Review Article

Social-emotional education programs for primary education: Bibliometric and thematic analysis (2010–2020)

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ABSTRACT

Social-emotional learning programs have demonstrated effectiveness in the academic, personal and social success of students, as well as in the prevention of future difficulties. Therefore, the aim of the study was to analyze the scientific literature on the implementation of social-emotional education programs in primary education, disseminated in databases (Web of Sciences and Scopus) between 2010 and 2020. A total of 168 articles were reviewed and analyzed in terms of bibliometric indicators, such as: temporal production, by journals and by author, methodological approach, sources of information and thematic analysis. The main findings show a substantial increase in productivity during the year 2020, that the journals with the most publications on this topic are mostly from the United States, and that there is also an inclination towards quantitative research. Programs such as Positive Action (PA) and the Social Emotional Learning Program (SEL) stand out as the most widely disseminated.

Keywords: Bibliometrics; social-emotional education; training program; primary education

1. Introduction

Bibliometric studies constitute a type of research that provides relevant information on a research topic and is valuable to determine the interest generated by a line of research, a field of knowledge or a discipline for the scientific world[¹,²].

This type of studies is mainly present in psychology and has expanded to other areas such as education, due to the need to systematize the circulating information on a subject. Despite this, and the large number of existing works on the topic we have chosen to review, there are few studies that synthesize information on social-emotional education programs that have proven their effectiveness and are available for use in the school system.

In view of the above, this study assumes the challenge of analyzing this research topic, considering for this purpose the review of publications published during the last ten years in two internationally recognized and prestigious databases, such as Web of Sciences and Scopus.
The study arises from the interest in knowing which are the educational programs that address socioemotional education, generated for primary education. It is of interest to know who the authors are who have researched and published more in this line of research, where these works have been published, which are the countries in which knowledge has been produced in this regard, the years in which there has been greater production, and to know the methodologies that have allowed the evaluation of these programs. From the thematic study, it is important to determine which educational programs address social-emotional education in primary education, as well as which variables are recurrently considered for social-emotional education.

Given the current relevance of research on how socioemotional education is developed in primary education, this study aims to conduct a bibliometric and thematic analysis on the scientific publication disseminated in the Web of Sciences and Scopus databases. These will give the study an international view of the interest generated by this topic during the last decade, including the period between 2010 and 2020.

2. Literature review

The education of the 21st century considers socioemotional and ethical education to be essential, mainly in elementary school[3], with the purpose of complementing the process of cognitive formation. In this sense, the school is seen as a privileged scenario to promote socioemotional education[4], understood as a learning process through which children and adolescents acquire knowledge, values, attitudes and skills that help them to better understand and regulate their emotions, to establish positive interpersonal relationships, to make responsible decisions and, ultimately, to manage challenging situations through ethics[5].

The purpose of socioemotional education is for students to manage strategies that strengthen their own well-being, prevent risk behaviors and promote mental health, based on the conscious practice of a mindset that helps students to achieve goals, establish healthy relationships with their peers, family and community, as well as influence academic performance[6].

One way to carry out social-emotional education is through social-emotional education programs, which have a universal character, that is, they are created for all the students of an educational center, and they also go through a scientific validation process that allows them to demonstrate their effectiveness in the population for which they were created. In this sense, research has shown that the incorporation of a socioemotional education program in the school generates warm, safe and secure environments.

Davidson and Begley[7], state that a better management of emotional competencies improves the emotional state of students in the classroom. Similarly[8], it leads members of the school community to relate to each other in a better way, since it leads to greater awareness of the needs, interests and emotions of others and because it promotes the use of peaceful problem-solving tools[9].

Zins et al.[10] conducted a review of social-emotional development and ethics programs in order to verify their effect on the improvement of attitudes, behaviors and school performance at different educational levels. In their study, the authors found that in schools where some educational program on socioemotional education was incorporated, it was possible to observe a better perception of the school environment, a closer relationship between teachers, students and families, improvements in cooperative work, as well as high expectations regarding students’ school performance.

In this same line, based on a meta-analysis of educational intervention programs, argue that the different results presented by the studies analyzed, allow us to affirm that the decrease in antisocial behavior and the increase in social skills are the most recurrent.

In general terms, the review of socioemotional programs, Sklad et al.[11], indicate that the effects of
educational interventions revolve around seven categories: social skills, positive self-image, prosocial behavior, antisocial behavior, substance abuse, academic performance and mental health. These results are consistent with Lewis et al., who also state that, despite the few studies conducted with minority populations, the acquisition of these emotional competencies is possible in groups of children from lower-income urban populations.

Concordant with the above, the work of Durlak et al., reaffirms the findings on the positive effects of socioemotional learning programs, also pointing out that there is an increase in the number of programs aimed at students and likewise those that help cushion the stress and burnout risks of teachers, thus promoting their mental health.

Along the same lines, there is currently a commitment to meet the need for socioemotional learning in both students and teachers. It is understood that a reduction in distress and improvements in teacher well-being, derive in changes in management and teaching praxis and, consequently, in student learning and participation.

School demands pose the need for various activities and strategies that promote socioemotional education of students, for the benefit of their personal development and for a better Society. In this sense, social-emotional learning involves the implementation of practices and policies to promote social, personal and ethical behaviors in both students and teachers.

From the Collaborative for Academic, Social and Emotional Learning (CASEL) perspective, social-emotional learning-based interventions are framed by five interrelated competencies termed: self-awareness, self-management, social awareness, relationship skills, and responsible decision making.

CASEL includes in the social-emotional learning (SEL) model competencies such as effective communication skills, cooperation and problem solving, which are based on emotional recognition and regulation. This model, gives rise to a large number of programs submitted to evaluation, after implementation in an elementary school and disseminated during the last decade. They include some or all of these competencies, thus demonstrating the effectiveness of SEL’s social-emotional learning model.

3. Methodology

This study conducts a documentary and retrospective analysis of the trajectory of articles published on the implementation of socioemotional education programs applied in the educational context during the decade 2010–2020. A cross-sectional quantitative-descriptive methodology was used to analyze the data, and frequency tables with grouped data were used to answer the following questions: who are the authors who have researched and published the most in this line of research; where have these works been published; which are the countries in which knowledge has been produced; in which years has there been the greatest production; which are the methodologies that have allowed the evaluation of these programs; and which are the most disseminated educational programs in the last 10 years.

3.1. Unit of analysis

The unit of analysis consisted of 168 research articles on the results of the implementation of socioemotional education programs in primary education, which have been published in the Web of Science and Scopus databases (all databases), between the years 2010 and 2020.

3.2. Materials

The search was carried out in the Web of Science and Scopus databases, which were chosen for being multidisciplinary, prestigious, and wide coverage platforms.
3.3. Procedure

On 1 January 2021 the search was configured, based on the terms: program, socioemotional and primary education, to which were added some truncators and Booleans that gave rise to the search strategy (Social-Emotional) AND (programme) AND (child* OR infancy OR “primary school” OR “elementary school”), with which the search was performed in both databases, in which the time period was also limited (2010 to 2020).

Prior to the review, inclusion criteria were established to select only those articles that met the established requirements. The requirements for an article to remain in the final database were that it should report on the implementation of a socioemotional education program that had been developed in the educational system (i.e., at school) with primary school children. It is worth mentioning here that the main reasons for exclusion were that the studies had been carried out in a community context (scout groups, clinical groups in hospitals, neighborhood, or religious communities), developed with mothers or families (pregnant or with children under two years of age) or with children in early childhood education. Programs addressing socioemotional learning during adolescence were also left out. It should be noted that it was decided to include work aimed at students up to the 8th grade.

After this initial review of the 1645 papers that the initial search yielded, the number of papers was reduced to 168, which were read in full text, recording data of interest such as the title of the paper, year of publication, journal in which it was published, authorship of the article, description of the participants, methodology used, and finally the topics or variables under study, which were subsequently categorized and analyzed in depth.

3.4. Data design and analysis

Montero and León[22] classify bibliometric studies under an ex post facto retrospective design, indicating that this is because this type of study does not allow the manipulation of the variables under study, due to the excontemporaneity with which the research is carried out.

To examine and systematize the information, descriptive and frequency analyses were used, which were processed using the SPSS-20 software and the Excel 2013 application.

4. Results

4.1. Temporary production

Regarding the analysis of the articles (168 in total) according to the year of publication, the range of publications per year oscillated between 8 and 34, with 15.27 being the average number of publications. From these data it can be highlighted that, in the five-year period 2010–2015 publications tend to remain at low productivity levels and that after 2015 this number increases in such a way that annual productivity is always equal to or higher than that of the first half of the decade, standing out among these the year 2020, in which there was a substantial increase in the publication of articles with respect to the entire period under review.

4.2. Productivity per journal

Of a total of 113 journals in which research papers on this topic have been published, only 10 journals have published more than two papers on the subject and only one stands out as the journal with the highest production on the subject: “School Psychology Quarterly”, with the publication of 6 articles during the period analyzed. Table 1 also shows that the most productive journals are mainly from the United States, with a total of 4 journals with 16 articles published.
4.3. Productivity by author

Following the criterion proposed by Crane (1969), who, based on productivity on a research topic, distinguishes between passers-by (authors with only one published work), aspiring (between 2 and 4 publications), moderate producers (between 5 and 9 publications) and major producers (10 or more publications), it can be reported that 88.51% of the authors in the review were in the bystander category (655 authors out of a total of 740), 9.46% in the aspiring category (70 authors), and 1.62% as moderate producers (12 authors).

The first two with 10 articles and the last one with 11 articles published in these databases in the period reviewed. In turn, it is worth mentioning that, like the large producers, the authors classified as moderate producers (12 in total) work at universities in the United States.

As for the number of signatures per document (740/168), there is a predominance of group work over individual work (155 group work, versus 13 papers), it can be added that the papers are signed by from one author to 15 authors (1 paper) and that the authorship index is 4.40, i.e., there is a tendency to work in teams of four authors, in this sense, there are 36 papers, corresponding to 21.42% that are signed by this number of authors.

With regard to the number of signatures per document (740/168), the authorship rate is 4.40, with a tendency to work collaboratively (155 papers, equivalent to 92.26% of the total), especially in teams of four people (36 papers, corresponding to 21.42%).

4.4. Methodological approaches used

Of the 168 articles in the database, there is an inclination towards quantitative research (123 papers) corresponding to 73% and to a lesser extent the use of qualitative or mixed methods (23 and 22 papers) equivalent to 14% and 13% respectively.

Regarding the instruments and procedures most used in data collection are self-report questionnaires, followed by parent reports and interviews created for the study, facts that correlate with the stated approach.

4.5. Sources of information/participants

In relation to the sources of information declared by the research reviewed, the use of four types of direct sources for obtaining data (participants) was evidenced. In this case, those who motivated the interest of the researchers, to develop the programs, are mainly: students, teachers, parents, and directors, belonging to the school institutions.

With reference to the educational levels that were considered to apply the programs and collect data, these are the following: primary level up to 8 years of schooling. The ages of the students belonging to the educational levels mentioned fluctuate between four and fifteen years of age.

The percentage distribution of the participants in the programs reviewed shows that students were the main subjects of study (153 papers, equivalent to 91%). This is different from what happens when considering all the members of the educational institution (students, teachers, parents, and directors), which only reached 1 paper (0.6%), there are also papers that include in their evaluation students and teachers (10 papers equivalent to 6%), students and parents (3 papers equivalent to 1.8%).

With respect to the educational levels considered for the application of the programs, the articles show the primary level as the area that generated the greatest interest and, therefore, the highest percentage (69.6%). As a second option, both levels were approached (18.5%) and with a lower percentage the secondary level (7th and 8th grade), which was calculated at (11.9%).
4.6. Thematic analysis

As noted above, the number of papers reviewed was 168 articles presenting educational programs in the socioemotional area for elementary education. These articles show a total of 106 programs different from each other, 13 of which have been reiterated over the years and with different participants (see Table 1).

Table 1. Name and description of the most frequent programs.

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<thead>
<tr>
<th>Program name</th>
<th>Program description</th>
<th>Frequency</th>
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<tr>
<td>Positive Action</td>
<td>Positive Action is a comprehensive developmental program to be developed in the school-wide curriculum and designed to improve the academic, behavioral and character aspects of students. Studies report positive effects on self-esteem and behavioral disorders. It is also highlighted that when developed in a school-wide manner it favors academic results and school motivation and minimizes school refusal behavior.</td>
<td>12 papers</td>
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<tr>
<td>SEL</td>
<td>SEL. Program based on the CASEL proposal. The results indicate that training in socioemotional skills has a positive effect on SEL components, academic performance, and emotional intelligence. Therefore, it is argued that this program has a positive influence on students in primary and secondary education.</td>
<td>11 papers</td>
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<tr>
<td>Paths</td>
<td>PATHS is a program whose acronym translates as “pathways”; it is a program to promote alternative thinking strategies, a universal intervention that includes multiple skills, in a sequence appropriate to the development of boys and girls. The focus of this program is knowledge about one’s own and others’ emotions, as well as the ability to self-regulate. The results reported are associated with socioemotional development, as well as with the overcoming of behavioral and social problem-solving aspects. One aspect of this program is that the impact of PATHS is greater in schools with high social vulnerability.</td>
<td>9 papers</td>
</tr>
<tr>
<td>Second Step</td>
<td>Second Step is a program that fosters social and emotional learning, structured around units of academic emotional and social skills. The results indicate significant improvements in social-emotional competence. Similarly, it is suggested that there are positive effects for educational institutions, with respect to social skills (empathy and social behavior) and learning approaches (academic engagement). However, it does not generate modifications in academic skills and in the generation of friendship bonds.</td>
<td>8 papers</td>
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<tr>
<td>Insight</td>
<td>Insights is a social-emotional learning program that helps children self-regulate, to improve their attention and behavior management. Results reveal that children experience an increase in academic achievement in both math and reading. The effects on academic performance are partially mediated by a reduction in behavioral problems and sustained attention. It is also suggested that this program improves behavior and reduces disruptive behaviors, which are mediated by improvements in the quality of the student-teacher relationship.</td>
<td>8 papers</td>
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<td>Mindfulness</td>
<td>Mindfulness corresponds to a category that groups SEL programs based on mindfulness, the results of these proposals have been associated with many cognitive, emotional, behavioral, and academic variables -academic performance- that are benefited through mindfulness practices. The results have been observed mainly in children, but also in parents and teachers.</td>
<td>6 papers</td>
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<tr>
<td>Friends</td>
<td>Friends is a program based on cognitive-behavioral intervention, selective type for children and adolescents with anxiety symptoms. This program is adapted to the period of development in which the participants are. The results show a decrease in anxiety symptoms and psychosocial difficulties, as well as relevant improvements in coping skills and psychosocial difficulties. From the different implementations it is evident that the effects are better when a sample is selected, such as students with higher levels of anxiety than when it is carried out universally.</td>
<td>5 papers</td>
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<tr>
<td>Coping Power</td>
<td>Coping Power is a program that addresses disruptive behavior disorders, which has proven to be useful in increasing prosocial behaviors, reducing social interaction problems and aggressive behaviors of students. Likewise, it is proposed that applying the program in Special Education contexts allows obtaining the same results as in general education schools.</td>
<td>3 papers</td>
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Table 1. (Continued).

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<th>Program name</th>
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<tr>
<td>Strong</td>
<td>Strong is a series of age-appropriate programs, which are named according to the age for which they were created, Strong Start or Kids. The results of the program are along the lines of self-regulation and the development of self-competencies, and no effects on student empathy, responsibility or external behavior are reported. On the other hand, focus group data revealed a positive change in social skills, anger management skills, and school attitude.</td>
<td>2 papers</td>
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<tr>
<td>Kool Kids</td>
<td>Kool.KIDS is a SEL-based program, with multimedia support, whose purpose is to develop emotional regulation, social and friendship skills, empathy, compassion, and self-esteem in primary school children. The results indicate that this program improves the social and emotional competencies it proposes if it is applied to the whole class and that it is included in the school curriculum. In addition, the reduction of anxiety symptoms and behavioral problems is evidenced.</td>
<td>2 papers</td>
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<tr>
<td>Together</td>
<td>Together corresponds to a culturally adapted version of the PATHS program, its purposes are to foster positive emotional and prosocial behavior. Outcomes for children include emotional understanding, altruistic behavior and executive functions, outcomes for teachers include improved school climate, teaching style and well-being. Finally, for parents, outcomes include emotional self-efficacy, parenting practices and collaboration with the school.</td>
<td>2 papers</td>
</tr>
<tr>
<td>The Incredible Years</td>
<td>The Incredible Years® is a series of interwoven programs for parents, children, and teachers. Its aim is to prevent and treat behavioral problems in young children and to promote the development of social, emotional, and academic competencies in them. The reported effects are less than auspicious, and it is stated that they will be used to adjust accordingly.</td>
<td>2 papers</td>
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<tr>
<td>Head Start</td>
<td>Head Start is a program that provides comprehensive support to children and their families. Its objective is to improve the physical and emotional well-being of children from early childhood. The results reveal that, with academic commitment and frequent participation of teachers and parents, the effects of the program are long-lasting. The effectiveness of the program refers to positive changes in socioemotional development, in social and academic skills, in the student-teacher relationship, as well as favoring the reduction of impulsivity.</td>
<td>2 papers</td>
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Among the positive effects reported by the programs are improvements in emotional areas such as overcoming self-esteem, emotional understanding, motivation, improved attitude towards school and teachers, decreased anxiety, and impulsivity. Similarly, the changes that occur in the social area are through empathy, development of social skills, better management of behavioral problems and resolution of social problems or disruptive or aggressive behaviors. At the cognitive level, improvements in executive functions and academic skills are also reported.

The variables addressed by the educational programs with the highest frequency are self-awareness, emotional regulation, prosocial behavior, interpersonal relationships, and empathy, and among the least considered are social awareness and self-care (see Figure 1).
In summary, it is important to indicate that, of the programs reviewed, approximately half have been implemented in the United States, and only 5 in Latin America (2 in Brazil, 1 in Guatemala, 1 in Argentina and 1 in Mexico). Regarding the duration of the interventions and the follow-up stated in the articles, it can be pointed out that the programs have been implemented from 1 month to 8 years. This data shows cross-sectional studies, i.e., that have been implemented only once and with a particular group of students, and longitudinal studies in which there has been a process experienced on more than one occasion by the students, and therefore under a logic of gradualness and systematicity in the socioemotional development that adds a relevant characteristic to the personal and social formation of the students.

It is also important to point out that many of the programs reviewed have virtual platforms that facilitate their applicability, even in complex times in which virtual education acquires a greater potential for use.

5. Conclusions

The purpose of this study was to present the socioemotional learning programs for primary education that have shown the longest trajectory over time, as well as the variables considered most relevant to be addressed in them, which have been disseminated in the Web of Sciences and Scopus databases between 2010 and 2020.

The global synopsis allows pointing out that this educational field is today a topic of high scientific interest, observed from the substantial increase in the number of publications made during the year 2020, which shows the importance that the incorporation of social-emotional education in elementary school is currently gaining.

It is also possible to indicate that the authors have a large number of possibilities of journals interested in the dissemination of works of this nature, among them School Psychology Quarterly, Mindfulness, Children and Youth Services Review and Journal of School Psychology, as those that have most supported...
the dissemination of educational programs for children.

With respect to the authors, it can be pointed out that there are few who have dedicated themselves to generating, disseminating and following up social-emotional learning programs for elementary education, with only three who can be classified as majores producers. It should also be noted that a large number of authors are from the United States and tend to publish their work in collaboration, perhaps due to the nature of the articles reviewed -socioemotional learning programs- which involve more time and work to obtain publishable results, especially considering that some of the works also correspond to longitudinal studies.

In relation to the methodological approach, it is important to state that a significant number of works state a quantitative research approach, and quasi-experimentais designs, whose initial evaluation considered the measurement with standardized self-report instruments, being mainly the students who filled out such instruments. It is also relevant to note that teachers and parents were also consulted through interviews and reports.

From the thematic analysis, it is possible to report the existence of 13 programs consolidated over time, which are based on the socioemotional learning model promoted by CASEL and of another 106 programs that have also undergone evaluation with the intention of forming a large base of valid and reliable proposals to educate students, parents and teachers of primary education, in the socioemotional field, a fact that opens a range of opportunities for the personal and social formation of boys and girls.

Regarding the variables addressed by the 13 educational programs identified as the most recurrent in the review, it can be indicated that these are structured on the basis of emotional and social variables, among which those that are at the basis of socioemotional education such as self-awareness and emotional regulation stand out, as well as prosocial behavior as a variable that, when acquired, favors interpersonal relationships and coexistence in the family, group of friends, classroom and school[23].

On the other hand, it is considered important to point out that, although the programs reviewed are for students, the benefits are received by the entire educational community, since they improve the environment and interactions among the educational actors. In this regard, their authors tend to conclude that a program is more effective if it is assumed by the school as a whole, that is, those that are aimed at the educational levels attended by an educational center, so that learning is gradual in the different courses and formative levels.

It is also argued that it is better for social and emotional learning programs to be inserted in the school curriculum, since this facilitates the articulation of training activities between subjects and therefore learning takes place in an integrated manner. In this same line, it is proposed as an important condition that educational programs be adapted to the level of development of the students who participate in them, since interests and needs change with age.

Finally, as an important conclusion, and also highlighted by the work carried out, a program will always have better and more lasting results if there is academic commitment from teachers and active participation of parents, since this ensures that the school advances towards comprehensive education, with family support.

**Conflict of interest**

The authors declare no conflict of interest.

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