

Original article (short paper)

Teacher efficacy beliefs during the practicum experiences in physical education classes

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Abstract—Previous studies focusing on teacher education have highlighted the role that supervised practicum plays in the construction of future teachers’ personal beliefs, including self-efficacy beliefs, yet there remains a need to understand which learning experiences contribute to the constitution of this belief during the supervised practicum. Our objective was to identify situations that influenced student teachers’ judgment of self-efficacy during the development of supervised practicum. This exploratory and descriptive documentary research analyzed 18 reflective portfolios produced by student teachers’ during their supervised practicum in a physical education teaching program course. The experience of teaching *in locus* and the opportunity to experience everyday school-life were recurring situations in 15 out of the 18 analyzed portfolios. The results led us to believe that offering student teachers the possibility to meet and experience the teaching environment in advance contributed positively, through enactive mastery experiences, to the building of their self-efficacy beliefs concerned to teaching.

Keywords: curricular supervised practicum, teachers’ efficacy beliefs, physical education.

Introduction

Studies regarding teacher education, particularly those focused on teaching practice, have documented the positive effects of training on the acquisition of experiences, the construction and reconstruction of knowledge, competencies and abilities, as well as the development of the identity and beliefs necessary for future teachers¹⁻³.

Brazilian education laws state that in the field of teaching education, the curricular supervised practicum must begin in the second half of undergraduate courses and must offer students who are still in their initial phase of training meaningful experiences that foster professional development^{4,5}. Practicum is, therefore, a distinctive phase of the teachers’ initial education, which enables to develop reflective capabilities in the future⁶.

According to the current literature, practicum experiences allow student teachers the opportunity to transfer teaching skills into practice (and reflect about this practice) within a relatively controlled context and under supervision. Other remarkable characteristics of student teachers’ learning process have been described. One such characteristic refers to the influence of first teaching experiences on new teachers’ construction of knowledge, competencies, and professional identity and on the establishment and strengthening of beliefs^{3,7}.

By the completion of their initial education experience, student teachers must be equipped with certain basic skills and abilities that foster effective and autonomous professional development. However, if novice teachers are unable to make effective use of their new skills and competencies, then these new abilities are essentially useless. Bandura asserted that individuals must be capable of organizing and systematizing their skills and abilities to create and execute courses of action in the pursuit of particular achievements. Therefore, “if people

believe they have no power to produce results, they will not attempt to make things happen⁸. As a consequence, personal beliefs assume a major role in the choice of whether to perform a particular activity^{8,9}.

Among personal beliefs, self-efficacy has a central role as it enables individuals to act according to their self-beliefs and based on what they believe themselves to be capable of achieving¹⁰. Therefore, beliefs are most flexible during one’s initial period of development^{7,8,11}. In other words, while students are still attending a teacher training program, their beliefs, competencies, and abilities can easily be shaped and changed in a way that leads them to believe that their efforts and engagement could make a difference in their teaching practices.

Teacher Self-efficacy

Self-efficacy beliefs are a component of social cognitive theory, as postulated by Bandura⁹, who considers it to be the key construct of human agency. Therefore, self-efficacy “operates through its impact on cognitive, motivational, affective, and decisional processes”¹². For example, teachers prefer to teach content that is more familiar rather than following prescribed curriculum content. Moreover, if teachers do not believe that they are capable of coping with the demands of teaching, they may choose to abandon their careers prematurely.

However, there is not a general self-efficacy belief that can be employed in all situations and social contexts. Rather, a series of beliefs in one’s personal capacity is activated in different domains.

In the domain of teaching, self-efficacy is defined as a teacher’s “judgment of their capabilities to bring about

desired outcomes of student engagement and learning, even among those students who may be difficult or unmotivated”¹³. In other words, the judgments teachers make about their own capacities are not directly related to the amount of abilities they possess, but rather to what they can effectively do with those abilities⁸.

Studies on self-efficacy regarding learning and teaching have shown the mediational and predictive role of this belief presents with respect to motivational and self-regulating processes¹⁴ and other variables, such as satisfaction with teaching career and its duration, greater commitment, effort, and persistence in teaching—even toward the most difficult and unmotivated students^{15,16}. A recent study posits that “... teachers with high self-efficacy ... design interesting and challenging programs to motivate students ... create a better learning atmosphere for student’ learning process ... set different teaching objectives and adjust the difficult level of the curriculum for students”¹⁷.

Other studies investigating the relationship between self-efficacy and the teaching and learning process have shown that the period of teachers’ initial education—particularly the time allocated to the supervised curricular practicum—can be understood as a time to promote behavioral and personal changes. Hence, this period is particularly important for establishing and strengthening the beliefs of future teachers which focus on the ways they will engage in the tasks of teaching^{18,19}.

Our investigation of the personal and behavioral changes of future teachers considers Bandura’s four sources that constitute self-efficacy: enactive mastery experiences, which pertain to teaching actions experienced by prospective teachers⁸. According to the author, the mastery experience are the most powerful source of self-efficacy because it shows the means to succeed; vicarious experiences, related to the observation of teaching models either “live” or through recorded videos; verbal persuasion, understood as feedback, assessments, and suggestions that student teachers receive; and physiological and affective states, which represent psychophysiological negative or positive information. Recent studies on the constitution of self-efficacy in student teachers have stressed the effectiveness of teacher training courses. For example, these courses contribute to students’ reflections on their teaching-related education since the training experience leads to the establishment and strengthening of self-efficacy beliefs. Moreover, teacher training courses provide a foundation for future teachers’ actions^{2,7,19,20}.

Thus, practicum, which is part of teacher training courses, is considered an important time for training student teachers. Atay’s²⁰ research showed that following their practicum, student teachers exhibited increased self-efficacy. Specifically, the beliefs established during this period helped novice teachers retain their motivation throughout the initial years of their careers⁷.

In a qualitative study, Anderson, Walker, and Ralph¹⁸ sought to identify aspects of teacher training that the student teachers interpreted as “successful.” The student teachers reported that although the support of a mentor was important, their experiences of success in response to the demands of teaching (teaching classes, overcoming adversity, and innovating instructional strategies) were equally helpful. This finding demonstrates the importance

of enactive mastery experiences during the practicum period in the development of self-efficacy.

Concerning the field of physical education, Gurvitch and Metzler¹⁹ compared two groups of student teachers. Individuals in the first group performed their first teaching practices in controlled settings (inside the institutions where they studied, with their own classmates, under professor supervision, and with an assortment of material resources) and were later placed in schools for “real” teaching practice. In contrast, individuals in the second group did not practice teaching in controlled settings; instead, they were directly and gradually included in the school setting. The researchers employed self-efficacy evaluation scales and identified a pronounced strengthening of beliefs in both groups, especially after their contact with the schools, although the student teachers in the first group achieved higher levels of efficacy compared to those in the second group. However, the researchers also found that both groups’ self-efficacy beliefs were only strengthened after experiencing teaching at a school, thus highlighting the importance of enactive mastery experiences for the development of self-efficacy beliefs.

Other authors also point to the need for further investigation on the constitution of self-efficacy, as well as on situations related to teaching that are relevant for student teachers^{11,21}. Greater understanding of these situations may encourage those responsible for teacher education policies to develop more effective training practices for student teachers and to promote better leadership, management of problem situations, communication, and encouragement for novice teachers to cope with the difficulties of the profession².

In Brazil, recent studies surveyed self-efficacy beliefs among undergraduate students in a Bachelor’s degree program in physical education. Results indicated that these students believed in their capacity to teach physical education in school and that their beliefs were particularly (but not exclusively) supported by their enactive mastery experiences as student teachers. Beyond the supervised practicum, the specific practical disciplines learned as part of the curriculum of the physical education teaching program also strengthened the student teachers’ self-efficacy beliefs. These findings drew the researchers’ attention to the need to observe teachers’ educational processes more carefully by investigating how student teachers value their teaching experiences, and how they understand those experiences as sources that shape and change their self-efficacy beliefs¹⁶.

The outcomes of the studies presented above highlight the relevance of the self-efficacy construct as it relates to the professional development of future teachers. Nevertheless, there remains a lack of studies that have addressed this topic (sources of self-efficacy), especially in the field of physical education teacher education in different countries^{2,23}.

To address this gap in the literature, we sought to: a) identify which curricular supervised practicum experiences student teachers perceived as relevant; b) analyze, from sociocognitive theory, the situations in which these experiences occurred in order to identify the most important source of self-efficacy; and c) present potential contributions to the area of education and, in particular, to physical education teacher practicums.

Methods

Study Design

This study employed documentary research with a qualitative approach and an exploratory/descriptive design²⁴. A total of 18 student teachers' reflective portfolios produced during a supervised curricular practicum in a course offered by the physical education teaching program at a public university in inner São Paulo State, Brazil were analyzed. The production of the reflective portfolios was a required activity during the supervised practicum course. The average age of the authors of these documents was 22 years, and 61% of them were female.

All individuals developed their teaching practicum activities in physical education classes at either urban public elementary or high schools (from 6th grade on), depending on the schools' availability.

To ensure the anonymity of the portfolio authors, the abbreviation PORT (for portfolio) followed by a number for each author were used. Thus, the portfolios were labeled from PORT01 through PORT18. The numbers were randomly assigned to the portfolios.

The Supervised Curricular Practicum

The supervised curricular practicum offered by the physical education program at this university is designed as a course with its own body of knowledge, investigation, and research. It aims to promote the placement of future teachers in school settings so that they can progressively interact with the planning, teaching, and evaluation of physical education classes.

In the context of this study, the supervised curricular practicum has two specific guidelines. The first one is related to the methodological theoretical framework, which favors reflection. Among the activities demanded by the discipline for this guideline, students are required to read and discuss texts on supervised practicum, teaching practices, laws, teaching knowledge, and the production of teaching plans and projects. The second guideline concerns the development of a teaching intervention project that rests on three axes: a) observing the school setting; b) planning and implementing a teaching project at the observed school; and c) assessing the supervised practicum. The reflective portfolio emerges on the final axis as a potential documentation of activities and of reflection grounded in the readings and experiences of teaching and supervision throughout the practicum process. According to Sá-Chaves²⁵, reflection is a fundamental process in the training of future teachers, and the reflective portfolio may prove to be a meaningful strategy to evoke and record the personal and professional development of student teachers.

Portfolios as a Documentary Source of Research

The "portfolio is designed as a collection of selected materials validating an individual's knowledge, skills, and competencies"¹. In the context of our study, portfolio production

represented a complementary activity among the other activities required by the supervised curricular practicum. Essentially, its purpose was to enable student teachers to reflect on teaching theory, methods, and practice. During the practicum period, the student teachers were asked to produce and compile reports of all activities they would develop. At the end of this period, based on the compiled reports, they were asked to write a reflective text (based on the theory and methods studied) describing the context in which the practicum occurred, the situations experienced during the practicum period, and the teaching activities they performed. The content that the student teachers were asked to describe and reflect on was established in advance and included the structure (physical and social) of the school, professional expectations, challenges experienced, and judgments of the student teachers' own capacity to teach.

We chose to use the reflective texts of the portfolios as a research instrument since they are documents in which students individually report their activities, experiences, and reflections. For the student teachers, the portfolio on teaching practice has self-reflexive and self-evaluative learning characteristics.¹ As such, the portfolio is a means to record the development process the students undergo while "learning" how to teach. It also represents an opportunity to think critically about their experiences as they practice teaching, including making choices, planning classes, managing students, and performing other teaching tasks. Similarly, the portfolio provides the student teachers with an opportunity to reflect on the beliefs that (positively or negatively) affected their capacity to cope with the tasks of teaching^{26,27}.

A previous study stated that as students reflect on their experiences and activities, they become more aware of their own personal and professional skills. It was also asserted that reflection on actions that are performed enhances the perception that students' beliefs play an important role in their thoughts and actions²⁸.

Researchers have shown that the use of portfolios during teacher education, and particularly during supervised teacher training, encourages student teachers to think more deeply about curricular content and alternative teaching approaches. This process of thinking exposes a range of possibilities that enables student teachers to become more aware of the theories and principles that guide their practices. Furthermore, writing a reflexive portfolio allows student teachers to become more self-confident about their teaching^{29, 30}.

Thus, the use of portfolios as a research instrument for data collection enabled us to better envisage and understand the student teachers' personal and professional development^{26,27}. Consequently, the use of these portfolios in our research allowed us to perform a qualitative analysis of their content, especially regarding the theme of self-efficacy beliefs, which was the focus of our study.

Data Analysis

The qualitative analysis of the documents was conducted through the construction of thematic axes²⁴. Based on the theoretical framework of self-efficacy, this procedure allowed us to find the themes and descriptive category groups that corresponded to our aims for this investigation.

To deeply explore and analyze the content expressed in the portfolios, several procedures were employed. The first step required us to comprehensively read each portfolio to identify the core ideas posed by the authors and to perform a systematization of the data from the documents we chose as our research material. This procedure allowed us to find component elements, which take into account both the expressed and latent content, because “it is necessary not to restrict the analysis to what is explicit in the material but to go further and unveil implicit messages, contradictory dimensions and themes systematically “silenced”³¹.

The second step was the organization and systematization of the ideas that were evident in the texts (i.e., the student teachers’ quotes). These components were then encoded and systematized into descriptive categories (the data we analyzed) for easier manageability²⁴. The process of systematization required extensive work and discussion among the researchers as some quotes did not express the subject clearly. Moreover, we aimed to add information to prior discussions on teacher training and self-efficacy beliefs, which required us to establish new linking components and to propose new interpretations of the subject of our research. The descriptive categories were constituted from the grouping of explicit and implicit components found in the documents. For example, school teaching experiences, coping with difficulties related to teaching, the role of university classes, and the student teachers’ perceived ability to teach physical education at school were some of the descriptive categories used.

The third step of the analysis was the categorization of the content units (data) based on the four above-listed sources of self-efficacy⁸. In this step, categories could be established *a priori* when they were predefined according to the researcher’s search of a specific response, i.e, the sources of self-efficacy beliefs.

The next analytical step was the distribution of content units (data) among the established categories. Again, this step required considerable debate since some data could be assigned to more than one category. Data were then converted into figures or tables to objectively present the information. Finally, we interpreted the data and made inferences in a discussion enlightened by Bandura’s theory.

Results and Discussion

Like Silva, Iaochite and Azzi², we believe that greater insight into the situations through which student teachers establish and change their beliefs about personal capacity can enable the proposition and development of more effective education practices such as providing real-life teaching experiences and offering student teachers closer contact with actual school settings. Moreover, this information could be useful for the establishment of new teacher education policies and could help researchers and student teachers’ professors to engage in more consistent planning with regard to teacher education as a whole.

The data analysis revealed the occurrence of references to the four categories of self-efficacy sources in the portfolios. The most frequent occurrences pertained to enactive mastery experiences, to which 15 of the 18 portfolios referred. References to the other three sources were less frequent, but still present,

and were as follows: references to vicarious experiences were identified in six portfolios; references to verbal persuasion were identified in five portfolios; and references to physiological and affective states were identified in four portfolios. Table 1 shows the experiences to which the four sources of self-efficacy were referred to in the portfolios.

Table 1. Situations experienced during the practicum period, understood by student teachers as promoters of self-efficacy beliefs.

| Source of self-efficacy | Experienced situations | Quotes |
|-------------------------------------------|-------------------------------------------------------------------|-----------|
| Enactive mastery experience | To put knowledge into practice | 5 (10.4%) |
| | To gain expertise to teach in different contexts | 5 (10.4%) |
| | To develop teaching practice | 4 (8.3%) |
| | A place to test and practice abilities and teaching techniques | 3 (6.25%) |
| | To interact with the future work setting | 3 (6.25%) |
| Vicarious experience | To observe teaching in different contexts | 4 (8.3%) |
| | To watch classmates’ teaching performances at school | 3 (6.25%) |
| | To watch school teachers’ teaching | 2 (4.2%) |
| | To reflect about one’s own practice | 1 (2.1%) |
| Verbal persuasion | Discussion and orientation between classmates and professors | 4 (8.3%) |
| | Exchange of experiences | 3 (6.25%) |
| | Orientation from school teachers | 2 (4.2%) |
| | Compliments from school students | 1 (2.1%) |
| | Fear/lack of confidence/shyness changed into reliability to teach | 4 (8.3%) |
| Physiological and affective states | Uncertainty/embarrassment changed into preparedness | 3 (6.25%) |
| | Knowing one’s own limits | 1 (2.1%) |

Source: Research data.

These results suggest that the majority of the situations that helped physical education student teachers develop their capacity to teach involved mainly enactive mastery experiences. Therefore, we can assert that enactive mastery experiences were the most important source of self-efficacy during the practicum period and contributed to the establishment and strengthening of the physical education student teachers’ personal beliefs.

Teaching Experiences as Enactive Mastery Experiences

Among the experiences described by the student teachers (Table 1), the most frequent experiences involved the possibility of putting into practice (while teaching at school) the knowledge they had acquired from the lectures at the university, practicing teaching in different contexts, and being introduced to their future professional setting.

Enactive mastery experiences represent the most powerful source of self-efficacy because “they provide the most authentic evidence of whether one can muster whatever it takes to succeed”

⁸ Our study found that even the portfolios authors' self-efficacy beliefs were established and strengthened by means of the four sources of efficacy, the source that prevails is the enactive mastery experience of teaching: "... practicum was an ideal space to develop abilities and methods of teaching, to assess activities we experienced in undergraduate classes, and have doubts and certainties about school students," says PORT08. And PORT09 indicated:

... coexistence with students and teachers at school, coping with problems ..., the search to reflect on my practice before, during and after it, brought me self-confidence and peace to work and be prepared to face any kind of school reality.

The quotes above provide evidence that the school setting in which the student teachers had been gradually placed had a considerable influence on their personal beliefs. The students repeatedly referred not only to the opportunity to get to know the teaching environment, but also to the fact that the situations they experienced at school represented important moments in their professional education during which they could face something hitherto unknown: the school environment in everyday life.

In agreement with a previous study³, the results of this study confirm that the curricular supervised practicum plays a central role in training student teachers. Once teaching practice begins, student teachers activate and develop reflection on their abilities, knowledge, and skills. This reflection, in turn, helps student teachers establish and strengthen their beliefs, capabilities and competencies. Indeed, the relevance of practicum is fundamental²². Physical education student teachers identified the practical disciplines (which include didactic and pedagogical guidelines) as those that were most influential to becoming teachers². The authors mentioned that teachers' education programs should acknowledge this fact and promote more meaningful training approaches that involve student teachers in actual experiences of teaching, even in controlled settings. This perspective stresses the importance of the practicum because, as a locus of knowledge production and acquisition, it allows future teachers to evolve personally and professionally by means of reflection through practice.

However, our analysis has also revealed that teaching practice at school entails obstacles that must be overcome. In this regard, during the practicum, student teachers were required to overcome barriers, such as unmotivated students, the lack of resources, and "dealing with local conditions and characteristics and unique personalities of each child" (PORT01) and "dealing with people from diverse socioeconomic statuses (I attended practicum at municipal, state and private schools)." (PORT18)

The above quotations show how the practical teaching experiences made possible by the curricular supervised practicum provided student teachers with opportunities to experience some of the obstacles and challenges that they would eventually face in their teaching careers. The exercise in coping with adverse situations prior to completing the undergraduate program was valuable for student teachers since it helped them feel more prepared to teach and better able to successfully overcome future adverse conditions when encountering them as actual teachers. PORT03 and PORT09 respectively expressed: "... the consequence of the various challenges I faced and of having to search for solutions—inside and

outside practicum—[was that] at each challenge overcome, my confidence in my own capacities increased" and "the lack of some equipment often helped me to find creative ways to teach classes and to deal with problems of this kind."

The possibility of overcoming adverse conditions through teaching practice and having experience with their future work setting helped the student teachers develop more resilient self-efficacy beliefs. Thus, we confirm Bandura's⁸ assertion that, in order to create robust efficacy beliefs, it is necessary to surpass potential obstacles, which, in turn, teach us to convert those obstacles into examples of success. Gurvitch and Metzler¹⁹, who found that student teachers developed their personal ability beliefs only after the practicum period, share this view. These researchers understand that specific teaching practice in actual school settings provides the necessary and transposable challenges (even with outside help) to empower future teachers to cope with potentially counterproductive aspects of education that are inevitably present in teaching.

However, although the environment acts on the behavior of individuals, it is also transformed by the actions of these individuals. Therefore, it was possible to identify the influence of the school setting—realistically presented, with all its obstacles—on the behavior of the student teachers. At the same time, to resolve conflicts, the student teachers were able to exercise some influence on the school environment (specifically on students) through their responses to issues related to a lack of discipline. "Although small, students' improvement was perceptible, especially with respect to their attitude, once they gradually began to respect us as well as each other." (PORT07) The student teachers were able to increase some students' motivation, to encourage greater participation by the students: "... gradually, even those who were not used to participating started learning to take classes seriously—as it is common to be charged within the classroom—participating and even enjoying it, showing greater interest in some activities." (PORT15)

The experiences conveyed in the above speeches refer mainly to the conclusions that student teachers reached concerning school students' learning and motivation. These results could be verified only after the student teachers' enactive mastery experiences had occurred.

Practicum Experiences as Other Sources of Self-efficacy

People also learn by means of other experiences than those related to enactive mastery experiences, such as social modeling. Observing others improves our own learning, especially when we have little or no experience with the involved activities. It is assumed that as students in a professional training course, student teachers have little experience with actual teaching. Hence, they also learn and evaluate themselves by watching other teachers and their own classmates in similar situations.

With regard to vicarious experiences, we found that the authors of the portfolios understood that observing teaching in different contexts and observing classmates in teaching performances at school were the most relevant situations. Among other reports, PORT06 related that each teaching

practice was coordinated by three student teachers: “one of them was responsible for teaching; the second assumed the role of the assistant teacher; and the third watched the class and commented on the positive and negative aspects of his or her classmates’ teaching practice.” Thus, vicarious experiences were important insofar as they enabled the student teachers to find support for solving problems and dealing with adverse situations experienced in teaching practice, such as a lack of discipline, students’ lack of motivation, and interpersonal student-teacher relationships.

When individuals (including student teachers) are faced with unusual problems, they must gather encouraging advice from others with equal or more experience. Therefore, receiving positive evaluations of their capabilities helps them to develop an equally positive self-evaluation¹⁸. Advice, guidance, and feedback are essential to help us handle particular situations or overcome doubts about our own capacities. Our analysis revealed that the verbal persuasion by means of the exchange of experiences between classmates, as well as suggestions from professors and school teachers promoted the strengthening of student teachers’ personal beliefs. PORT09 reported that the student teachers’ discussions in university classes regarding their common situations and experiences, such as school teaching, the difficulties and challenges they faced, and their achievements and goals, were enriching and facilitated reflection on their own teaching methods and practices.

According to the portfolios, the verbal persuasion occurred because as the authors listened to suggestions and reflected on them, they also found success in their own actions; that is, they could move forward in teaching and deal positively with their proposed teaching activities. In other words, this finding allows us to assert that the success resulting from verbal persuasion helps to sustain a positive evaluation of self-efficacy.

The main physiological and affective states that student teachers experienced—fear, lack of confidence, shyness, uncertainty, and embarrassment—were more often perceived as negative at the beginning of the practicum period than at the end. Nevertheless, according to the related experiences within the portfolios, by the end of the training period, these affective states became understood as displays of confidence in reference to the student teachers’ own professional and personal capacities.

With successful experiences provided by the implementation of teaching practices during the practicum, student teachers also had the opportunity to experience positive psychophysiological feelings (e.g., confidence) while overcoming negative feelings (e.g., anxiety and fear) and to learn more about their own physical limits: “Unlike six months ago, I feel now confident enough to teach ... I can say that today I’m not discouraged in front of a class filled with teenagers ready to judge me.” (PORT15) Similarly, PORT10 stated: “Based on these teaching practices, I have learned a lot about my limits, about what I can and cannot do and about how much I can withstand.”

The excerpts above show that psychophysiological sensations (physiological and affective states) are important to the establishment and strengthening of self-efficacy because they remain stored in memory. When we must deal with subsequent similar situations, these sensations are activated by our

memory⁸. Thus, the experience of psychophysiological sensations during the practicum facilitates the learning of teaching, greater self-knowledge, and effective self-confidence in student teachers’ teaching capacity by the time they become teachers.

Bandura^{8,9} believed that results, such as those described above, are encouraging because they enable student teachers, even unconsciously, to perceive themselves as able to exert an influence on their environment (the school, the learning environment, and students’ motivation) and able to make things happen on their own.

Conclusion

To promote strong efficacy beliefs during the initial training period, teaching education curricula should devote special attention to activities related to teaching practices, which represent important moments of learning for student teachers who do not yet have the necessary experience to masterfully deal with everyday teaching careers. In this study we aimed to identify curricular supervised practicum experiences that student teachers perceived as relevant, and analyze the perceived experiences in light of the sources of self-efficacy. In addition, we expected to present potential contributions to physical education teacher practicums.

Physical education student teachers can be placed in various simulated situations during classes in which they must take control of teaching activities. In simulated situations, student teachers “play” teaching, and through their performance as teachers, they “teach” their classmates effective methods to cope with the challenges associated with teaching. As a result, these situations can contribute to promoting self-efficacy related to teaching. On the other hand, it is necessary to devise additional ways to place student teachers in “real” schools even earlier in the teacher training program. Only the challenges provided by enactive mastery experiences (i.e., actual situations) can help student teachers develop robust and lasting beliefs, skills, and competencies.

We must also consider other sources of self-efficacy establishment and strengthening in addition to enactive mastery experiences. As shown by our study, these sources reinforce enactive mastery experiences and exert important influences that enable future teachers to establish and strengthen their personal beliefs in teaching.

Thus, we highlight the need for physical education programs to continue to offer their student teachers various circumstances (real, at school and simulated, at college/university), or enactive mastery experiences, so that these student teachers can put their previously constructed theoretical knowledge into practice to promote reflection and, consequently, the establishment and reconstruction of skills, abilities and beliefs.

This study did not intend to exhaust all possible inputs that are offered by the socio-cognitive perspective. Our results should be viewed with caution considering the Brazilian context and cultural aspects.

Other sources of self-efficacy should be examined in greater depth in future studies. We emphasize the need for more studies of this nature to expand our knowledge of how student teachers constitute and strengthen their self-efficacy beliefs, and how this knowledge can contribute to the excellence of teachers’ education programs, particularly physical education teaching programs.

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