

## THE PROFESSIONAL DEVELOPMENT OF HIGH SCHOOL TEACHERS

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**RESUMO**

Este artigo apresenta uma pesquisa de abordagem qualitativa do tipo exploratória que foi realizada com 47 professores que atuam no ensino médio de diferentes instituições públicas de ensino. O desenvolvimento profissional docente é um processo que depende de um conjunto de elementos que não estão somente no contexto acadêmico ou da titulação, como ocorre na formação inicial e continuada. Sendo assim, entende-se que cabe ao professor do século XXI investir em sua formação para obter desenvolvimento pessoal e profissional, e com isso, contribuir ao processo de ensino e aprendizagem, melhorando consequentemente a qualidade da educação. Diante desta perspectiva, tivemos como problema de pesquisa a seguinte indagação: Como os professores se desenvolvem profissionalmente na busca de melhorias a profissional idade docente? A pesquisa realizada teve o objetivo de analisar o desenvolvimento profissional docente dos professores que atuam no ensino médio de diferentes instituições públicas de ensino. Os dados foram coletados a partir de um questionário enviado por e-mail que permitiu realizar a análise de conteúdo na perspectiva de Bardin (2011) com o auxílio do *software* Atlas Ti. Com base na pesquisa realizada foi possível identificar que os professores do ensino médio se desenvolvem profissionalmente a partir das dificuldades vivenciadas na escola, especificamente, pela falta de conhecimento tecnológico. A carência de conhecimento tecnológico faz com que os professores busquem por formação, conhecimento e isso contribui ao desenvolvimento profissional docente.

**Palavras-chaves:** Docência. Desenvolvimento Profissional. Ensino Médio.

**ABSTRACT**

The following study presents an exploratory qualitative research that was carried out with 47 high school teachers who work in different public schools. Teachers' professional development is a process that de-

depends on several elements that are within not only the academic scope or the number of academic degrees one has as it happens in initial teacher training, but within continuing professional development as well. Therefore, it is understood that it is the role of the 21st century teacher to invest in his/her training to obtain personal and professional development, and with that, to contribute to the teaching and learning process, and consequently improving the quality of education. Then, the reason for writing the paper is based on the following question: How teachers, by seeking professional development, can improve professionalism within teaching? The study analyzed the professional development of teachers who work in different public high schools. The data were collected from a questionnaire sent by e-mail that allowed the content analysis under the perspective of Bardin (2011) with the help of Atlas Ti software. It was possible to identify that high school teachers develop themselves professionally from the difficulties experienced in the school, specifically, by the lack of technological knowledge. Such fact makes them to look for training, which contributes to their professional development.

**Keywords:** Teaching. Professional development. High school.

## Introduction

Nowadays many teachers seek for professional development in order to face the daily challenges the 21<sup>st</sup> century school presents, especially high school teachers.

Contemporary teaching presents has increased the intensity and the number of activities that overload the teacher. Such facts affect the quality of teaching, the time for class planning, as well as time for professional development. Initial teacher training and continuing professional development are processes directly related to teaching professional development.

The concept of development has a connotation of progress, evolution, and professional growth when related to education. However, professional teaching development is thought as the constant learning of a teacher in his/her daily activities with students, with his/her peers, training, cultural and social aspects as well as with historical and political relations. The professional expectations of teachers is another aspect that should also be taken into account.

Teaching professional development goes beyond initial teacher training and continuing professional development because such processes depend on several elements that are not only within the academic environment or the number of degrees one has. Professional development has been called as continuing professional development, professional certification, trade certification, recycling training, among other concepts. Rudduck considers teacher professional development as “the ability teachers have in exploring the potential of his/her students, identify significant interests within the teaching/learning process, value and seek the dialogue with more experienced peers through case study” (RUDDUCK, 1991, p. 129).

Thus, “From such point of view, professional development takes place always through research, questioning, and the search for solutions” (MARCELO GARCÍA, 1999, p. 137). According to Day (2001, p. 15) “teachers’ professional development depends on their personal and professional life as well as poli-

cies they have to follow and the school environment”.

Considering such perspective of teaching professional development, the following study displays the repercussions of such permanent learning process that teachers do to improve professionalism within education. It used an exploratory qualitative approach methodology with 47 teachers who work in several public high schools.

The discussion and reflection of the following article are based on professional development as a process that depends on several elements that are not only within the academic environment or the number of degrees one has, as it happens in initial teacher training and continuing professional development. Thus, it depends on the 21<sup>st</sup> century teacher to invest in his/her personal and professional development, and by doing this, he/she contributes to the teaching and learning process that consequently improves education quality.

Accepting such fact, the authors decided to work on the following issue: How do teachers professionally develop themselves when they look for teaching professionalism? The objective of the following study is to analyze professional teaching development of high school teachers who work in several public schools. The data were collected from a questionnaire sent by e-mail that had its content analyzed under the perspective of Bardin (2011) with the help of Atlas Ti software.

### Teaching Professional Training and Development

Teaching is essential to the social development of a country. Its relevance reflects directly on the society, on the education quality, and consequently on forming citizens. The performance of a good teacher influences the students as well as contributes to his/her professional development.

Another fundamental aspect of such process is the dialogue between teacher and students. The teacher needs to be efficient as well as adapt himself/herself to the classroom reality, especially when it comes to professional practice. There is the need of knowing initial teacher training and professional updating deeply.

Regarding teacher training, the main objective is to build solid bases that will guide and support teacher professionalism. In fact, at this point, the intention is to provide the basis of a profession, in other words, the basic requirements for professional performance, which come from initial teacher training. In Brazil, teacher training follows the Brazilian Education Law (LDBEN 9394/96), that says:

Teachers, who want to work with kindergarten and the first five grades of elementary school as well as regular high school, must have a university degree as the minimum requirement. (Brazil, 1996).

According to Romanowski (2007, p. 99), in spite of the stimulation for teachers to take a university degree, “in Brazil, there is a significant number of teachers working today without it”. A university degree is the first requirement to improve the quality of education in Brazil. However, there are several obstacles and battles that teaching faces nowadays that interfere when it comes to professionalize the profession. It is clear that the lack of appreciation for the teaching career compromises the profession and its development and it compromises education as well.

After initial training, throughout their career, there are other ways for teachers to become a professional and one of them is through continuing professional development. It groups all the knowledge<sup>1</sup>

<sup>1</sup> The concept of “knowledge” follows Tardif’s definition (2008, p. 199) that from now on will refer

acquired after initial training.

According to the LDBEN 9394/96, continuing professional development programs in Brazil should take place in several levels of teaching. Article 62 emphasizes that “continuing professional development and training for teaching professionals can use distance learning resources and technologies”. It also says, “Continuing professional development will be assured for teaching professionals [...] at their workplace, elementary schools or colleges and they are going to include professional training, full technological and undergraduate courses and graduate courses as well” (Brazil, 1996).

Within such stream of thought, “Contemporary continuing professional development tries to characterize training focused on the teacher as the subject of his/her own praxis” (Ferreira, 2014, p. 45). So “[...] that, continuing professional development in Brazil is one of the elements of teachers’ professional development because it complements initial training and leads to higher career levels” (ROMANOWSKI; MARTINS, 2010, p. 287).

Teacher’s professional development is beyond continuing professional development. It is a process that depends on several elements that are not only within the academic scope or the number of academic degrees one has, and in initial teacher training, but within continuing professional development as well. The expression “professional development” has been called continuing professional development, professional certification, trade certification, recycling training, among other concepts.

The search for knowledge and qualification are essential for teaching development. It depends on the teacher to learn, throughout his/her career, to invest in training in order to get professional and personal development, which can help the teaching learning process. Such fact also reflects positively on education quality. Gatti and Barreto (2009) present the definition of professional development as follows:

[...] professional development is defined as a movement focused on several challenges regarding different phases of a professional career such as the development process, and the latest phases when the teacher solidify his/her career (GATTI;BARRETO, 2009, p. 203).

Teaching professional development is individual as well as collective. The private aspect deals with mastering private knowledge. The collective aspect is described by Marcelo Garcia (1999) as a dialogue among peers and other people such as specialists. Such dialogue should be done through permanent questioning dynamics, studies and researches, and the search for solving teaching issues.

According to Day (2001), teaching professional development is a broad and complex process, which include training, specific skills, personal and educational relationships, and other aspects that have the objective of improving the pedagogical practice as well as having education as a reality modifying deed.

Professional development of a teacher can occur in different ways, with different personal and professional objectives to become effective in different contexts. It has the objective of improving teaching quality, students’ learning, and it takes place only when the teacher seeks knowledge, and permanent learning. The teacher should also search for professional improvement, as he/she is the responsible for the teaching process and he/she lives in a society in permanent social, political, economic, and tech-

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exclusively to the thoughts, judgements, and arguments that follow certain rational demands. I rationally speak or act when I am able to justify, through reasons, statements, procedures, etc., my speech or deed before another individual who questions over the pertinence and value of “knowledge”. Such “ability” [...] is verified within the argumentation, or within a speech I propose to justify my deeds.

nological turmoil. “It is a process that builds itself as teachers gain experience, wisdom and professional awareness” (MARCELO GARCÍA, 2009, p. 11).

Teaching professional development characterizes itself by joining teacher training and specific skills in a permanent learning process with a personal, biopsychosocial, educational, cultural, historical, political, and economic scope. “It is necessary to understand that teaching and its development are fundamental and crucial to assure students’ learning quality” (MARCELO GARCÍA, 2009, p. 19).

Teaching professional development is a permanent and reflective process that draws upon teachers’ personal and academic needs. Teachers’ learning process takes place in different levels and in different teaching contexts. Nowadays “training throughout life is a reaction to the permanent innovation and changing challenges and at the same time it is a condition to stimulate teachers’ personal and professional development” (GONÇALVES, 2009, p. 24).

### Methodological Phases of the Study

The following study tried to analyze the teaching professional development of high school teachers. It presents an interpretative exploratory qualitative approach. The qualitative study allows the researcher to draw on the complex aspects of education as well as the aspects that surround it. Thus, the researcher is able to understand real educational events and facts throughout the study to realize the complexity of education as well as the complexity of educational processes.

The qualitative approach allows the researcher to establish a real interpretation and a detailed description of education in its several dimensions. “It delivers reliable data, dispersion, clear interpretation, contextualization, details and unique experiences, according to Sampieri; Collado; Lucio (2013, p. 41).

The investigation, in this particular case, is complemented by the exploratory approach, which stimulates the participants to think about the subject being studied as well as answering the questions freely. The exploratory research allows the researcher to study the subject and it is used when one is looking for the perception and understanding of the subject under scrutiny. Such type of research intends to enhance comprehension and familiarity on the subject being studied. It also intends to show how teachers develop their careers.

The study interviewed 47 high school teachers from different public schools through a questionnaire, validated by the researchers, sent by e-mail, which had open-ended and closed-ended questions. It was sent to 70 teachers but only 47 answered it. From the 47 teachers 32 were female and 15 male. They have been teaching for more than 8 years and most are over 25 years old. Fifteen of them are pedagogues and the others are graduated in several other subjects (Math, Physics, Portuguese, Biology, English, Arts, Geography, History, sociology, and others). There was full anonymity during the data collection. The authorization for using the data was made available for the subjects, through e-mail. The following study is part of a project developed by Prof. Dr. Jacques de Lima Ferreira called Teacher Training and Educational technologies and was approved by Uninter Ethics Committee under the number: 1.801.624.

The answers from the questionnaire were encoded for the content analysis as follows:

- QRP01 = questionnaire answered by teacher 01
- P05 added at the end means question number 5

When put together it means:

- QRP01P05 = teacher number one answered question number five.

Such code was used for all 47 questionnaires answered. For every answer, a code was created with such information.

After all the answers were encoded, they were organized and added to the Atlas Ti qualitative analysis software in its Mac version in order to initiate the content analysis under Bardin (2011) perspective.

### Data Analysis

Data analysis is an important part of qualitative research because it allows the researcher to interpret and organize the collected data. Within such investigation phase, the researcher tries to organize and structure the data to identify a meaning and a sense that can consolidate an analysis category. Data analysis within the qualitative approach is dynamic and varied so the researcher can choose different kinds of data analysis to better answer the questions he/she asked that motivated writing the study. The researcher must master the theory of technical analysis when he/she performs the data analysis. Nowadays, there are different techniques to organize and analyze qualitative data. In the following study, the authors chose the content analysis under the perspective of Bardin (2011), which was applied in the answers from the questionnaire sent to public school teachers in Parana State.

The content analysis is a possibility when it comes to qualitative analysis technique that can be performed in texts from several sources. Content analysis, according to Bardin (2011, p. 37), “[...] is a set of communication analysis techniques. It is a unique tool with several adaptability characteristics and can be used in vast ways [...]”.

The content analysis phases under Bardin (2011) have the following steps: **pre-analysis, material analysis, result treatment**. Pre-analysis refers to the organization of the collected material.

During the **pre-analysis** there is the data organization, decision of which documents are going to be part of the data analysis, preparation of code index that can make the analysis easy. Within such content analysis step, the questionnaire answers are organized and there is the creation of a code to identify each question and each answer provided by the teachers.

During the **material analysis** the researcher does the content analysis, and the systematic application of the analysis technique. There is also the encoding, which is the creation of codes based on the answers within the questionnaire. It is the data organization for a further categorization. After the encoding, which is the systematic organization; there is the classification and categorization. The next step is the categorization that according to Bardin (2011, p. 133) “[...] corresponds to a transformation that follows precise rules regarding text raw data. Such transformation, by choosing specific parts, aggregation, and numbering, allows a content representation or expression representation. It helps the analyst regarding the characteristics of the text”. The categorization is a process that allows the codes to be grouped, separated or regrouped in order to consolidate a meaning.

During **result treatment**, according to Bardin (2011, p. 131) “[...] the raw results are adjusted in order to be meaningful and valid” [...] and the researcher “[...] having at his/her disposal reliable and significant results can propose inferences and analyze the subject being studied or that refer to unexpected discoveries”.

The content analysis of the answers from the questionnaire was facilitated by the Atlas Ti software, which allows the researcher to do the collected data qualitative analysis. The Atlas Ti is a qualitative data analysis software often used in education studies, which allows data management, organization, grouping and regrouping.

As an explanation for the data analysis steps, the authors present the following:

**Step 1. Pre-analysis – Data Organization:** The collected data from the questionnaire were organized, encoded, and inserted into the Atlas Ti software. Forty-seven answers from the open-ended question number five were inserted into Atlas Ti software.

**Step 2. Atlas Ti software Use:** The answers from the questionnaire were identified by the code QRP01P05, which means that teacher number one answered question number five.

**Step 3. Material interpretation:** At this step the answers from the questionnaire were encoded and categorized, which are related to the analysis of the answers given by the teachers involved in the study. There was a code for each question and answer.

**Step 3.1 Encoding:** Creation of the categorization codes. The codes represent a system of symbols that allow the representation of some information. The codes were created as soon as the answers, given by the teachers who took part of study, started being read. For each answer, there was a code and for similar or identical answers, a previous code was assigned to them.

**Step 3.2 Categorization:** Categorization is the set of incident and similar codes that allow grouping the data to consolidate a meaning. The codes were grouped according to their similarity and incidence. They also originated the analysis categories.

After encoding, the most incident and similar code was eyed in the Atlas Ti. The researchers analyzed all codes with the most incident and similar answers. The code analysis was performed as follows:

- 1- Careful reading of teachers’ answers;
- 2- Consideration of researchers over every answer;
- 3- Identification and creation of groups with similar answers in order to consolidate a meaning;
- 4- Creation of categories from the answers given by the teachers.

**Step 4. Material Interpretation:** As soon as the answers given by the teachers were known, they were used to create the categories. In order to do that the researchers looked for meaning and sense of the answers and since they were interested in the incidence of logical semantic meanings, they decided to quantify the relative and absolute frequency of the answers. For the questionnaire answers content analysis there is a chart that displays the categories and some of their indexes (answers). The following chart displays three answers that were used as examples for the category answers as well as all the answers for each category. Question number five is as follows: **Besides your initial teacher training and continuing professional development what else do you do to develop your academic skills? Why?**

The most common answer, 33 times, was that teachers develop their academic skills through day-by-day activities in classroom. The reason for such question was to discover how high school teachers develop their academic skills. Chart 01 displays the categories that were created from the participant answers.

Chart 01 – Some reasons given by teachers to justify their teaching development due to pedagogical drawbacks.

Answers	Participant
<b>(CATEGORY) – Difficulty related to the lack of technological awareness</b>	<b>Total of answers: 22</b>
“I try to develop my academic skills in order to overcome the drawbacks faced in classroom. Technological information and knowledge used in biology are welcomed. Since my students are aquatinted with technology, I need to bring it to the classroom. I try to take part in training courses that take place in my school. I’ve been learning a lot with my students [...]”.	QRP08P05

“[...] I teach Sociology and I don't know how to apply educational technology resources to the content of my classes. Such difficulty forced me to study and learn about such resources. I've taken part of an Educational Technology training course”.	QRP22P05
“I am a Portuguese teacher and I try to develop my academic skills within my own school by taking part of training courses organized by the pedagogical team. I am interested in many subjects related to technology and I need some updates. My students enjoy my classes when I use some technological resources they already master [...]”.	QRP33P05
<b>(CATEGORY) – Difficulty in not mastering the subject taught</b>	<b>Total of answers: 06</b>
“[...] regarding the subject I teach I need constant updating. Biology is constantly updated and changed. I have problems teaching some topics such as genetics [...] I try to develop my academic skills through my day-by-day activities as well as in my own school. I try to take part in symposiums that deal with subjects I do not master.	QRP05P05
“The development of my academic skills take place throughout the difficulties a face every day. Such challenges make me look for information, knowledge, culture, as well as talking to my peers who teach the same subject I do [...]. When I have problems teaching any topics of English I talk to more experienced teachers [...]”.	QRP09P05
“I've just finished a graduate course in History teaching methodology. I've done it due to difficulties I have when I have to teach practical classes. I consider myself too “content focused” and the graduate course helped to develop my academic skills as a high school history teacher”.	QRP37P05
<b>(CATEGORY) – Difficulty in doing practical activities</b>	<b>Total of answers: 05</b>
“[...] The content taught in math, requires a lot of talking in class and I can't think of doing anything practical in class but many written exercises. My difficulty in connecting theory and practice made me look for math practical classes on the internet. I put some of them in practice and they have worked well”.	QRP36P05
“I develop my academic skills from the challenges I face at school. Such challenges stimulate me to look for improvements for my pedagogical practice, especially practical classes in the computer lab”.	QRP41P05
“I am a pedagogue and my initial teacher training and continuing professional development helped my professional development, but the challenges lived within the school environment are very complex. Develop and put into practice solutions for such challenges is not easy and it requires a lot of experience and knowledge [...]”.	QRP47P05

Source: Chart filled in with information from collected data.

Chart 01 showed that 22 teachers mentioned that they professionally developed themselves from drawbacks experienced within their workplace especially when it comes to technology. Non-technological acquaintance makes teachers look for training, knowledge, and professional knowledge. Many teachers still have problems dealing with educational technologies. According to Behrens (2005), the conservative paradigm is still present in teachers' pedagogical practice. The approach for an innovative paradigm requires specific knowledge where the teacher presents new educational technologies that students already use in their life outside school.

## Conclusion

The following study has showed that high school teachers' professional development has important aspects that must be considered in their training as well as in their teaching process. The authors



wanted to know how teachers professionally develop themselves when they look for teaching professionalism. Then the objective of the study is to analyze professional teaching development of high school teachers who work in several public schools.

The study identified the teachers who develop their academic skills due to drawbacks faced with in schools, especially for not having technological expertise.

Difficulties faced in pedagogical practice make teachers to look for training, information and knowledge, which are factors directly related to teaching professional development. It is hard to believe that in the 21<sup>st</sup> century there are still many teachers who are not prepared to handle digital educational technologies in their teaching and learning process.

Difficulties in handling technology by teachers shows the need for specific training regarding educational technologies. Teachers still need continuing professional development. The fact that educational technologies are significantly important to teaching professional development cannot be ignored.

Long distance learning is an alternative for teachers to get closer to technology and, at the same time, they can collaboratively and interactively learn. The technologies used as resources for teaching professional development can provide permanent learning to schools as well.

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