they felt more capable to "Encourage students to follow the rules of conduct of the classroom." Figure 3, item 5 shows an increase of + 3.1, from 5.1 in the pre-test

to 8.2 in the post-test. Once again, the data collected during the interviews and the focus groups help us interpret these results. The *prima facie*, it is interesting to note that during training meetings, resource teachers expressed a negative perception of students with learning difficulties. For some teachers, students with learning difficulties were "...lazy, unmotivated, they do not care, they do not pay attention in class. They do not invest themselves in their tasks." Resource teachers condemned some students' tendency to 'avoid the task' by challenging the class rules. They talked about these students with a lot of resentment but felt compelled to help students whom, according to them, were not eager to help themselves: "The resource should be offered to those who want it." "To receive the service, students should participate in class, doing their academic tasks and they should come by their own will to the recovery classes." "Students must take responsibility for their own development." At this point, resource teachers thought they had little influence on students' engagement. They assumed they could help students only if they were motivated and seek support. Resource teachers expressed their lack of resources to intervene with students who were not engaged, "We need material to accompany students with difficulties, and strategies."

In spite of everything they had said at the beginning of the project, resource teachers have developed various tools during the training courses. Notable among them, an observation checklist and a questioning plan that have helped clarify their role in relation to the type of support they could provide targeted students and their teachers: "The grid allowed us to see that there were not so many students that disturbed in class"; "The questioning plan helped focus the students on what they had to do." Some resource teachers were now able to see a certain students' autonomy they did not see before: "Now, I frequently see students who have stopped asking me for help when I arrive, whereas they tell me: 'It's okay, I have just finished my questioning plan and I have found the answer to my question by myself' [...] when I correct their homework, I find they have done a nice job!" "The questioning plan forces students to question what they are told to do"; "Compelling them to verbalize, helps them internalize what they should do."

4.3. Impact of Collaborative Training Approach on Their Ability to Favor Students' Engagement

The questionnaire results show that resource and classroom teachers' global sense of self-efficacy seems to have remained the same after the training – an average of 7.5 over 9 for all respondents. However, many statements that were gathered during focus groups and semi-structured interviews show changes at this level. A few examples are: "The fact that I see students appreciate my contribution, makes me feel comfortable and happy when I go to the teaching-resource classes." or "Now when I work with my students, it is important for me to identify my pedagogical aim: What do I want my students to learn or what do I want them to do? Also, I wonder if the texts I have chosen are accessible to my students: Is the vocabulary too difficult? Should I use other formulations? The tool I now use allows me to verify that I have really

targeted what I am trying to teach." Also: "Before I used to force myself to do the same as all my colleagues. Now, I give myself more freedom to evaluate the competences developed by the students. Now the choices I make take into account my students and their needs." "Seeing my students' improvement, I am more willing to invest myself fully and consistently in my work as a resource teacher."

5. Discussion

The support seems to have had a positive impact on resource teachers with regard to their confidence in their ability to work with students at risk and with learning difficulties. Another study demonstrated that the lack of knowledge plays a predominant role in their beliefs and their attitudes towards students as well as their perceived self-efficacy to intervene with them [19]. The interviews reveal resource teachers have perceived the training they received as adequate and showing an understanding of their needs: "There is a follow-up and that's really interesting!" "The training gave us tools, the individual meetings gave us guidance. We felt motivated every time." "I received a lot of support from the trainer. The kind of support that can help a teacher transform her interventions." "It has had a positive effect, I have put into practice the knowledge I learned from recent research." In our study, we observed a reinvestment of the knowledge acquired during the action research-training [6,7] in the way teachers designed their classroom situations: "We decided to work the revision more intensively and tried to help students structure and organize better their note taking." Consultation events between resource and classroom teachers in teaching practices to support students' success are other elements that lead us to believe that the support was positive: "We targeted students, we consulted each other. We become a *real* resource when we know what they need."

As we mentioned in the previous section, from the very beginning of the project, resource and classroom teachers tended to see themselves as having a pretty good sense of efficacy to intervene with students at risk or with learning difficulties. However, it should be recalled that initially, their judgment was based on the belief that they were not the ones that had to motivate the students; it was the students who had to make all efforts. It is our hypothesis that when they were able to perceive the positive effects their teaching practices had on their students, their professional posture also changed: "I do not have the same vision as before." In a literature review, Carrington emphasizes the need to consider the impact of teachers' beliefs and attitudes towards students' diversity on their practices, offering afterwards a program of research, training and support for teachers to meet all students' diverse needs [20,21]. Their testimonies show that after the research they feel more like pillars of success for their students. They also want to continue to invest themselves and develop new teaching practices to contribute to their students' success. Several teachers have pointed out that they are pleasantly surprised with the results obtained by their students: "Teachers have told me that they can perceive their students are calmer and more in control during exams." They also declared: "Many students with learning difficulties have passed the annual ministerial

examinations.” “Most students will join regular classes next year.” A teacher said: “I have realized that it is our duty to motivate them, to engage them in learning.” Several studies report that teachers with a high sense of self-efficacy, among others, are more likely to innovate through the adoption of new educational and pedagogical practices that promote students' success [22]. In particular, teachers' confidence in their ability to teach students will influence their behavior so that they will be eager to implement new strategies to help students succeed. In addition, studies have shown positive correlations between the sense of efficacy and the attitude towards inclusion [23,24,25].

This new position has been gradually built up over the two years of this research-action-training. Gradually, as they were able to envisage solutions to counter the dissatisfactions they face at work, they could better define their role within the school, their professional identity started to take shape and they were more concretely embodied in their professional practice. On the other hand, to allow other school teams get engaged in a similar process of continuous and collaborative learning, we consider it important to emphasize the importance of clarifying certain organizational elements such as task scheduling and the role assumed by resource teachers; elements that sometimes acted as barriers to collaboration.

At the beginning of the project, some schools shared the teaching periods among all classroom teachers, thus assigning to each of them 2 periods per 9 day cycle, which seemed sufficient: “We are a lot of teachers doing resource teaching, but for few periods of 60 minutes.” This type of work distribution limits resource teachers' engagement. In addition, teachers' schedules do not allow resource and classroom teachers to collaborate, as a teacher said, “The free time for resource teachers and classroom teachers to meet should be coordinated together.” Another one explained: “Our first goal was to reinforce team work, but our schedules did not allow us.” The willingness of classroom teachers to welcome their colleagues, the resource teachers, in the classroom also proved to be an obstacle for the deployment of the resource teachers: “They all wanted us to be in the class, but when I was there, they would not pay attention to me. I spent many periods just listening to explanations or marking assignments.”

At the beginning of the project, the most common intervention models adopted were to help students outside the class in small subgroups and organizing individual meetings for behavioral follow up: “At first, we had considered helping the students in their own class, but it was sometimes difficult to go to certain classes, and we thus decided to make subgroups, we had to readapt.”

6. Conclusion

At the end of the project, resource teachers were interviewed and they validated the usefulness of the meetings and the support provided in class. Taking into account the needs of special education students as well as those of regular teachers allowed resource teachers to define their roles in order to provide a service that meets the educational objectives. Thus, without replacing the classroom teacher, the resource teachers improved the

degree of students' autonomy and they developed teaching practices that promote the regulation of learning. The meetings made it possible to exchange ideas and find new solutions for all the participants: “Students can feel that we work together like a real team.”

In fact, the more the new strategies implemented by resource teachers yield positive results, the more confidence they acquired in their ability to intervene with the students. We believe that the sense of self-efficacy of resource teachers has been strengthened by the observation of the modeling performed by the researcher/instructor (vicarious learning) and their own classroom successes, which have in turn influenced their feeling of self-efficacy. They learned strategies and teaching methods (graphic organizers, questioning plan) to support student learning. Changes have also been observed in the students' behavior in the classroom. They were more autonomous, more engaged in their learning process and seemed to feel more in control when facing a task. According to Bandura [28], these items positively affect the sense of efficacy and influence their job satisfaction and motivation. One of the participant stressed: “I feel that it was a positive year, I have the feeling that I have truly helped them and, the best of it, is that I did it without getting exhausted. I think the results were beneficial.” Before the training, some resource teachers felt powerless, poorly equipped and hardly dared to speak in class. It is also worth mentioning that during the first year of the project, there was a high turnover. The involvement and support have been a catalyst to the sense of efficacy while helping to improve professional satisfaction.

On completion of the two years of this action-research-training, we can see more than one positive effect on the transformation of teaching practices. Our approach has helped resource teachers to better assist students with difficulties, to support classroom teachers in creating teaching-learning activities conducive to all students success, to safely secure classroom and resource teachers' practices around common strategies that would help students succeed in academic disciplines, and also to establish closer cooperation between the resource and classroom teachers in order to help at risk students and with learning difficulties by increasing exposure to ‘success factors’. We recommend maintaining or making yet more frequent, the moments of exchange and discussion so that cooperation can continue and teaching practices can be better adapted to the needs of students included in regular classes in high school.

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