

UNIVERSAL DESIGN FOR LEARNING AND INCLUSIVE EDUCATION: A SYSTEMATIC REVIEW IN THE INTERNATIONAL LITERATURE¹

DESENHO UNIVERSAL PARA APRENDIZAGEM E EDUCAÇÃO INCLUSIVA: UMA REVISÃO SISTEMÁTICA DA LITERATURA INTERNACIONAL

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ABSTRACT: This study carried out a systematic review of the literature guided by the following research question: How have the empirical research based on the principles of Universal Design for Learning – UDL influenced the inclusion of the Specialized Educational Service Teacher – SEST in the international literature? The general objective was to map and analyze the international empirical research involving the UDL interface and inclusion. To do so, the research was carried out in the journal database of the Coordination for the Improvement of Higher Education Personnel - CAPES and the descriptors used were “universal design for learning” and “inclusion”. As a selection criterion, it was established that only papers published in English language would be analyzed in peer-reviewed journals; in addition, for analysis, it was necessary that the paper reported an empirical research. Thus, 44 papers were initially found, and after the application of the criteria, seven were analyzed. The results show that most of the published works have theoretical conceptions about the subject, but without the realization of an applied research. The few empirical studies found are centered around questionnaires and interviews, as well as teacher training. It is concluded that the need for research that directly apply the principles proposed by the UDL emerges, so that it is possible to analyze the effects of the application of the UDL in the inclusion of all students in the school.

KEYWORDS: Special Education. Systematic review. Universal Design for Learning. Inclusion.

RESUMO: Este estudo realizou uma revisão sistemática da literatura norteada pela seguinte questão de pesquisa: Como as pesquisas empíricas baseadas nos princípios do Desenho Universal para Aprendizagem - DUA têm influenciado a inclusão do Professor de Apoio Educacional Especializado - PAEE na literatura internacional? O objetivo geral estipulado foi mapear e analisar as pesquisas empíricas internacionais envolvendo a interface DUA e a inclusão. Para tanto, a pesquisa foi realizada no portal de periódico da Coordenação de Aperfeiçoamento de Pessoal de Nível Superior - CAPES e os descritores utilizados foram “universal design for learning” and “inclusion”. Como critério de seleção, ficaram estabelecidos que só seriam analisados artigos publicados em língua inglesa em periódicos revisados por pares; além disso, para análise, era necessário que o artigo relatasse uma pesquisa empírica. Desse modo, foram encontrados inicialmente 44 artigos, e, após a aplicação dos critérios, sete foram analisados. Os resultados mostram que a maioria dos trabalhos publicados tece concepções teóricas sobre o tema, mas sem a realização de uma pesquisa aplicada. As poucas pesquisas empíricas encontradas concentram-se em torno de questionários e de entrevistas e, também, na formação de professores. Conclui-se que emerge a necessidade de pesquisas que apliquem diretamente os princípios propostos pela DUA, para que assim seja possível analisar os efeitos da aplicação do DUA na inclusão de todos os alunos no contexto escolar.

PALAVRAS-CHAVE: Educação Especial. Revisão Sistemática. Desenho Universal para Aprendizagem. Inclusão.

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1 INTRODUCTION

The concept of Universal Design (DU) comes from architecture and was designed to provide accessible environments for the entire population (Nelson, 2014). Although this concept was initially developed to ensure the accessibility of people in the most diverse conditions in physical structures, these principles have been applied to other areas of knowledge. In the area of Education, the term adopted in the United States is Universal Design for Learning (UDL), being understood as a set of principles, strategies and actions that aim to make education accessible and functional for all people. This concept is based on three principles: 1. provide multiple means of engagement; 2. Provide multiple means of representation; 3. Provide multiple means of action and expression (Meyer, Rose, & Gordon, 2014).

According to Nelson (2014), the concept of UDL is based on neuroscience, which argues that each individual learns in a certain way and through different stimuli. In this sense, the author defends UDL as a continuous process to think about teaching planning. Although UDL has been designed to meet the demand of the entire population and its various characteristics, it is important to reflect on its influence in the area of Special Education, since it is a recent concept that has had a direct impact on research on inclusion.

To Rose and Gravel (2010), UDL is based on practical research that takes place in the learning sciences; among them, we highlight Education. Although UDL has many benefits when considering its application in the school context, King-Sears (2014) warns that this concept should not only be used thinking about assistive technology, but also on the characteristics of instruction and planning used by the teacher. In this same perspective, Prais and Rosa (2017) state that

the organization of the teaching activity subsidized by the guiding principles of UDL plans the activities, the objectives, the resources and the pedagogical strategies, the intentions and the practices consistent with the inclusive education movement, that is, to ensure the right of all to education through teaching organized to meet students' learning needs. (p. 415).

It is important to emphasize that UDL comes to the area of Special Education, since it visualizes individuals in a unique way and proposes to think about their peculiarities. Understanding how this concept has been used in the school context is of paramount importance, as well as knowing the direction of the research inserted in this theme. In this sense, compiling the material already published is a way to establish an overview of the use of this concept in the education and inclusion interface.

Prais and Rosa (2017) conducted a systematic review of UDL in Brazil between 2010-2015, proposing to investigate how UDL has been included in Brazilian scientific publications. When concluding the research, the authors stated that:

As the main result and discussion, the research reveals the need for research that address the *didactic contribution in the field of teaching practice for educational inclusion in the context of regular education*. Research also the need for teacher training for the implementation of UDL in teaching planning and development of inclusive pedagogical activities, which contemplate the use of technological resources enhancing the teaching and learning process. (Prais & Rosa, 2017, p. 421, emphasis added).

This study differs from the research developed by Prais and Rosa (2017) as it covers the international literature, involving the production of knowledge in empirical research on UDL in the field of inclusive education. As objectives, it was stipulated:

- General Objective: Map and analyze international empirical research involving the UDL interface and inclusion.
- Specific objective: to verify how the concept of UDL has been applied in international empirical research.

In order to guide this study, the following research question was established: How have empirical research based on UDL principles influenced the inclusion of the *Specialized Educational Service Teacher* – SEST in the international literature?

2 DEVELOPMENT

This study is based on a systematic literature review to gather information about the UDL theme.

Systematic review is a method that has been increasingly used in scientific research to evaluate a set of data simultaneously, which has been widely accepted in academia, given the ability to integrate the findings of existing individual research, objectively allowing the synthesis of scientific information. (Segura-Muñoz, Takayanagui, Santos, & Sanchez-Sweatman, 2002, p. 6).

To Costa and Zoltowski (2014), conducting a systematic literature review allows maximizing the search, as it offers the researcher a support to find and analyze the studies in an organized manner. Thus, the authors would define eight steps adopted as procedures in this study: 1. Delimitation of the question to be researched; 2. Choice of data sources; 3. Definition of search keywords; 4. Search and storage; 5. Selection of papers; 6. Extraction of data from selected papers; 7. Evaluation of papers; 8. Interpretation of data.

In order to gather the largest number of papers on the theme studied, a general search was made on the databases available on online platforms. After careful analysis, it was decided to use the Coordination for the Improvement of Higher Education Personnel (CAPES) database, considering that it covers the most representative international bases in the area of Human Sciences. As this is an English language search, the databases covering Latin America were excluded, as well as those that are not part of the Humanities and those specific to books. Among the databases that make up the CAPES Periodical collection (21), nine were selected. Figure 1 below illustrates the selected databases.

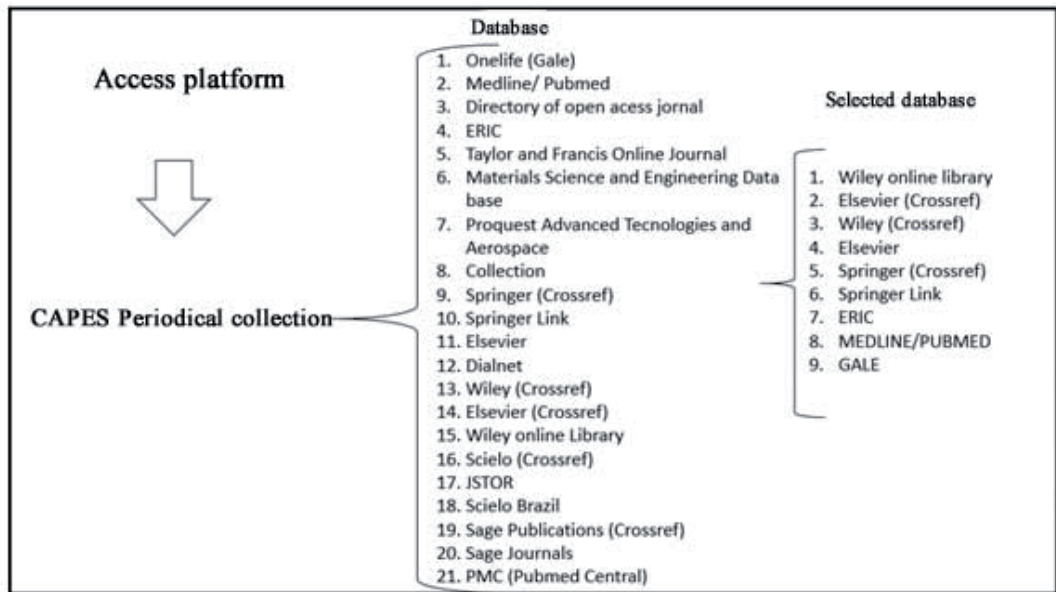


Figure 1. Selection of databases.

Source: The authors.

To raise the desired publications, two descriptors were used: “Universal Design for Learning” and “Inclusion”. The descriptors were used together with the boolean operator “and”. The terms chosen were verified in using Thesaurus, and only the term “inclusion” is registered as a descriptor.

To refine the search, the following filters were applied: full papers published in peer-reviewed journals in the English language. Searches were conducted in the second half of 2018.

For the papers found, the following selection criteria were established:

- Be in the English language.
- Display the acronym UDL or the exact term in full in the title and/or abstract.
- Be an empirical research (empirical research is understood to be one whose data collection is performed in the field).
- Have the UDL as the main object of research study.

After employing the search procedures previously described, a total of 44 papers were found. After applying the inclusion criteria, 37 papers were excluded from the analysis, as indicated in the following flowchart (Figure 2).

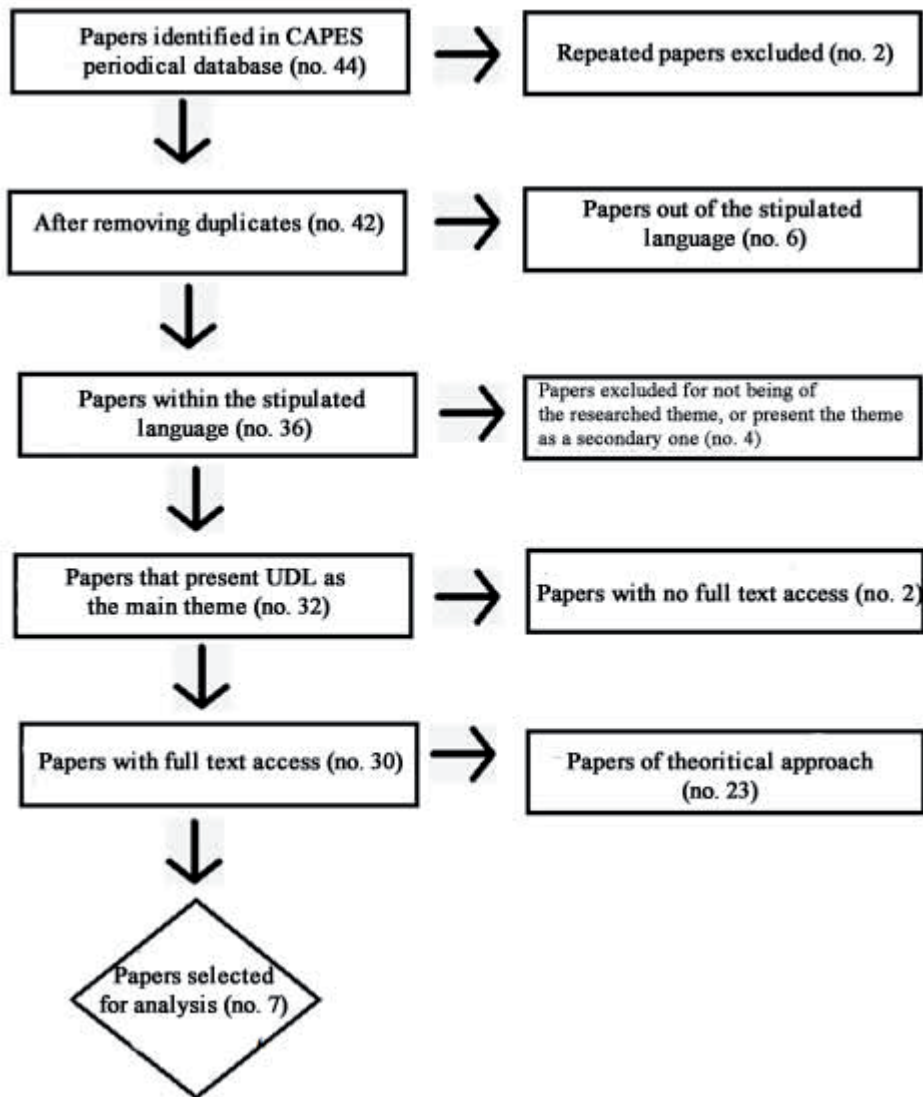


Figure 2. Flowchart of application of the inclusion criteria for selection of papers for analysis. Source: The authors, based on the PRISMA Group model - Preferred Reporting Items for Systematic Reviews and Meta-analyses (Moher, Liberati, Tetzlaff, & Altman, 2009).

It is important to highlight the prevalence of theoretical studies that defend the ideal of UDL in the educational field, but without presenting scientific evidence that proves the effectiveness of this type of instruction. This data stands out since 23 papers were excluded because they presented only the theoretical approach of UDL, corroborating the findings of Prais and Rosa (2017), in the review of national literature (Brazilian) conducted by the authors: of the 23 papers selected for analysis, 12 addressed literature review and theoretical considerations on the topic, whereas 11 featured field research and analysis of UDL application.

In the international literature, this data was even more discrepant, since, of 30 papers, only seven addressed applied research.

Table 1 below describes the studies selected in chronological order (oldest to most current).

Author / (Year)	Title	Periodical/ Country	Area	Objectives	Method/ Participants	Results
Katz & Sugdan (2013)	The three-block model of universal design for learning implementation in a high school	Canadian Journal of Educational Administration and Policy, Canada	Education	Evaluate the role of school leaders in the process of implementing inclusive education and universal design for learning.	Analysis of the field notes, photographs, and principal's video evidence is detailed to illuminate a process of supporting inclusive education through teachers' professional development in universal design for learning.	The results indicated that the principal's efforts to provide teachers with professional development, time planning for collaboration, vision, and direct involvement in instructional delivery resulted in positive learning outcomes, self-efficacy, and a sense of community among students and teachers.
Mcghie-Richmond & Sung (2013)	Applying Universal Design for Learning to Instructional Lesson Planning	International Journal of Whole Schooling, Canada	Education	To analyze the effects of introducing universal design for learning into a teacher education program.	Two groups of participants: pre-service teachers and in-service teachers. The teachers participated in the course which consisted of planning their classes according to the UDL concepts, from the modification of the original lesson plans. Teachers were provided with a step-by-step UDL guide.	Both groups made modifications to the lesson plans regarding the introduction of UDL principles. The use of UDL principles in lesson plans has enabled all students to enjoy learning.
Katz & Sokal (2016)	<i>Universal Design for Learning as a Bridge to Inclusion: A Qualitative Report of Student Voices</i>	International Journal of Whole Schooling, Canada	Education	To analyze the effects on the learner of a new pedagogy called the Three Universal Design Blocks Model for Learning through student reports.	101 students from 51 Canadian schools participated in an interview.	Overall, the analysis showed that students had changes in five categories: learning conceptions; learning processes; interdependence in learning; student self-concept and school involvement.
Navarro, Zervas, Gesa, & Sampson (2016)	<i>Developing Teachers' Competences for Designing Inclusive Learning Experiences</i>	Educational Technology & Society, Australia	Education	To present the design, implementation and evaluation of a teacher professional development program (PDP) aligned with CFIT for designing inclusive OERs by applying the UDL principles.	Forty-seven primary and secondary school teachers who attended classroom and online classes on the Universal Design platform for learning participated in the research.	The results of the teacher's PDP assessment have shown their added value for the development of teachers' skills in designing inclusive learning experiences for their students.

Author / (Year)	Title	Periodical/ Country	Area	Objectives	Method/ Participants	Results
Lowrey, Hollingshead, Howery, & Bishop (2017)	<i>More than one way: stories of UDL and Inclusive classrooms</i>	Research and Practice for Persons with Severe Disabilities, USA and Canada	Special Education	To examine the stories of general education teachers related to the implementation of the Universal Design for Learning (UDL) framework and inclusion of students with moderate to severe intellectual disabilities.	Narrative Investigation. Seven teachers working in education from the United States and/or Canada participated in the study.	All participants shared stories demonstrating that students with moderate and severe ID can and should be included in the intentional planning of learner variability. General education teachers need more support and training to understand the characteristics, instructional methods, materials, and expression options for incorporating these students into the general curriculum.
Taunton, Brian, & True, (2017)	<i>Universally Designed Motor Skill Intervention for Children with and without Disabilities</i>	Journal of Developmental and Physical Disabilities, USA	Physical Education	To examine the effects of a six-week Universal Design for Learning (SKIP-UDL) motor skill intervention on the fundamental motor skills (FMS) of children with and without disabilities.	Pre – post test with intervention. 67 participants of both sexes aged 3-5 years, 42% of the sample with disabilities.	The statistically analyzed results showed differences in motor skill acquisition between the participants of the experimental group and the control group. However, when disability and non-disability groups were analyzed, non-disability participants performed better on the proposed tests.
Loman, Strickland-Cohen, & Walker (2018)	<i>Promoting the Accessibility of SWPBIS for Students with Severe Disabilities</i>	Journal of Positive Behavior Interventions, USA	Education/ Psychology	To evaluate the effects of adapted SWPBIS lesson plans on the inappropriate behavior of students with severe disabilities in the school context.	Experimental research - Multiple baseline design between participants. Three students with autism (8-9 years) and their respective class teachers.	In general, problem behaviors among students with severe disabilities have decreased with the adaptation of SWPBIS through UDL principles.

Table 1. Description of studies selected for analysis.

Source: The authors.

Initially, an analysis of demographic data was performed, in which it was found that the studies are predominantly produced in North America (6/7); the other study analyzed was conducted in Australia (1/7). Regarding the area of publication, the papers were subdivided into the areas of Education (4), Special Education (2) and Physical Education (1). Although the timeline was not used as a filter, it is noted that the research found occurred between 2013-2018, which highlights the relevance of the theme as well as the recent beginning of practical research on the subject.

For analysis, all papers were read in full under the technique of content analysis (Bardin, 2011) in which the similarities between the studies were identified so that they could

be grouped by thematic categories. We chose to group them according to the strategies used in each research. Thus, it was found that four studies involving direct intervention were found (two with SEST and two focused on teacher training) and three diagnostic research that used interviews and/or questionnaires as data collection instruments. From this division, by type of research, three categories emerged. Table 2 shows the categorization of the research analyzed in this systematic review.

Category	Description	Number of papers allocated	Authors/ year
1. UDL in intervention with students.	In this category, studies that addressed direct intervention with students were allocated to verify the cause - effect relationship between UDL principles and behavior or ability.	2	Taunton, Brian, & True (2017) Loman, Strickland-Cohen, & Walker (2018)
2. UDL in teacher training	In this category, studies that made direct intervention with teachers, seeking to promote a training on UDL were grouped.	2	Mcghie- Richmond & Sung (2013) Navarro, Zervas, Gesa, & Sampson (2016)
3. UDL from the perspective of teaching professionals.	This category corresponds to the diagnostic research that aimed to describe how the UDL is viewed by participants in the school environment.	3	Katz, & Sugdan (2013) Katz, & Sokal (2016) Lowrey et al. (2017)

Table 2. Categorization of the analyzed studies.

Source: The authors.

2.1 UDL IN INTERVENTION WITH STUDENTS

Taunton, Brian and True (2017) analyzed through a pre-post test the effects of a motor intervention using UDL on students with and with no disabilities. Sixty-seven children between the ages of three and five took part in the study. The sample consisted of 42% with some type of disability and 58% with no disability. Participants were randomly divided into two groups. The control group did not undergo the intervention, only the pre-post test and was composed of 19 students with disabilities and eight students with no disabilities. The experimental group included 20 students with disabilities and 20 students with no disabilities. For measurements, the Gross Motor Development Test (TGMD-2) was used.

The intervention program developed by Tauton, Brian and True (2017), called SKIP - UDL, was designed based on evidence practice of Physical Education and Motor Education, as well as the three universal principles of UDL. There were six weeks of intervention during Physical Education classes, which had external observers to ensure that the teacher was applying the UDL-based motor intervention. At the end, intra-observer agreement was performed which corresponded to 95%. The statistically analyzed results showed differences in motor skill acquisition between the participants of the experimental group and the control group. However, when the groups with disabilities and non-disabilities were analyzed, participants with no disabilities had superior performance in the proposed tests. The authors concluded

that, in addition to the intervention improving students' overall motor skills, planning an intervention in Physical Education based on the principles of UDL favors the participation and engagement of students in the proposed activities.

Loman, Strickland-Cohen, & Walker (2018) also used an experimental model (multiple baseline single subject design) to assess the effects of adapted lesson plans and inappropriate behaviors of students with severe disabilities in the school context. The inadequate behaviors of the three students analyzed decreased with the insertion of the UDL principles in the lesson plans and school daily life.

Both studies allocated in this category worked with experimental research methods. The experimental model has been widely used in the national literature for research applied in the SEST (Lima & Almeida, 2008; Lopes-Herrera & Almeida, 2008; Oliveira, 2016), because it is possible, through the chosen designs, to determine the causal relationship. effect between two variables. This fact shows the researchers' caution in really identifying the effectiveness of the UDL intervention, whether in motor skills or in the school's daily activities.

The use of UDL for learning, thinking about motor skills, such as the study developed by Tauton, Brian and True (2017), raises a discussion about the use of UDL not only for more theoretical subjects in the school context, but also in the area of Physical Education. Promoting a quality motor education supports the student to benefit in several aspects, including: independence and autonomy in performing daily tasks (Pereira & Moreira, 2013).

In this sense, it is important to highlight that, if UDL is still a new concept in our country, in the area of Physical Education it is practically unknown. In an initial research proposed by the authors of this paper, we sought to investigate, through a systematic literature review, the relationship between UDL and Physical Education, but the material found was insufficient to be discussed. The recent study published by van Munster, Lieberman and Grenier (2019) aimed, through a case study, to describe the different approaches teachers use to include students with disabilities in a New York Elementary School. Thematic analysis identified three main approaches: (a) standardized instruction; (b) differentiated instruction; and (c) instruction based on UDL principles. The authors conclude that by using the differentiated strategy when necessary (one tailored specifically for a student) and the UDL-based strategies in line with the goals of Physical Education, the teacher will favor the participation of all students during the activity.

Although the compiled material is still small, even in the international literature where UDL has been studied for 20 years, it is clear that research applied to students based on UDL principles has shown advances in behavior modification and also in the inclusion of students with disabilities in the regular school.

2.2 UDL IN TEACHER TRAINING

Mcghie-Richmond and Sung (2013) offered a UDL course for two groups of teachers: in-service teachers and pre-service teachers (undergraduate students). The course consisted of planning the classes according to UDL principles. A step-by-step guide of this planning was offered to all teachers. For analysis, the authors examined teachers' lesson plans before and after the course. All teachers participating in the training presented modifications to their original

lesson plans. Modifications made to the lesson plans following the principles of UDL favored that all students participate and enjoy the learning. Planning was the main object of study of the authors. In this sense, Orsati (2013) points out that planning is the starting point for the elaboration of inclusive classes.

The research carried out by Navarro et al. (2016) presented the implementation and evaluation of a teaching professional development program. The study included 47 teachers who attended classroom and online classes on the theme of UDL. As a result, the program evaluation has shown that training has enabled teachers to broaden their competencies in planning and designing inclusive learning experiences for their students.

Teacher education in the perspective of inclusion is discussed both internationally and nationally, highlighting the importance of developing programs for professional training. To Navarro et al. (2016), “teachers need to be equipped with appropriate competencies for addressing the diverse needs and preferences of their students and providing them with equal educational opportunities” (p. 25). Regarding the UDL perspective, three key points for reflection stand out: planning (Orsati, 2013), instruction and/or strategies and evaluation (Chтена, 2016).

To Chтена (2016), some strategies should be adopted when thinking about structured teaching according to UDL, namely: the use of technology, expository teaching, other classroom activities, assessment and additional support. Such strategies are found in the literature and seek to make the class accessible to everyone. Teacher training programs, in turn, should help to give teachers access to this literature and also to pedagogical practice.

In this scenario, UDL appears as a proposal to enable teachers to practice inclusive practice, because “the greater the possibilities of presenting new knowledge, the greater the possibilities of learning it” (Zerbato, 2018, p. 58). Such a precept is part of the second principle of UDL - that of representation. Rose and Meyer (2002) point out that this is the principle by which teachers identify most, and attribute this by saying that the basis of representation is the act of teaching.

The curriculum issue is another point that deserves attention when addressing the training of teachers to use the principles of UDL in their classes. To Alves, Ribeiro and Simões (2013), UDL allows to offer multiple means for all students to have access to curriculum content. Therefore, it is corroborated with Pletsch, Souza and Orleans (2017) in discussing that curricular differentiation should not happen through content impoverishment, but rather in reviewing the strategies and technologies that can be used to make the curriculum accessible to all students.

In Brazil, teacher education from a UDL perspective has gained visibility recently. Zerbato (2018) developed a teacher education program directing UDL to school inclusion. To reflect the pedagogical praxis, the author proposes a model of collaborative formation, in which there is dialogue between theory and practice. Among the research analyzed here, Navarro et al. (2016) also highlight that the collaboration between several professionals during the teacher training program corroborates a more efficient training.

The literature found and discussed in this category points to the importance of vocational training not only in understanding the concept and principles of UDL, but mainly in the planning and execution of the class, in order to make the activities accessible to all students, implying indirectly in the inclusion of SEST students.

2.3 UDL IN THE PERSPECTIVE OF TEACHING PROFESSIONALS

In this category, three of the selected papers were grouped. Two of them corresponded to the same author, they are: Katz and Sokal (2016) and Katz and Sugdan (2013). In the 2016 study, the authors used the interview technique to evaluate the effects of a new pedagogy called the “three-block model”, which proposes the application of UDL principles from the students’ perspective. The sample consisted of 101 students from 51 schools in Canada. Students responded to the interview before the implementation of the new pedagogy and after its implementation. Overall, the analysis showed that students had changes in five categories: learning conceptions, learning processes, interdependence in learning, student self-concept and school involvement. The authors also report that the vast majority of children recognized the changes in the new pedagogy and provided evaluative comments such as “the class has become more united”; “We are not ashamed to position ourselves”. Such comments point to an improvement in the socio-emotional climate and also in the instruction design.

Katz and Sugdan (2013) assessed, through field notes, school photographs, and video evidence, the role of school leaders during the UDL implementation process. The results indicated the principal’s effort to encourage teachers to participate in the UDL implementation process in the school context. The authors also point out that the success of this implementation is largely due to the participation of this manager for teachers to engage in the proposed initiative.

The study conducted by Lowrey et al. (2017) examined the stories of seven teachers about the implementation of UDL. All participants shared stories that students with disabilities were included in their teaching plans, as well as the need for more support and training to understand the characteristics, instructional methods, materials, and expression options for incorporating these students into the general curriculum. This meets the need to promote teacher education discussed in the previous category, and dialogues with the studies of formation carried out by Mcghe-Richmond and Sung (2013) and Navarro et al. (2017), analyzed in this systematic review.

It is possible to notice that the three works in this category sought to give voice to the teaching professionals involved in the implementation of the UDL, teachers and managers, as well as the students themselves. Analyzing the implementation of UDL from the perspective of who is inside the school is important to evaluate success points and points to be rethought, since this process is continuous and must be constantly thought and re-thought.

School inclusion is due to several factors, such as public policies, physical structure, school context, intra and interpersonal relationships. In this sense, Tavares, Santos and Freitas (2016) conducted a research that aimed to investigate whether, from the teachers’ point of view, the training received by them contributed to their actions with children with disabilities in regular schools. To this end, the researchers interviewed 52 teachers and applied content analysis to the transcribed interviews. The study data showed that teachers are very frustrated and distressed because they do not feel prepared to work with SEST.

The so-called “fear of the unknown” was also listed by Fiorini (2011) as a hindrance to school inclusion. Thus, Faria and Camargo (2018) argue that, in addition to aspects of vocational training, it is important to study how these feelings permeate the teacher’s practice, thus indirectly impacting inclusion. Due to that, works that seek to listen to school actors

and their perceptions (such as the studies listed in this category) are extremely relevant to understand the process of inclusion in the educational context.

The perspective of the professionals involved in the school universe also corroborates the reflection of teaching practice and the dialogue between theory and practice, which is intrinsically linked to teacher education. In this sense, Lüdke (2012) states that “we have already gone a long way in the study of the so-called teaching knowledge, to be aware that they are built from different sources, including that linked to the teacher’s own experience” (p. 32).

The teacher’s experience is also valued by Cruz (2011) in stating that “we believe that theory provides guidance and reading tools, but we also assume [that] the meanings people take with them are linked to their experiences” (p. 27). This interlocution of knowledge (theory and practice) also occurs when we think about teaching and the contributions that research can make to the school environment.

3 CONCLUSION

This paper aimed to analyze the contributions applied to the theme “Universal Design for Learning” in the field of inclusive education, from the international literature. Although the search resulted in a considerable number of papers when the selection criteria were applied, it was observed that the vast majority of international production concerns the theoretical considerations on the subject.

Practical contributions on the theme refer to the application of the principles of UDL in the students to modify some behavior, the teacher education and also analyzed the discourse of the participation of the management, the teachers and the students in the implementation of programs with UDL. The data collected show above all the importance of planning and teaching from the perspective of UDL, so that classes can move in an inclusive direction.

Although the term “inclusion” was used as a descriptor, no paper dealt with the theme of inclusion as the central study object of the text. The focus has always been on UDL principles. Some authors have made some final considerations about UDL and inclusion.

UDL is a recent perspective that seeks to promote and facilitate teaching for all students. This research found that, although we have a solid theoretical contribution in the area, there is a need for research that is effectively applied to analyze the real effects of the application of UDL principles in the school environment and the inclusion of students with disabilities, thus subsidizing the practice of teaching professionals.

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