

## **O Design Universal Para Aprendizagem e a Pedagogia das Estações: As Múltiplas temporalidades / Espacialidades do Aprender nas Escolas.**

### ***Universal Design for Learning and Pedagogy of the Seasons: Multiple Temporalities and Spatialities for Learning in School.***

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Elizabete Cristina Costa-Renders; Sean Bracken; Ana Silvia Moço Aparício

#### **ABSTRACT**

This article deals with an exploration of school inclusion processes, with a view to problematizing the learning hegemonies of time and space in educational institutions. It presents partial results of the research project: '*A Escola Para Todos*' (The School for All) and responds to the question: How can Universal Design for Learning (UDL), which is somewhat similar to the 'pedagogy of the seasons', qualify inclusive experiences in schools? By providing an integrative review of the salient features of UDL and pedagogy of the seasons, the paper questions the hegemony of time-space teaching and learning in schools by drawing on insights from narrative theory.

Methodologically, this part of the research provides an integrated reflection on critical conceptual attributes incorporating; UDL, the temporalities and spatialities of learning, and concepts of inclusive education. The results of this stage of the research show that it is necessary to overcome the hegemony of time and linear space in learning and teaching processes in order to arrive at school inclusion. Despite similarities between UDL and the 'pedagogy of the seasons,' tensions remain between these approaches. Not least as reflected in the overcoming of inclusive praxis paradoxes such as the necessity to address universal requirements while also tending to particular learner requirements; or equally, while recognizing the variability of strategies without losing sight of more global pedagogical approaches. This challenge is accentuated when the UDL concept of 'expert learners' is further interrogated.

**Keywords:** Narrative learning. Curriculum. Universal Design for Learning (UDL). Inclusive education. Pedagogy of the Seasons.

#### **INTRODUCTION**

The qualification of school inclusion processes has been the central problem of research carried out within the scope of the *ACESSI* study group and its research project entitled *A Escola para Todos* (The School for All). This paper presents some partial insights into a wider reaching research brief that interrogates the nature of inclusion in Brazilian schools. In this article we are primarily concerned with methodological considerations and it starts with the following investigative question: how can UDL, along with the concept of 'Pedagogy of the Seasons' help to qualify inclusive experiences within schools?

Our hypothesis in this investigation is that the physical and temporal movement of differences within school considerably impacts upon the hegemony of time and linear learning, causing and demanding new curriculum practices to emerge in the daily lives of educational institutions. We understand the emergence of new forms of curricula come about because, “it is impossible for the formal curriculum to live up to the unpredictable experiences that exemplify the nature of daily classroom encounters” (Macedo, 2018, p. 29). Alternatively, faced with difference, some schools may become paralyzed between old practice and the demand for new paradigms to emerge.

Methodologically, we work with integrative and iterative reflective processes, with a view to considering experimental and non-experimental studies to better understanding the UDL conceptual framework. While seeking to interrogate the lived curricular approach that emerges with the adoption of the UDL conceptual framework, we combine; “data from theoretical and empirical literature, in addition to incorporating a wide range of purposes: defining concepts, reviewing theory and evidence, and analyzing methodological problems ”(Soua, Silva & Carvalho, 2010, p. 103). Thus, this phase of the research is theoretical and philosophical as well as being methodological and practical.

In this text, our objective is to reveal temporal and spatial hegemonies within school based teaching and learning as revealed within narratives of learning. If the educational space is an open malleable and mutually informing space, informed by the dynamics of human learning, it cannot be legitimate to interrupt the movement of differences by imposing a ‘normed’ hegemony of standard time and space.

To continue problematizing the hegemony of uniform time and learning space in schools, in the first instance, we refer to the concept of UDL as developed by the Center for Applied Special Technology (CAST, 2018). This is a framework and a curricular approach that seeks to support teachers in order to minimize curricular barriers and maximize learning for all students, whether or not they may be disabled. To this end, supported by insights from neuroscience, UDL proposes three guiding principles which taken together will lead to the formation of accessible curricula. These are;

- Providing for multiple means of engagement (articulating the why of learning);
- Incorporating multiple means of representation (providing for the what of learning), and;
- Facilitating for multiple means of action and expression (enabling diversities in the how of learning).

We also draw upon, the notion of *Pedagogy of the Seasons* (Costa-Renders, 2016), as a new metaphor for the teaching-learning process. This conceptualization of difference leads us to consider the movement of human learning, where the seasonal light of knowledge arrives at different times and in different ways for all learners - be they teachers or learners. In this study, we are responsive to the

multiple dimensions, temporalities and spatialities of human learning in terms of a lived curriculum.

Drawing on learning from within the study group 'School Accessibility and Inclusive Society (ACESSI),' our research (Costa-Renders, 2016) has pointed out that the presence / claim of the disabled person presents itself as an emblematic case that demands consideration for new temporalities and spatialities of teaching and learning in schools. Like Rose (2006; 2019) and Rose, Meyer and Gordon (2014), we started from school inclusion studies concerned with people with disabilities but, to some extent, we have expanded our perspectives of pedagogical reach to all students in the course of our research.

In Brazil, authors such as Prais (2017); Zerbato, Mendes (2018); Bock, Gesser, Nuernberg (2018) and Costa-Renders (2019) have pointed to the relevance of UDL in the context of special education in terms of the extension of inclusive practices school systems. But they also identify the necessary for expansion of Brazilian research on UDL in the scope of inclusive education.

In this paper, we present the results of the first stage of research in the scope of the project *A Escola para Todos*. This stage, methodologically, guided by an integrative review of UDL, the temporalities / spatialities of learning and inclusive education. In particular, we seek to interweave UDL studies along with the Pedagogy of Seasons, which calls into question the imposition of standard time and space for learning at school.

In this text, our reflection is organized along three overlapping axes. The first addresses *the problem of time within schools*, starting from the contribution of the presence / claim of people with disabilities in the educational field, which contests the hegemony of linear time (chrónos) and announces the multiple dimensions of time lived (kairós) in schools . The second considers *the multiple temporalities / spatialities in the pedagogy of the seasons*, continuing in the quest for a school that is unhurried and open to the movement of diverse corporealities and its attendant feature that considers multiple dimensions of the temporality / spatiality of human learning. The third promotes a reflection on, *The universal and the variable within universal design for learning*, laying the groundwork for pedagogical approaches that provide multiple forms of engagement, multiple forms of perception, and multiple means for action and expression within the shared domain of learning and teaching.

## **1. The Problem of Time in School.**

Is there a predominant time in school? Is there an ideal teaching time in relation to inclusive education? The possibilities of talking about time are endless and complex, due to the specificity of the theme: there are for example; political times, productive times, advertising times, consumerist times, biological times, short times, long times, simultaneous times, sequential times, universal time, singular time, etc. All these times, in one way or another, have been subordinated, since modernity, by linear time. And at school, the same applies. Linear time has become a universal and hegemonic representation of time,

which consequently restricts the occupation and use of school space for some students.

Space, from the Latin “spatio” (Ferreira, 2004, p. 803), is a noun that denotes place, place or distance between two points that may or may not contain something, it may be a gap. This leads us to the spatiality that is required differently in the teaching-learning process. In the perspective of the inclusion paradigm, we understand that space - that which “is a practiced place” (Certeau, 1994, p. 202) - must be practiced by all people who so wish. Therefore, having in mind equality of opportunity at school for learner diversity, the determination of standard time for the spatiality (occupied place) of human learning must be problematized.

Tempo, from the Latin “tempus”, is a noun that denotes “the succession of years, days, hours, etc. that denotes, for human, the notion of present, past and future” (Ferreira, 2004, p. 1930). It also has connotations with, “the appropriate (or available) moment or occasion for something to be accomplished” (Ferreira, 2004, p. 1930). It can be a season, it can be a period and it has many associated adjectives, such as; absolute, compound, shared, local, universal, etc. From the perspective of an inclusion paradigm, however, we understand that time is plural and provisional and refers us to different temporalities. Temporality, from the Latin “temporalitate”, is a noun that denotes the provisional, the interim. In the field of inclusive education, this concept supports us in problematizing the time set by the clock for learning.

On the one hand, history, progress, modernization, development and globalization has constituted the theme of ‘advancement’ as existing within unique and malleable understandings, whilst also taking place within somewhat linear timelines, shortening spaces for some and widening spaces for others. On the other hand, education with its systematic regulation of prescriptive curricula has led to rather rigidly fixed time frames marking the phases of human development. This phenomenon has significantly favoured chronos time (clock time, time measured rigorously, time marked and fixed) to the detriment of kairós time (life time, opportune time, cyclical time, mobile and provisional time). Further, it has legitimized a process of marking, selection and exclusion in school systems.

In both cases, in society and at school, what occurred was the commonplace erasure of those who delay, ultimately leading to their non-existence because they have not adhered to the demands of linear time. According to Santos (2008), linear time is therefore a mode of production for ‘non-existence. Offering a complementary perspective, Foucault (1999) points to the relationship between educational institutions and the power of temporal signs, in which each program must be fulfilled within its allocated time. It is according to an awareness of temporal demands that behavior is guided by the determinations of disciplinary control.

According to Assmann (1998), alternatively there is an experience of living time, which is both individual and collective and it embodies simultaneous plurality. The idea is advocated in the chronicle, '*Time in Three Times*:'

- I have to hurry, time is short. Today, I woke up, not because of the cry of Clarice Lispector's three experiences, but because of a myth - Time. The time of learning has been hijacked and now you want to hijack me in three stages.

- Teacher, there was no time! I did everything we agreed, but the semester ended, and the book wasn't ready. And now, will I give up on what we started? When the book's ready, the student will no longer need it!

- Teacher, it didn't work, time is up! From tomorrow, after the grades have been entered in the system, the student will fail. All activities planned to make the assessment time more flexible will be lost, unless we make a follow up grade correction. What do I do? Do I fail the student?

- Teacher, I'm sorry, I won't be able to pay any longer. I know he has more time to study, by law, but I don't have enough time to work and get my son's tuition fee. I need to change schools because I can't afford it anymore. Do you have a scholarship for people with disabilities at school? In the morning, held hostage by the weather, there I was on the phone.

- Fernando, I'm sorry. Apologies! The book your son needed was not ready.

- Fabíola, don't worry. According to the system, the student will appear to have failed, but he hasn't. After the agreed activities we will put the record straight, is that ok ?!

- Samuel, unfortunately, I was unable to negotiate the times for payment. I'm sorry! (Costa-Renders, 2016, p. 169)

Considering the presence / demand of people with disabilities in schools and the flexibility of processes, this is the issue that opens the chronicle about Time in the three times. We question how pedagogical intentions brought about by greater complexity and diversity come up against administrative models fixed within prescriptive curricula. Or, what kind of school management would be able to contribute to a creative movement, towards the recognition of human differences and the rewiring of knowledge in school communities? This perspective also leads us to addressing the necessary for democratic school management, which must start from collegiate school decisions in relation to the lived school curriculum.

Frequently institutionalized school time is incompatible with providing an education for all, since chronologically institutionalized time excludes what fixing the spatiality of learning. Assmann (1998) contends that the desire to imprison temporal experience according to the constraints of clock time is disastrous in pedagogical terms, as well as being dehumanizing, because clocks do not chime with experiential temporalities. If there is an institutional time that prevails in the current educational system, Assmann problematizes it in the following terms:

The notion of time cannot be easily unified through a single universal representation, time remains problematic because it includes not easily unified facets of the human experience configured within those dimensions of spatiality that characterize and involve our sensing of the world (1998, p. 221).

The spatiality of this sensing of the world takes us to the consideration of the time / space binomial. Considering space from the perspective of Michel de Certeau, according to whom; "there is space whenever vectors of direction, speed and time variables are considered. Space is an interface between life's furnishings. It is, in a way, animated by the set of movements that unfold there" (de Certeau, 1994, p. 202). Therefore, space is the practiced place. These references about place and space are relevant to a conceptualization of what inclusion would be without the dictates of an educational system fixated with capturing bodies. From an inclusive education perspective, school space facilitates a practiced art open to whomever wishes to learn.

Taking the experience of people with disabilities into consideration in relation to the time / space of learning involves an awareness that the sensing of the world by people with disabilities often does not pass through the senses that cultural evolution has privileged, namely, hearing and vision. This results in the constitution of different temporalities / spatialities of learning for these people, starting for example with a fundamental attribute of schooling; the time / space afforded to reading.

Reading in Braille takes more time than reading text printed in ink. The dimensions of the spatiality of written words are different, they each demand their own time. We can also mention processes for reading used by deaf students. Reading a text by students with profound deafness and proficient in Sign Language requires the patient and time-consuming exercise of translating the reader's exposure to the normed language of communication, Portuguese or English for example, into sign language. This may involve searching for synonymous words that vouchsafe the symbolic exchange between these different linguistic modalities, an indispensable condition for the interpretation of a text. The reading experience lives according to another time! Or rather, it embodies other temporalities / spatialities of learning that require other temporalities / spatialities of teaching.

If institutional time prioritizes an equal and fixed time (the universal standard) for reading among students with variable requirements over the time lived in the act of reading for disabled learners, then the privileged senses of vision and hearing are valorized while those with differing senses are left behind or failed. This legitimizes their exclusion within normalized school environments. Is it possible to break away from this monoculture of standard time at school?

In the search for the educational enchantment, Assmann (1998) introduces the transtemporal imaginary of becoming as an irreversible flow that counter checks the unidirectional chronological dimension, which is embodied by living time. For him, "... institutional time should always be at the service of an institutional

climate that encourages synchronization between chronological times and experienced times" (Assmann, 1998, p. 235). Such a culture would give meaning to different pedagogical times. Is this a first step towards the ecology of temporalities in education? Is it possible to guarantee the space to become at school through more complex and plural times? We understand that respecting the different modes of sensing in the world (human corporeality) requires that we work with multiple pedagogical times in school units.

By proposing a macrosocial ecology of temporalities Boaventura de Souza Santos proposes a multitemporality that breaks with the hierarchies between the different temporalities; monochronic, polychronic, hourly, experiential, continuous, discontinuous, reversible, irreversible, etc. But Santos warns that "building coalitions and organizing collective actions between movements or organizations with different temporal rules is not an easy task" (Santos, 2008, p. 110). For the author, such difficulty can only be overcome with a mutual learning that frees "the social practices from the residual status that is attributed to them by the hegemonic temporal canon" (Santos, 2008, p. 110). Would such an approach also be possible in education? Due to the ecology of knowledge, would it be possible to expand times and spaces in the curriculum experienced at school? This question brings us closer to the concept of the narrative curriculum as proposed by Goodson (2007) that is guided by narrative learning, which requires recognition of experiential time - or *kairós*. In other words, it opens up space and provides the opportune time for learning according to each subject's uniqueness.

From a micro social view, there is a question as to whether the hegemony of standard time (*chrónos*) in education has already desensitized people to the point that they do not perceive different temporalities arising, so that existential processes and cognitive processes have become almost coincidental (Assmann, 1998). How, then, is it possible to break the governance of the hegemonic temporal canon of prescriptive curricula in schools? Is it possible to reverse the current flows of learning and teaching processes and propose multiple temporalities / spatialities across pedagogical time? If, for Assmann, the "....pleasure of cognition happens when 'self-time' and 'environmental, or universal time' come together" (1998, p. 231). This approach offers a clue as to how providing multiple temporalities / spatialities for pedagogy may lead to a return of pleasure in the act of school-based learning.

Following this approach, it is feasible to interrogate the time / space necessary for learning to use a new or different resources. In contemporary times, information and communication technologies are effective mechanisms of accessibility, as is the case with screen reader software (Dosvox, Jaws, Virtual Vision, etc.), especially for people with visual impairments. However, there is an important curricular transcendence in the processes of engaging with specialized assistive technologies (AT) within regular public schools.

The State programme of 'specialized educational needs' (Brasil 2018) has inserted new codes of reading and writing in the daily lives of schools and is seen as an important curricular bridge to span the tension between the monocultures

of time and providing the space to learn. SEN approaches thus call into question the dominant cultural code determined by the elite throughout human education. For example, the recognition of sign language in Brazilian education and its insertion into the school's daily life is an example of this tension. 'Libras' or sign language has heretofore existed outside of the school realm because it did not meet body behavior etiquette as determined by dominant modes of being and communication. In terms of curriculum theory, if SEN strategies in contemporary schools cause an important curricular spanning, or crossing between temporalities, then consideration of dominant school cultures is an area ripe for investigation because:

The curriculum and its implementation has been mediated through a dominant culture: it has been expressed in the dominant language, it has been transmitted through the dominant cultural code. Children in the dominant classes can easily understand this code, because all their lives they have been consistently immersed in this code all the time. (Silva, 2010, p. 35).

Regarding intersectionalities between social class and disabilities, Marcelo Neri points to correlations between these variables when analyzing the results of the 2000 Census. He has found inverse correlations between "having a disability on the one hand, and having education and an income on the other" (NERI, 2003, p.175). This perspective also confronts the contention that our curriculum provides a reflection of social needs. Rather, dominant forms of curriculum lack a mode for reflecting the multiple forms of sensing or living in the world.

The Common National Base Curriculum (Brasil, 2018) points out that curricula have complementary roles in guaranteeing the essential learning defined for each stage of Basic Education, as "such learning only materializes through the set of decisions that characterize the curriculum in action" (Brasil, 2018, p. 17). In other words, decisions by the school community will be necessary to adapt the National curriculum proposals to the local reality of schools. So, schools will have to:

[...] decide on forms of interdisciplinary organization of curricular components and strengthen the pedagogical competence of school teams to adopt more dynamic, interactive and collaborative strategies in relation to management of teaching and learning;  
[...] conceive and put into practice situations and procedures to motivate and engage students in learning;  
[...] select, produce, apply and evaluate didactic and technological resources to support the processes of teaching and learning. (Brasil, 2018, p. 17-18)

Elizabeth Macedo problematizes the National curriculum, because, "the curriculum in action necessitates a re-reading of the formal curriculum occurring as it is implemented" (Macedo, 2018, p. 30). The establishment of a common national curriculum for basic education in a vast, continental and unequal



country like Brazil is problematic because it doesn't articulate how the time and a space for learning might be linked to curricular content, nor does it identify the possible languages linked to these areas. As such, it disregards the necessary curricular extending or spanning work required for narrative learning. It also ignores the necessary flexibility required for effective SEN provisions as a constituent element of the inclusive school that excels at recognition and respect for differences in curricular approaches.

The question remains as to whether it is indeed possible to work with differing temporality and spatialities of human learning framed within a common national curriculum for basic education. From an inclusive education paradigm, decisions concerning how the curriculum is enacted within schools, will need to move beyond mere prescription, especially regarding the hegemony of time and the standard space imposed on teaching and learning. In these terms, we understand the 'curriculum in action' as the lived curriculum, as the curriculum needs to "encompass more than the socially prescribed knowledge to be mastered, opening up to experiences that allow the student to understand their own lived world" (Macedo, 2018, p. 29). This reflection brings us closer to the narrative curriculum as a teaching-learning process built by the subjects who share this path, thus; "Narrative learning, as a concept, seeks to shift the focus of learning from the prescriptiveness of a strongly defined curriculum to accommodate personal narrative styles and, thereby, encourages involvement and motivation in the learning process" (Goodson, 2010, online) .

According to Mantoan inclusion, "implies a change in the educational paradigm that generates a reorganization of school practices: planning, formation of classes, curriculum, evaluation, and management of the educational process" (2008, p. 37). In this sense, inclusion is necessarily transgressive, as it points to the void and creates opportunities for the new. The presence / demand of people with disabilities in school interrupts hegemonic curriculum time, by promoting other temporalities / spatialities of human learning. This is an important contribution of this social group to the emergence of new epistemologies in schools, in terms of narrative learning.

We understand that we still do not overcome the tension between the dominant paradigm (teaching based on the imposition of the universal and common standard for all) and the emerging paradigm (teaching that constitutes the tension between universal / singular in terms of respect for the singularity of learners) in schools. This requires schools that are in no hurry and that are open to the narrative curriculum in terms of the multiple temporalities and spatialities of human learning. In this sense, we suggest a new metaphor that can support us, as a school team, to redefine time and space in teaching and learning. This novel approach is entitled *Pedagogia das Estações* or Pedagogy of the Seasons.

## **2. Multiple temporalities and spatialities in Pedagogy of the Seasons.**

Considerations about time and space also lead us to the question of simultaneity and rhythm in the teaching-learning process. Based on the studies Bakhtinianos Faraco (2010) states that "pace due to its regularity and predictability, closes,

shapes, reshapes, and predetermines". Therefore, if the creative act is, "essentially extra-rhythmic: a breaking with rhythmic existence is needed in order to be able to create. Rhythm is possessive, I live under it as if subsumed under anesthesia" (Faraco, 2010, p. 20). In the field of education, the limitations and barriers arising from the linearity of school time and the demarcation of the clock (chrónos) act as an hegemonic standard rhythm, controlling the use of space and inflicting a desired homogeneity (universal standard).

We understand that, in the scenario of an educational institution guided by logic, selection and classification, rhythm provides a gear that does not allow for deviations, interruptions and variations. It takes us back to the automaton, being composed of a mechanism that prints certain movements, which is the negation of the ontological vocation of being-more (Frere, 2005). In this system, it is not possible to differentiate to include, as it is a gear fed by rhythmic monoculture.

Affirming the contribution that the presence / claim of people with disabilities bring to the school calls for new temporalities and spatialities in the teaching-learning process. Respecting different ways of sensing the world involves breaking with a rhythmic monoculture, as at the heart of inclusive pedagogical approaches are bodies and lives that are necessarily deviant. Thus, respect for different ways of sensing the world (Assmann, 1998) meets the multiple dimensions of the temporalities / spatialities of human learning and requires that schools work with, and for, an ecology of temporalities that ultimately promote different ways of knowing and generating knowledge (Santos, 2008). We can now explore further the metaphor of the pedagogy of the seasons.

## **2.1 A new metaphor for educational inclusion**

We have considered the seasons as a new metaphor for educational inclusion. The seasons are part of an annual calendar, but are not firmly attached to it, repeating themselves each year continuously, they come and go, in a cyclical movement in times and spaces. So, they do not occur simultaneously throughout the world, they are itinerant in terms of planetary movement and differ in each hemisphere according to the solstices - when day and night have their longest durations during the year, and equinoxes - occasions when day and night last the same time and in which the change of season happens. However, it is worth remembering that the dates of equinoxes vary from year to year. There are, therefore, variables in this process, with possible misconceptions, especially when considering other variables that impact on the seasons such as the influence of oceanic temperatures. Cognisant of this seasonal variation and movement, we propose a pedagogy of the seasons where:

[...] We will consider that knowledge reaches everyone in different times and spaces respecting the ecology of knowledge and temporalities.

[...] We are going to ask about the temporalities and spaces of human learning that are not set in a pedagogical time marked by curricular rigidity, but which differ continuously.

[...] We will consider the variations and work to expand the degree to which learners can influence curricular dynamics (Costa-Renders, 2019, p. 164-165)

There is a conceptual triad underpinning the Pedagogy of Seasons, namely: the paradigmatic transition in the field of education, simultaneous plurality, and narrative learning. The paradigmatic transition (Sanchez, 2005) concerns the innovation that arrives with inclusive education, allowing a break with the traditional schooling paradigm and promoting new ways of learning and teaching in schools. Simultaneous plurality (Assmann, 1998) problematizes the imposition of *chrónos*, opening diverse ways of sensing the world and revealing the multiple implications of its affects (corporealities / temporalities/ spatialities) within the teaching-learning processes. These conceptual frameworks are further complemented by narrative learning (Goodson, 2010), which changes the focus of learning through a curriculum influenced by personal narrative styles, thereby providing opportunities for the validation of learners within their own learning.

The pedagogy of the seasons is established, in a pedagogical dynamic that requires expand spaces and respect multitemporalities in a cyclical curricular movement guided by living time of what Goodson (2010) refers to as narrative learning. It considers the inseparability of personalization and universalization of the curriculum experienced in schools, it brings to the surface the tension between pedagogical time and experiential temporalities of the different learners.

Based on these premises, pedagogy of the seasons works to eliminate the impositions of rhythm arising from the dominant paradigm, while also mindful of frictions that become apparent during paradigmatic transition in contemporary education (Sanchez, 2005). This pedagogic approach seeks to promote, in constant and non-linear movement, learning for all, working epistemologically to anticipate accessibility in its multiple dimensions. We understand that pedagogy of the seasons allows us to present the universal and the particulars required for individual learning, because it is precisely in this interaction between the multiple to the singular that the dynamics of the temporalities / spatialities of human learning occurs .

### **3. Universality and Variability in Universal Design for Learning**

Universal Design for Learning (UDL) is a curricular approach that considers differing neural networks influencing student learning, namely the networks of recognition, strategic networks and affective networks. In this sense, UDL is guided by three principles that are based on multiplicity, namely.

Principle I: Provide multiple modes of presentation (the “what” of learning).  
Principle II: Provide multiple modes of action and expression (the “how” of learning).  
Principle III: Provide multiple modes of self-involvement (the “Why” of learning). (CAST, 2011, online).

Through these three principles, UDL supports teachers in responding to learner variability by removing barriers to learning and reducing the need for individual curricular adaptations. There are, however, two questions regarding UDL that we consider in light of our recent studies. First, what is the semantic field of the 'universal' in this approach curricular? Second, how is multiplicity sustained in the incremental and progressive constitution of learners as being; resourceful and knowledgeable, strategic and goal directed, purposeful and motivated as identified in the UDL *Guidelines version 2.0*?

The first question assumes that the 'universal' category can refer to different semantic fields. Universal, from the Latin *universale*, is an adjective that denotes the “Relative or belonging to the universe, to the cosmos. [...] Which is applicable to everything. [...] Which is adaptable or adjustable so that it can meet different needs” (Ferreira, 2004, p. 2021). So, universal can be understood as a reference standard for all, as the ideal. But it can also lead us to the purpose of broadening a perspective and widening the possibilities in order to respect differences. In the field of inclusive education, these two directions point to a paradox to be considered: the universal and particular are constitutive elements of the conceptualization for inclusive curricula.

Inclusive education is guided by this movement of the particular / universal or the singular / plural, since respects the complex human condition in terms of what Morin (2003) calls uno-diversity of the human being. We understand that the universal / particular paradox is included in the UDL, because the universal is concerned with making it as comprehensive as possible and its principles are not guided by the monocultural standard. When working with the curricular anticipation of multiple means and forms, the UDL points out that:

there is no standard means of representation that is ideal for everyone. [...] there is no means of action and expression that will be ideal for all students. [...] nor is there a means of engagement that will ideally serve all students in all contexts. (CAST, 2018, online)

The principles of the UDL are guided by multiple means and possibilities, recognizing and respecting the uniqueness of each learner without losing sight of the universal, this there is an expanded means and ways of providing pathways to knowledge in order to be able to address learner variability. Indeed the concept of variability, is a significant attribute of UDL and this specifically points to inter-individual and intra-individual variation. There are a variety of sources that can influence individual variation including; neurology, culture, personal relevance, subjectivity and knowledge of the world.

Some learners are highly involved in spontaneity and novelty, while others are not engaged, they are even frightened by these aspects, preferring a rigid routine. Some learners may like to work alone, while others prefer collaborating with peers. In reality, there is no optimal means of engagement for all learners in all contexts. (CAST, 2018, online)

Student variability is one of the strengths of UDL (Bock et al, 2018) and as reflected in some of the early UDL research, “variability is the dynamic and constantly changing mix of strengths and challenges that make up each learner”. (Rose, Meyer and Gordan, 2014, p. 48). Fundamental to each learning experience is the individual

affective perspective that differs according to unique academic learner pathways. This is variability in the intra-individual domain.

The same student differs, in time and circumstance, his or her "interests" change as learning develops and new knowledge and skills are accrued and as a child becomes a teenager or an adult. Pedagogically, therefore it is important to arouse the interest of different students, by different means that reflect the inter and intra individual differences. UDL and the pedagogy of the seasons consider the singularity of each learner's cognitive and learned processes without losing sight of the global and the interdependent relationships throughout the teaching-learning. In this way, a curricular approach that aims to remove barriers to learning, according to DUA (CAST, 2018), should:

- a) Consider recognition networks involves; providing information and content in different modalities and formats that allow the user to make the necessary adjustments. But also working with universal linguistic symbols that enable understanding among different people within different cultural contexts, offering clarifications and supports for decoding. Currently, digital technologies are important instruments in this regard.
- b) Considering strategic networks involves; providing options for physical action and technologies support, offering options for communication and expression through different means of construction and composition, offering options for executive functioning through the planning of goals and strategies for development and enhancement of learner ability to self-monitor progress in learning.
- c) Considering the affective networks involves; whenever possible, learner determination of their own academic objectives, providing opportunities for the development of individual self-regulatory skills in order to facilitate the skills and personal strategies required to do this. But also stimulating effort and persistence by differing means that ultimately create support programs and collaboration between students.

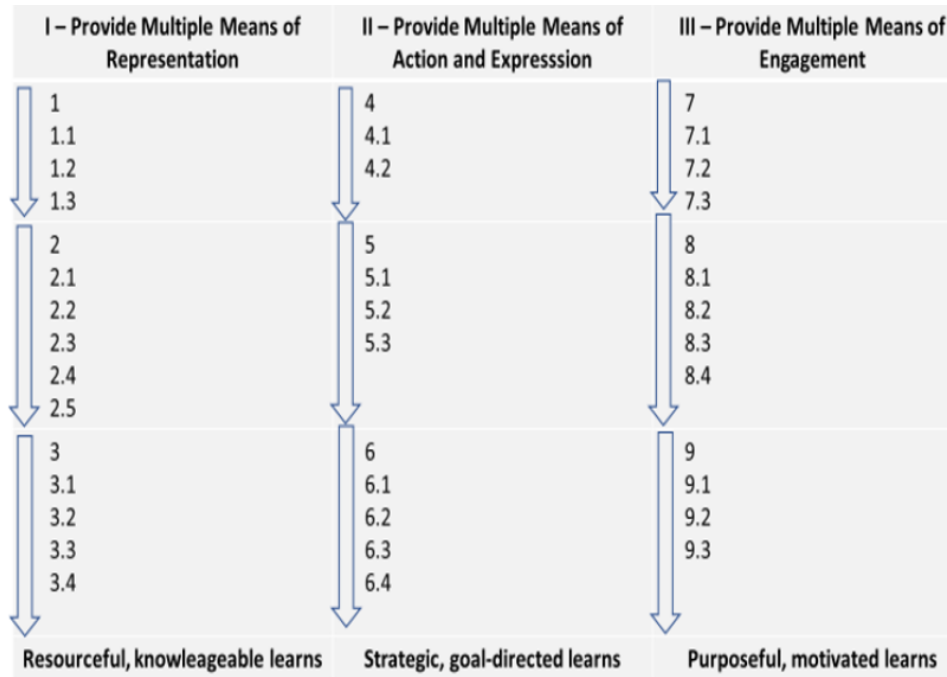
The concept of multiplicity mitigates against UDL from being interpreted as a constraining curricular approach guided by the imposition of one standard of teaching and learning, or being proposed as some form of pedagogical dogma. In this respect, Rose (2019), affirms the importance of reinterpreting the Framework considering experiences put forward by different researchers throughout the world as they implement UDL principles, this will bring to light new and contextually appropriate solutions in the field of inclusive education.

Let us now return to our second question about UDL: how are multiple possibilities in the progressive constitution of learners who are; resourceful and knowledgeable, strategic and goal oriented, as well as being purposeful and motivated as described in *Version 2.0* of the Guidelines Framework (CAST, 2011)?

A significant challenge associated with the Framework emerged from an analysis of the graphical representation of *Guidelines* version 2.0 (CAST, 2011), which is

presented a linear and numerically ascending sequence of actions, which are marked by sequential arrows towards the attainment of *expert learner* status (CAST, 2011). The graphical representation in Figure 1 exemplifies this finding.

Figure 1: Graphical representation of *Guidelines version 2.0*, 2011, with modifications (COSTA-RENDERS, 2019)



Source: CAST, 2011, online.

As this is not the definitive graphic representation of UDL principles, it is possible to evidence an epistemological tension when we place the *Guidelines version 2.0* (CAST, 2011) alongside the *Guidelines version 2.1* (CAST, 2014) and the most recent *Guidelines version 2.2* of the Framework (CAST, 2018). The latter eliminates all numbers and arrows and better represents the non-hegemony of linear time in this curricular approach. It also inserts three drawings of the brain with the spatial marking of the different neural networks, as identified in Figure 2 below.

Figure 2: Graphical representation of *Guidelines version 2.2*, with modifications (Costa-Renders, 2019)

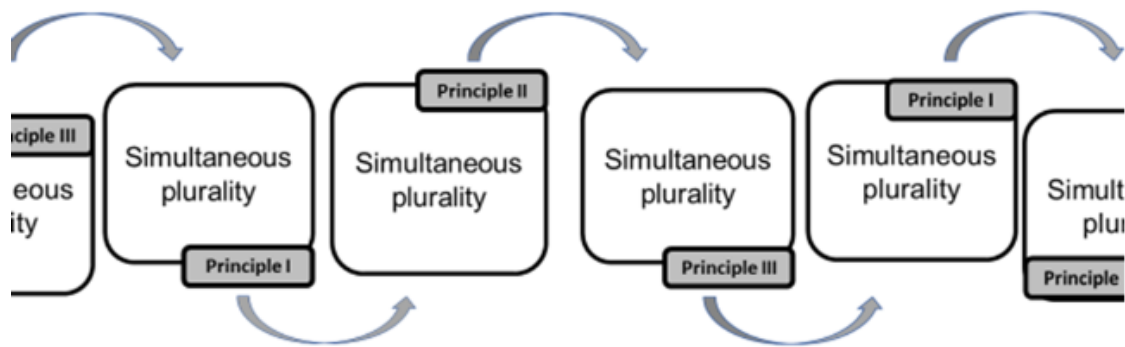


Source: CAST, 2018, online

We noticed a significant advance in this graphic representation as it breaks with the temporal and spatial linearity previously applied to UDL principles. Directional arrows and sequential numbers that fixed them to the linear time arrow are eliminated. In *Guidelines version 2.2*, the multiple dimensions of the teaching-learning process gain greater prominence and the graphic representation allows a flexible curriculum congruent with narrative learning, which is informed by learners' personal styles. Accordingly, consideration of simultaneous plurality becomes possible.

We understand that the subject of curricular flexibility brings us to the continuous cycle of the pedagogy of the seasons, where it is also possible to experience ambivalence within frontiers of knowledge domains, akin to the transitions within and between seasons. The seasons change from one to the next, not according to days marked on a calendar, transition brings with it its own ambivalence. With the experience of cyclical time, in a spiral, pedagogy of the seasons, also encourages conceptualization of 'mixed spaces' where differentiated resources are possible for the co-construction of the knowledge based on simultaneous plurality. The following representation illustrates how individual narratives can occur within simultaneous plurality, and how both interface with the three overarching UDL principles. The process occurs in a non-linear an ongoing time frame, therefore, the representation is purposefully left unfinished.

Figure 3 - Graphical representation of the interface between Pedagogy of Seasons and DUA



Source: COSTA-RENDERS, 2019

In this interface between the simultaneous plurality incorporated within the pedagogy of seasons and the UDL principles, we seek to make the principles more flexible, breaking their sequential linearity and leaving the borders open in order to make it possible to overcome a perception of curriculum prescriptiveness. According to Goodson such constraining uniformity; “seeks to impartially define the main ingredients of the development of the study”(2007, p. 242), marking boundaries in the knowledge construction process and inhibiting multiple means of representation, expression, action and interest within school. Presently, an inherent attribute of the Framework appears to be its adaptability, and as shared by CAST the Guidelines:

Are not intended to be a “prescription”, but a set of suggestions that can be applied to reduce barriers and maximize opportunities for learning for all learners. They can be combined accordingly with specific learning objectives and can be applied to areas and specific contexts (CAST, 2018, online).

So, the UDL principles have also ruptured with the linearity of a prescriptive curriculum and approaching the narrative curriculum approach. However, returning to the graphic representation of the principles of UDL, *Guidelines version 2.2*, the objective remains to attain *expert learners* who are “individuals who know how to learn, who have learned a lot and who want to learn more”(Rose, Meyer; Gordon, 2014, p. 49). In this regard, CAST clarifies that the *Guidelines* “Together lead to the ultimate goal of UDL: to develop *expert learners* who are, each one in their own way, resourceful and knowledgeable, strategic and goal oriented, with purpose and motivation”(CAST, 2019, online).

Such a statement leads us to a series of questions: what might learners look like that do not fit the adjectives of being an *expert learner* - engaged, resourceful, knowledgeable, strategic, targeted, etc.? Should each learner be obliged to attain the status of the *expert learner*? Does UDL recognize the potential for some learners to retain an element of vulnerability as part of the human condition? Might being an *expert learner* become an imposition on students, or does this goal present itself as a utopian horizon for teachers? In what way does the demand to become an *expert learner* chime with universal or singular principles? Our research about the UDL intends to pursue these problematic lines of inquiry. In this paper however, we continue the consideration of learning time and space.



### 3. 1 Synergies between Pedagogy of the Seasons and UDL

The curriculum perspective of pedagogy of the seasons proposes a dynamic movement that is not fixed to linear space time, but works with simultaneous plurality that problematizing the imposition of *chrónos*, opening up to different temporalities / spatialities of human corporality in its sensing of the world. Under the aegis of UDL, this brings us to the affordances brought about by employing multiple means of representation and perception simultaneously for all learners, so they have access to school-based knowledge.

To reduce barriers to learning, it is important to ensure that key information is equally noticeable to all learners: 1) providing the same information through different modalities (for example, through sight, hearing or touch); 2) providing information in a format that allows user adjustment (for example, text that can be enlarged, sounds that can be amplified). Such a multiple of representations not only ensures that information is accessible to learners, especially learners with sensory or cognitive disabilities, but also that it is easier to access and understand for many others. An important teaching strategy is to ensure that alternative representations are provided not only for accessibility, but to enhance clarity and understanding for all learners (CAST, 2018, online).

UDL proposes a pedagogical movement informed by didactic intentionality a hallmark of which is the breaking of barriers and opening up of learning spaces. This leads to a space where understanding is facilitated for all learners. Its strength lies, not in its focus on differentiation because of disability, but, rather in its dynamic curricular movement recognizing the necessity to include all learners at once. This perspective might also be conceptualised as enabling simultaneous plurality. It is about respecting the multiple spatialities and temporalities of learning providing opportunities for different seasons that facilitate knowledge construction. By eschewing linearity, it may even be possible to reverse the beginnings based on the individual wishes, possibilities and abilities of specific learners.

While recognizing synergies between pedagogy of the seasons and UDL, we also understand that there are differences between these conceptual frameworks. The first works with the inseparability of time and learning space and proposes to serve different learners through provision of different training stations, simultaneously offered, without predefining for learners how to access knowledge within specific boundaries of time or space. In other words, it gives centrality to multi-temporalities in the pedagogical process. Whatever is lost, for one reason or another, may also be offered again, just like the movement of the seasons, as all elements will remain available to everyone who wishes to gain access.

UDL, in turn, gives centrality to the availability of; multiple means and modes of representation, multiple means of action and expression, and multiple means of learner engagement. However, the Framework does not shed light on the question of time and learning spaces. Nevertheless, UDL is particularly concerned with capacity for learner identity to influence the nature of the curriculum. Pedagogy of the seasons is predominantly based on multitemporalities while UDL proposes flexibility in curriculum and pedagogy through its multiplicity of means and forms in the learning and teaching process. Both have in common the centrality of creating helpful

conceptualisations of learning and teaching processes. In so doing, both UDL and pedagogy of the seasons further enable the construction of narrative forms of curricula that are inextricably bound up with and responsive to learner identities as these are reflected in learner variability and difference.

## **Conclusion**

In this paper, we present the results of an integrative review on the UDL, the temporalities and spatialities of learning and inclusive education. In particular, we have brought UDL closer to studies on the pedagogy of seasons, which problematizes the imposition of the standard time / space for learning at school and highlights the relevance of a narrative curriculum approach towards respect for the different Learners in schools.

When we articulate how the pedagogy of the seasons and UDL can augment our understanding of how best to promote inclusive experiences within the framework of narrative curriculum in schools, taken together the approaches highlight three dimensions permeating the essence of an inclusive school.

Firstly, epistemological discussion brought about by the pedagogy of the seasons and UDL takes us to the central concept of multiple temporalities and spatialities transversing pedagogical time in schools leading to the formation of an inclusive culture and practice. Ensuring accessibility conditions, and providing equity of educational opportunities, depends on inversions in the enacted school curriculum. The case of disabled learners has been emblematic in this sense. Knowing the world without visual images, passing through learning with tactile and auditory memories, as well as knowing the world only through visual images in a dynamic and sharp panoramic view, bring to light new temporalities and spatialities that may not have been previously considered within schools. Consideration of accessibility creates conditions for a broader learning scape with enriched scope for all learners. Inclusion don't just seek to overcome immediate barriers for some individuals, it expands and enhances new learning at school for learners and teachers alike.

Secondly, and as a result of the previous epistemological review, an inclusive approach works to expand learner influence and power within curricular dynamics. However, this is only possible in the constant movement of the coexistence with difference, which requires making available similar and differing knowledge seasons for all learners. We need to provide the necessary support to ensure that all learners have access to knowledge and freedom to engage in learning. This also allows us to work on ethical content at all times, because, it is important to continually ask 'how do we inhabit the world'? And, in responding to that question opportunities are created for 'learning and living with dignity' and this has a particular resonance in places of learning. There is a necessity to consistently question then how we provide opportunities that enable us to live at once together and differently within the learning space.

The third and final dimension to be considered in order to qualify the nature of inclusive school processes at the interface between the pedagogy of the stations and the UDL, sheds light on the necessary emergence of flexible times and spaces for the

construction of knowledge, without losing discipline rigor, which also contributes to learning. We contend that variability does not abrogate the need for universality of knowledge, which brings us to the paradox inherent in education that aims to be inclusive and sustainable - the old and new are constitutive of educational processes. As Hannah Arendt has shared; “the essence of education is birth, the fact that beings are born to the world” (2009, p. 223). Special education is the field where new knowledge always arrives to meet or confront what has already been constituted. But that previously constituted world is also provisional because it can be impacted by novelty that is repeated just like the movement of differences in human history and indeed this is a reflection of the pedagogy of seasons.

We understand that curriculum planning should not, in the name of the differentiated or particular, lose sight of the consideration and availability of knowledge already built by a universal community throughout history. Our work is ultimately concerned with guaranteeing access to the cultural heritage of humanity as a common good to be shared also in all learning spaces.

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