

## Collective Teacher Efficacy Beliefs: a Critical Review of the Literature

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### Abstract

*Collective teacher efficacy is the perception that a group of educators have about the capacity of influencing the academic performance of the students. This article has as objective the systematic review of researches about collective teacher efficacy, analyzing their main results and suggestions for future studies. For such aim, researches for articles published between 2000 and 2013 were performed in the database of CAPES journals. The results indicate that the collective teacher efficacy is directly related to the academic performance of the students, however, other contextual variables may also influence the collective beliefs, such as socio-economic disadvantages.*

**Keywords:** collective efficacy, teachers, systematic review

### 1 Introduction

The contribution of school organizations, their dynamics and main characteristics to the academic success of their students has been being object of interest of several researchers (Bandura, 1986, 1993; Bandura, Lindzey, & Runyan, 2007; Klassen, Tze, Betts, & Gordon, 2010; Kurz & Knight, 2004; Tschannen-Moran, Hoy, & Hoy, 1998). One institutional characteristic that has been being related to the academic development of the students is the collective teacher efficacy, as well as the satisfaction at work and the confidence in the colleagues (Bandura, 1993, 1997).

Collective teacher efficacy is the perception that a group of teachers have about the ability of influencing the academic performance of the students. Based on the Bandura's Social Cognitive Theory (1977, 1986, 1997), this construct is associated to the way people exert some control over their own lives, or to the beliefs in their own capacities to produce certain action. The Social Cognitive Theory considers the beliefs of efficacy as the base of the human agency, which operate within multiple socio structural influences. Therefore, the collective efficacy refers to the exercise of the action in the ambit of the group, being comprehended as the shared beliefs by the body of teachers to produce effects over determined actions (Bandura, 1997).

The collective teacher efficacy, in social organization, is constituted as product of the dynamic interaction between the educators, being an important property of the school, considering the positive association with the academic results (Bandura, 1993, 1997). Such notion does not restrict itself to the sum of individual faiths of each component of the group, but in the comprehension that the shared beliefs in the level of group can favor expected results. Some elements of the school context may contribute to the development of the collective teacher efficacy, so that they are considered important sources of information to the construction of those beliefs.

### 1.2 Collective Teacher Efficacy Sources

Bandura (1996, 1997) postulated four sources of information about the beliefs of efficacy: *the direct experience, the vicarious experience, verbal persuasion and the affective and physiological states*. The mode such sources are interpreted is fundamental, because the same experiences may result in beliefs of different efficacy, depending on the given interpretation (Bandura, 1992, 1997).

The first source is the *direct experience*, which is characterized by the experiences interpreted as successful, these perceptions generally increase the confidence; experiences interpreted as unsuccessful commonly lower the confidence. A resilient sense of collective efficacy probably requires experience in overcoming difficulties through persistent effort (Goddard, Hoy, & Hoy, 2000). Understanding that this is a truth for the schools, the last school successes trend to elevate the faith of the body of teachers in their collective capabilities, while the failures from the past are inclined to undermine the group beliefs (Goddard, 2001).

The second source is named *vicarious experience* and is related to what we learn through the others experience. The observation of successful practices increases the observers' beliefs, who are able to apprehend themselves as people with the ability to well perform similar activities that guarantee their success (Bandura, 1994).

The third source is the *social persuasion* and involves verbal contributions from others, such as colleagues, supervisors and administrators, which serve to strengthen the belief of a person in herself ability and in the capacity of the group to achieve a desired level of performance, mainly when there is the necessity of facing challenges and overcoming of difficulties (Tschannen-moran & McMaster, 2013). Lectures, workshops and *feedback* may influence educators. The more cohesive is the body of teachers, the bigger are the possibilities of persuading the group by arguments (Goddard et al., 2000).

Finally, the *affective and physiological states* are also sources of information of collective teacher efficacy (Goddard, 2001). According to Bandura (1997), by judging their own capabilities, people partially trust on information transmitted by physiological and emotional states. For example, high levels of stress may weaken the functioning of the group, lowering the confidence in the capacities of the members among themselves. Moderated levels of excitation, when identified as a challenge, may improve the accomplishment, focusing the attention and the energy in the task, on the other hand high levels of excitation may be perceived as a menace capable of interfering negatively in the use of self skills and capacities (Tschannen-moran & McMaster, 2013).

It is important to emphasize that the sources of efficacy indicated by Bandura (1986) help to construct both individual beliefs (self-efficacy) and collective beliefs. While the collective teacher efficacy refers to the beliefs one has in the capacity of the group he belongs, the self-efficacy refers to the beliefs of the individuals over their own capacities to achieve successfully a particular line of action, aiming to reach established goals.

Facing the presented context, the current study analyzes the main results of 30 articles gathered in systematic review, from the database of CAPES –Periodic in order to build a landscape of researches about collective teacher efficacy.

## 1.2 Strategies for Research and Analysis

In order to achieve the present survey, some descriptors have been defined related to thematic in question, which generated 36 possibilities of researches starting with their intersections, namely: collective efficacy, organizational climate, collective efficacy beliefs, teacher collective efficacy, collective perceptions, social cognitive theory, teacher efficacy, scale beliefs, teacher performance.

Aiming at the delimitation of the research, some inclusion criteria were predetermined, specifically: having in the title the term collective efficacy or *eficáciacoletiva*; being complete and available; only articles from the last 10 years (2000 to 2013); articles in English and Portuguese; have been revised by pairs; and having as focus to investigate the construct of collective teacher efficacy. All of those found that did not obey to the criteria of inclusion were excluded.

Only 30 articles that met to the criteria of inclusion were found in the researches. It was possible to find 70% of the articles from the descriptor Collective Efficacy, the remaining descriptors numbered percentage smaller than 7%. For the data analysis the results were organized on spreadsheets in the software Microsoft Excel (2010).

The data was organized considering the main results and were structured in thematic categories, specifically: (a) collective teacher efficacy (CTE) and students' performance; (b) CTE and self-efficacy; (c) validation and analysis of scales; (d) sources of information of CTE; (e) technical and administrative support, goals and compromise; (f) satisfaction at work and CTE; (g) confidence in the co-workers and CTE.

It is noteworthy that for not being exclusive categories, one same article may have investigated more than one thematic, therefore, the sum of percentage of incidence indicated in the presentation of results exceeded the total of 100% of analyzed articles.

In the analysis of data, the qualitative and quantitative approaches were used. In the quantitative approach, the aim was to compare percentage and make the distribution of frequency of the data. In some cases, the results were demonstrated by numerical representation on table (Cozby, 2003).

In the qualitative approach it was took as base the content analysis of Bardin (1975). This is a method frequently adopted in qualitative researches, however it may also be used in quantitative researches. The analysis of content involves initiatives of explicitness, systematization and expression of the content of messages.

Thus, there was a transit between two poles of scientific investigation: the rigor of objectivity and the fecundity of subjectivity. Those factors implied the definition and treatment of the qualitative and quantitative indicators (Minayo&Sanches, 1993).

## 2 Results and Debate

The data analysis revealed seven thematic categories, specifically: collective teacher efficacy (CTE) and students' performance; CTE and self-efficacy; validation and analysis of scales; sources of information of CTE; technical and administrative support, goals and compromise; satisfaction at work and CTE; confidence in the co-workers and CTE. In table 1, it is possible to visualize the percentage and the frequencies of these thematic subcategories incidences.

**Table 1: Frequencies and Percentage of Thematic Subcategories**

Subcategory	Frequency	Percentage
CTE and students' performance	12	39%
CTE and self-efficacy	8	26%
Sources of information of CTE	6	20%
Validation and analysis of scales	5	16%
Technical and administrative support, goals and compromise	5	16%
Satisfaction at work and CTE	2	7%
Confidence in the co-workers and CTE	1	3%

Note 1: CTE – Collective teacher efficacy

### 2.1 Collective Teacher Efficacy (CTE) and Students' Performance

The category *collective teacher efficacy (CTE) and students' performance* made a total of 39% of the articles found, as it is possible to see on table 1. The articles related to this category mainly aimed to investigate the relation between CTE and the students' performance. The central results connected to this subgroup indicated that 100% of the studies found a positive correlation between this construct and the students' performance.

The researchers point that the collective teacher efficacy may influence the performance of students, however, in some cases, these collective beliefs are able to explain only in a moderate way the variation on the performance, because other facts can exert influence in the process of teaching-learning, such as socioeconomic aspects (Cybulski, Hoy, & Sweetland, 2005; Goddard, 2001; Goddard, Logerfo, & Hoy, 2004; Hoy, Sweetland, & Smith, 2002; Moolenaar, Slegers, & Daly, 2012).

In the research of Moolenaar et al. (2012), a interesting finding revealed that the beliefs of collective efficacy seemed to be beneficial to the academic achievements of the students in language, but not for school results regarding mathematics. However unexpected, this data is justified, according to the authors, by social, economical and political questions which involve the local educational system where the data were collected. In this specific case there was much more political and financial investment directed to the practices of reading than to the teaching of mathematics. It is noted, therefore, that the structure of educational systems may also explain, in part, the variation in the academic performance of the students.

Another important finding in the *collective teacher efficacy (CTE) and students' performance* category is the influence of sociodemographic and socioeconomic disadvantages for the lowering or elevation of collective teacher efficacy beliefs and their consequences in students' performance. It is believed that face to elevated collective beliefs the negative effects of sociodemographic aspects are reduced, including over the students' performance (Parker, 2006).

For that reason, it is important to invest in the elevation of beliefs, once, it is, probably, easier to change levels of collective efficacy beliefs than sociodemographic aspects, for there are political and structural implications involved in this process (Parker, 2006). It is necessary to consider the probability that teachers with elevated collective beliefs can positively influence the performance of the students, despite the schools' socioeconomic disadvantages (Cybulski et al, 2005).

## 2.2 Collective Teacher Efficacy (CTE) and self-efficacy of Teachers

The thematic category *collective teacher efficacy (CTE) and self-efficacy of teachers* made a total of 26% of the studies found (8 studies). In this group the focus of investigation was the analysis of the relation between collective efficacy and self-efficacy of teachers. The results indicated that 100% of the articles found positive correlation, from moderated to strong, between the two constructs (Chan, 2008; Gibbs & Powell, 2012; Kurt, Duyar, & Çalik, 2012; Lev & Koslowsky, 2009; Parks, Solmon, & Lee, 2007; Viel-Ruma, Houchins, Jolivette, & Benson, 2010a; Zambo & Zambo, 2008).

It was discovered that the collective efficacy foresees some aspects effectively specific of teachers' self-efficacy in distinct situations, for example, the self-efficacy for the management of the class among the members of the team. In this specific case, it is understood that the elevated sense of personal efficacy may influence the way how teachers administrate the activities in class, conferring them bigger domain over situations related to school discipline, strategies of teaching, control in adversities, among others. This means that groups of teachers with elevated beliefs of collective efficacy, trend to be, individually, more efficient in the management of the class (Lev & Koslowsky, 2009).

Kurz and Knight (2004), in their investigations, determined that the relation between collective efficacy and self-efficacy is only moderated, however they understand that it is reasonable to say that both constructs are interdependent. These results indicate that distinct forces in the work place shape the collective efficacy and the self-efficacy. Different perceptions from teachers about their own beliefs in the capacity of generating significant changes and their beliefs in the capacity of co-workers may contribute to provoke a difference between the collective and personal beliefs of teachers.

The articles that investigated the relation between collective teacher efficacy and self-efficacy also analyzed other variables on group, such as: influence from the institutional environment (Parks et al., 2007; Viel-Ruma et al., 2010a) and professional performance (Zambo & Zambo, 2008).

In the researches of Parks et al. (2007) and Viel-Ruma et al. (2010) was possible to verify that the school environment can influence the levels of collective and individual beliefs on teachers' efficacy. Aspects as interpersonal relations with colleagues, with superiors, parents and students; physical structure; geographical location (urban and rural zone); technical support, among others, may affect the way teachers think about the group's capacity concerning the achievement of the proposed institutional objectives.

The personal and collective beliefs have also been correlated to the professional performance. Zambo and Zambo (2008), noticed in their studies that the personal competence trend to be more strong as far as teachers gain more expertise and, consequently, the sharing of said beliefs elevates the collective teacher efficacy. Yet, it was noticed that the participation in program of professional training increases the perception of personal and collective competence.

The studies in this category confirm, yet, that the collective teacher efficacy and self-efficacy are distinct constructs, and that the four sources of information (the direct experience, the vicarious experience, verbal persuasion and the affective and physiological states), which generate self-efficacy also constitute the basis of collective beliefs.

## 2.3 Sources of Information of CTE

The category of *Sources of information of CTE* made 20% of the studies, which presented the direct experience, the vicarious experience, affective states and verbal persuasion as elements of the collective efficacy beliefs' construction. It was identified that the experiences of success (domain) are the more important ways of construction for the collective teacher efficacy in schools (Adams & Forsyth, 2006; Goddard, 2001).

Hoy et al. (2002) and Cybulski et al. (2005) noticed that the vicarious experiences also have strong influence over the constitution of beliefs, because to watch the practices of success and the fulfillment of co-workers promote the reinforcement of personal and collective efficacy.

It is known that the perceptions of efficacy are determined by judgment of capacities, environmental conditions and expected results. This suggests that the judgment of the group capacity is also constructed from contextual factors, which affect the achievement of goals. It is argued that the perceptions of efficacy are influenced by external and internal variables in the form of sources of information (Adams & Forsyth, 2006).

It was signed that no study analyzed exclusively and directly the four sources of information indicated in Bandura's Social Cognitive Theory (1986). Adams and Forsyth (2006) centered their analysis in what they consider immediate sources of information (task's analysis and evaluation of competences). They suggest that the Bandura's four sources of efficacy are categories that report themselves to remote situations, past and, therefore, they present other two categories of information (task's analysis and evaluation of competence), supposedly originators of collective teacher efficacy beliefs.

Although they do not contest the significant influence from the sources presented by Bandura (1997), Adams and Forsyth (2006) defend that a magnification and a reclassification of sources of efficacy are necessary in order to not include only the past experiences, but also the immediate contextual variables, which affect the "here and now" of the school (Adams & Forsyth, 2006).

#### 2.4 Validation and Analysis of Scales

The thematic category *validation and analysis of scales* made up to 16% of found articles. The studies in this area aimed to investigate the structure of instruments of collection (Goddard et al., 2000; Klassen, 2010; McCoach & Colbert, 2010); *Collective Teacher Efficacy Scale – CTES (long form)* validation process of Goddard et al., (2000); *Collective Teacher Efficacy Scale – CTES (short form)* validation (Goddard, 2002) and the validation and analysis of *CTBS – Collective Teacher Beliefs Scale* (Schechter & Tschannen-Moran, 2006).

The *Collective Teacher Efficacy Scale (long form)* was validated through the pilot study performed by Goddard et al. (2000), over a sample 46 teachers belonging to 46 middle schools from United States. The participant schools were framed in two predetermined categories by the researchers, namely: institutions of low level of conflict and institutions of high level of conflict. The Likert type scale (1 to 6) of 21 items reached one Alpha of Cronbach = 0,96. To verify the validity of the scale the researchers used the analysis of the items made by specialist judges in the field. After the necessary alterations the items were submitted to a second group of judges constituted of teachers to verify their level of comprehension. It has also been verified the validity of the construct and the criterion by statistical factor analysis.

Goddard et al. (2000), McCoach & Colbert (2010) determined that the scale *CTES – Collective Teacher Efficacy Scale (long form)* with two factors – task's analysis and evaluation of competences is valid and reliable to measure the collective teacher efficacy beliefs. This model suggests that the collective teacher efficacy may be measured both in relation to internal dimensions (evaluation of competence), as in external dimensions (task's analysis). With the information obtained through this scale, it is possible to identify the aspects, which will need improvement in the internal and external dimensions of school routine, aiming to an elevation of collective teachers efficacy beliefs.

The researchers found that the scales with two factors have higher capacity to measure the collective efficacy beliefs than the scales with just one factor and, which unify the internal and external dimensions referring to the task's analysis and the evaluation of competence. It is highlighted, however, that the *CTES (long form)* of Goddard et al. (2000) has some limitations, making necessary more studies to perfect this instrument, it is understood that the items of the scale are not well explained (McCoach & Colbert, 2010).

The study of Goddard et al. (2000) presented important contributions for the researchers of collective teacher efficacy in what refers to data collection instruments, in this case, more specifically related to the application of scales to measure the beliefs. They suggested that collective efficacy beliefs are an extension of teacher's self-efficacy to the organizational level. They defended that the direct experiences, vicarious experiences, social persuasion and affective and physiological states are processes through which the group of teachers evaluate the tasks of teaching and the body of teachers' competences. Both domains (task's analysis and evaluation of competence) are measured to determine if the body of teachers has capacity to obtain success in the process of teaching-learning.

Goddard (2002) performed another research to explore the construct of collective teacher efficacy, this time the focus was to validate a short version of *CTES – Collective Teacher Efficacy Scale (long form)*.

The short version presents 12 items, which were highly correlated to the 21 items of the long version, however the omission of 43% of the items generated little changing in the instrument.

The *CTES – Collective Teacher Efficacy Scale (long form)* was validated through the pilot study accomplished by Goddard (2002), with a sample of 452 teachers belonging to 47 middle schools, from Michigan and Ohio, in the United States. To arrive at the 12 items of the short version of the said scale, it was made an analysis of psychometric data found in the original version and, after, necessary adjustments were made in order to balance the quantity of items by conceptual factors. The validity of items construction; the correlation between data from the long and short scales ( $r=0,98$ ) and the predictive external validity ( $r=0,55$ ) was verified. The *CTES – Collective Teacher Efficacy Scale (long form)* is the Likert type (1 to 6) and presented Alpha of Cronbach=0.94.

As expected, the *CTES – Collective Teacher Efficacy Scale (short form)* was confirmed as valid and reliable to measure the collective teacher efficacy beliefs, it demonstrated to be more efficient than the long version, because it corrected the difference in the number of items by factor, making the structure of the scale more balanced.

Klassen (2010) examined the factorial structure of *CTBS – Collective Teacher Beliefs Scale* of Tschannen-Moran & Barr (2004). The *CTBS* was created to reflect the personal perceptions over the collective capacities to influence the performance of students. The study of Klassen (2010) indicates that the *CTBS*, a scale of two factors – *strategies of teaching and discipline of students* – is valid and reliable to measure collective teacher efficacy beliefs.

Schechter e Tschannen-Moran (2006) performed a comparison between the English version (USA) of *CTBS*, and a Hebraic version (Israel), for this purpose an Israeli sample of 876 teachers from urban middle school was used. The comparison between the versions revealed remarking resemblances, providing support to the conceptual structure of the scale. Therefore, this study contributed for the, still small, but growing body of researches about collective teacher efficacy. This international perspective reinforces the construct's validity of the scale and its two dimensions (strategies of teaching and discipline of the students), adding more support to the idea of a multidimensional collective teacher efficacy (Schechter & Tschannen-Moran, 2006). In general terms, the studies that treated the validation and analysis of scales aimed to investigate secondarily the relation between collective teacher efficacy and students' performance.

## **2.5 Technical and Administrative Support, Goals and Professional Compromise**

The thematic category *technical and administrative support, goals and professional compromise* totaled 16% of the investigated articles. The results of these studies indicated that the technical and administrative support, the reach, or not, of the institutional objectives and the level of compromise of the teachers' team influence the collective teacher efficacy beliefs (Kurt et al., Kurz & Knight, 2004; Lev & Koslowsky, 2009; Ware & Kitsantas, 2007).

Ware and Kitsantas (2007) noticed that the technical and administrative support and the establishing of institutional goals might be associated to the development of collective efficacy beliefs, this agrees with the Social Cognitive Theory and with other results found in researches about this thematic. It is understood that, when school administrators offer a *feedback* of support to teacher, collaborating with suggestions and orientations, the body of teachers becomes more disposed to develop a sense of collective compromise with the institutional objectives and the performance of students. It was discovered that the collective teacher efficacy can influence the way by which the school is managed by leaders and this context, consequently, will favor the managing of the class, strengthening the teachers' compromise. For that, the offering of orientations in the work environment for the achievement of the pedagogical practice grows the compromise with teaching.

Ware and Kitsantas (2007) indicate in their studies that the compromise is reinforced when teachers believe that they can obtain support from principals to influence politics related to education and to have control over the teaching-learning process. For this purpose, it is important that the school administrators inform the group of teachers about the institution plans, making the fulfillment of institutional rules in a democratic way and informing what is expected from teachers, individually and collectively, by conversations about the practice of teaching and through the professional recognition. These data show that the efficacy beliefs of the principal may influence the collective beliefs of teachers. It is also suggested to directors to define objectives and to engage the body of teachers in strategies that make easy the communication (Ware & Kitsantas, 2007).

## 2.6 Satisfaction at Work and Collective Teacher Efficacy

The category *Satisfaction at Work and Collective Teacher Efficacy* made up to 7% of the studies, which had as objective to analyze the way how collective beliefs, the stress at work and the cultural dimensions of collectivism and individualism are associated to the satisfaction at work (Klassen & Chiu, 2010; Viel-Ruma, Houchins, Jolivet & Benson, 2010).

Klassen et al. (2010) examined the relation between satisfaction at work, collective teacher efficacy and stress. They realized that cultural contexts point, specifically, significant differences in the roles developed by collective efficacy, stress in the school environment and their connections to satisfactions at work. This study was one of the first to examine the collective beliefs of teachers using one intercultural structure, investigating data from different countries (two countries from North America – Canada and United States, and one from East Asia – Korea). They conclude that the researchers about teacher motivation will only have practical value once their findings are understood as being limited by a series of cultural factors, which must be considered and comprehended.

In Klassen et al. (2010), it was found that, despite the fact of belonging to more individualist cultures, the Canadians and North Americans present higher levels of collective efficacy than the Korean teachers. It was noticed that the collectivist culture of Koreans is a predictive factor of satisfaction at work. The same relation was not found in North American teachers, what is justified by the presupposition sustaining the notion that cultures, which value more the group than the individual, for being collectivist, are able to increase the level of satisfaction at work, because they can develop an organizational climate more cooperative and empathic than the individualist cultures.

In the of Korean teachers, this is given, perhaps, because the relation between the variables is a result of an cultural emphasis stronger in avoiding conflicts and improving the group harmony, while the North American teachers can concentrate in individual needs. Thus, considering the cultural aspects of each society, it was concluded that to increase the collective North American teacher efficacy it is necessary to provide administrative support, conditions to control the teaching environment and the opportunity to influence the educational politics, which can consequently reduce the stress and increase the satisfactions at work. In order to develop the collective Korean teacher efficacy, on the other hand, it is required to elevate the satisfaction at work as well as to reduce the stress (Klassen, Usher, et al. 2010).

It has been noted that the collective efficacy, the stress and the satisfaction at work are variables that can influence each other. The teachers, who are very pleased with their experience of work, describe higher level of collective efficacy beliefs (Bandura, 1997, 1998; Klassen, Usher, et al., 2010).

The research of Viel-Ruma et al. (2010) indicated that the satisfaction at work is directly related to permanence in the teacher career, while the dissatisfaction generates waiver. It was also noticed that the collective teacher efficacy influences the level of satisfaction. The results suggest that the investment in improvement of collective efficacy beliefs might elevate the level of satisfaction at work and, consequently, improve the performance of the teacher.

## 2.7 Confidence in the co-workers and CTE

The category confidence in co-workers and collective teacher efficacy totalized only 3% of the studies. The focus of the investigation was to verify the function of confidence to the construction of CTE, analyzing comparatively Western and Eastern cultural contexts.

In relation to the concept of confidence there is a radical difference between West and East. As confidence is a notion specifically related to cultural structure, it is manifested in different ways in individualist and collectivist communities. Despite the expectation in a stronger level confidence in collectivist communities, the study revealed that individualist cultures, as the western ones, had a higher degree of generalized confidence. In the West, the positive belief in the pairs trend to be emphasized having as base the supposition that the people, who work in the same institution share the same goals and organizational values and, for that reason, it is safe to have formal confidence in the colleagues. In Eastern societies, for example, the Chinese, however, the personal confidence is a significantly strong factor, but to conquer the trust in colleagues it is necessary a long time of reciprocal relationship inside an institution (Lee, Zhang & Yin, 2011).

Lee et al. (2011), explored the way how the variables of confidence in the body of teachers and collective efficacy can affect the compromise of teachers in relation to the students' performance. It was noticed that these variables are positively correlated in the school environment. It was understood that by creating an atmosphere of collaboration, of mutual trust, the collective teacher efficacy is improved and the compromise of teachers is elevated towards the students. A collaborative environment of work offers opportunity for the teachers to share their experiences about teaching, to quest institutional placements, to obtain feedback from colleagues and make a good use of resources from technical and administrative support in the teaching-learning process. All these aspects improve the personal and collective beliefs about teaching strategies and the students' discipline.

The results from studies of Lee et al. (2011) reinforce the findings of Goddard et al. (2000), which indicate that the confidence in co-workers is strongly correlated to the collective teacher efficacy. This meaning that teachers who trust in their colleagues present high collective efficacy.

Lee et al. (2011) highlight that the continuing professional training of teacher in school has positive role in the formation of collective efficacy beliefs. The argument that the school must work as a community of teacher learning has been gaining academic support and, in general, is well accepted by teachers and administrators, because it helps to establish values and institutional goals, collective responsibility, reflexive pedagogical practices, collaboration and the promotion of continuous professional training in the individual and collective levels. This school environment of continuing training of teachers performs an important role in the construction of collective capacities as well as in the improvement of the achievements of students.

### **3. Final Considerations**

The present systematic review has some limitations, which derive from the chose of criteria of inclusion. In this study, the search for articles was performed only in the database of *Portal de Periódicos – CAPES* (Brazil) that has great collection both on national as on international level. It is suggested for future researches to amplify their searches using another database.

From the results of the present systematic review it was possible to identify some gaps in this field of study that need more attention by part of the researchers, aiming to a better comprehension about the explored construct. Among these it is highlighted the relation between collective teacher efficacy and the performance of students. However the majority (39%) of studies analyzed have explored this relation, it is noticed the need of deepening, exploring these constructs in various contexts, for example, in schools with great socioeconomic disadvantage, with high poverty, as well as in high schools. The researches have been frequently being developed in middle schools.

It was also verified that it is imperative to perform more studies analyzing the sources of information in the collective teacher efficacy, expanding the comprehension of the contextual variables that help to constitute these sources and that interfere in the tasks of teaching. Future researches will be able to examine the relation between contextual variables, sources of information and collective efficacy beliefs.

The necessity of developing and improving more instruments of data collection to measure the beliefs was determined. Some measures have been presenting problems in the validity of the construct of the items and in the adequacy to the indicated orientations of Bandura. More investigations are yet necessary over the relation between sociodemographic, cultural and economical variables and the collective teacher efficacy.

The identification of methodological characteristics also points that it is important to enlarge the studies with qualitative approach and longitudinal nature. Researches that approach the qualitative nature of data will be able to contribute significantly with the comprehension of data produced by researchers on the theme.

Another aspect in need for attention is the relation between personal beliefs and the collective teacher efficacy beliefs. More studies are necessary to verify the level of interdependence between these two constructs as well as how they act in the school routine.

The present systematic review results indicated that it is still needed the development of studies to explore other gaps, such as: analysis of beliefs of teachers in college, the impact of formation of teachers in collective beliefs; more studies analyzing the implications of burnout in the teachers' collective beliefs of teaching; more studies exploring the variables of stress, satisfaction at work and social networks.



In summary, this review allowed to notice that there is shortage of articles related to the theme of collective teacher efficacy. If by one side this made the searches more difficult, by other it indicates the necessity of more researches to describe this phenomenon and its implications, once it has a recognizable important role on the performances of teachers and students. In this sense, the intention of the present review is to wake the interest of the scientific community in general, with the objective of developing more studies about this theme.

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