

UDL, Education and Psychotherapy



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Abstract

UDL is not only substantiated in relation to interventions within the school system, but also to the fields of community awareness, advocacy, education, work, health, institutional strengthening, and empowerment of society, as well as prevention, support and protection of people with disabilities. In our work, we present the possible applications of the UDL, I apply the educational field and psychotherapy, namely psychological treatment for children, adolescents, and adults. What we seek to understand is whether the UDL is also applicable to psychotherapy with the possibility to design universal accessible psychotherapy. In connection with the three neural network proposed by the UDL model, in psychotherapy practice the clinician might observe why patients establish a significant connection with the proposed material during treatment, what is accessible and understood in relation to the content, and how the acquired knowledge and skills can be effectively translated into daily life. Clinicians shall respect the principle of “flexibility within fidelity” [1] that is to widen the multiple possibilities of presentation of material and content in order to meet the different needs of a plurality of patients, while complying with the evidence-based principles.

Keywords: UDL; Education; Psychotherapy; CBT

Abbreviations: UD: Universal Design; UDL: Universal Design for Learning; CAST: Center of Applied Special Technologies, CBT: Cognitive Behavioral Therapy; EBT: Evidence-Based Treatment; MT: Movie-Therapy; VR: Virtual Reality; VRE: VR Exposure; PTSD: Post-traumatic Stress Disorder; TBP: Text-Based Psychotherapy

Introduction

Universal Design (UD) originated as an approach in the field of architecture, with the aim of making accessibility universal for all individuals, through the recognition of individual differences in terms of needs and diversity, and a design of spaces and environments based on the same principle. «The design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design», North Carolina State University (2008). From the perspective of the UD, therefore, accessibility no longer translates as the planning and implementation of specific adaptations aimed at compensating for the needs of the individual, but as the assumption of multiple ways to achieve the same result for all users, the conscious and full use of tools, products, services, environments. As a declination of this approach, Universal Design for Learning (UDL) originated in the nineties, in the Center of Applied Special Technologies (CAST), intended as a concept of universal design applied concretely to educational contexts for the identification and removal of those barriers generated by learning contexts. The application of UDL to training contexts is closely linked to the identification of the three neural networks corresponding to three basic principles serving as guidelines for the design of environments, materials, content,

and curricula, flexible, egalitarian, and accessible to all. Meyer and colleague has identified the recognition network (the “what” of learning), connected to the principle of providing multiple means of representation, the strategic network (the “how” of learning), corresponding to the principle of providing multiple means of action and expression, and the emotional network (the “why” of learning) linked to the principle of providing multiple means of involvement, Meyer et al. (2014).

The UD, although originated within the specific field of architecture, has a potential multidimensional and multidisciplinary nature, configuring itself as universal not only for its intersubjectivity, but also for the numerous areas of application. In fact, this approach is not only substantiated in relation to interventions within the school system, but also to the fields of community awareness, advocacy, education, work, health, institutional strengthening and empowerment of society, as well as prevention, support and protection of people with disabilities. As matter of fact, in our work, we present the possible applications of the UDL, applied to the educational field and psychotherapy, namely psychological treatment for children, adolescents and adults. The UDL and its principles, in fact, are well suited to a

universal application within different spaces and contexts, for a plurality of target subjects. We will evaluate, the UDL contribute to a global transformation of the educational system, within the school environment, and, how, within the psychotherapeutic sciences, it can provide a substantial contribution in fluidity and accessibility of the processes of support, rehabilitation, and mental health.

Discussion

The UDL originated as an approach to educational contexts that enhances the inclusion of diversity and individual differences of all students, with the aim of achieving meaningful learning and scholastic success. The UDL starts from two basic assumptions: the inter-individual differences do not concern only the learning of people with disabilities/diversity, but involves everyone, and, furthermore, learning, skills, and competences, are significantly influenced by the characteristics of the context, that may create barriers preventing its development and expression. Therefore, the macro-objectives of the UDL are identifiable as the recognition of individual differences, and, based on this recognition, the design of educational contexts that can support the development and learning of all subjects. These objectives are achieved through practical guidelines, deriving from the three main assumptions of the UDL: providing multiple means of representation, action and expression, involvement.

Provide multiple means of representation (the “what” of learning), in order to propose to the student’s different possibilities of acquisition of information and knowledge. This principle identifies the student’s abilities to understand and learn the information they receive, differences, that depend on the methods and materials used by the teachers Meyer et al. (2014). Therefore, the teacher will provide students with multiple ways to acquire content and develop knowledge, including a variety of methods and materials to diversify the presentation of content. Thus, learning becomes significant when multiple modes of representation are employed, as these allow students to establish internal connections between concepts. So, according to the UDL, there can be no specific means of representation equal for all students, but teachers must provide options for representation.

Provide multiple means of action and expression (the “how” of learning), in order to produce a plurality of opportunities to allow students to demonstrate their own skills. This principle refers to the means of action and expression that students can use to prove their learning ability. Meyer and colleagues (2014) highlighted that teachers should lead students in the process of becoming expert apprentices, namely, developing their executive function skills, in terms of goal setting, self-monitoring progress, adaptation of learning strategies. This can be useful in helping students to express what they know and what they have learned, considering individual differences.

Provide multiple means of involvement (the “why” of learning),

to engage and broaden the interests of students and keep learning motivation high. Meyer and colleagues (2014) clarified that this engagement can be accomplished by addressing student interest, supporting options for sustaining effort and persistence, and assisting student’s ability to self-regulate. The process, therefore, also entails drawing on the interests of the students, overcoming the appropriate challenges and increasing motivation. The affect is a fundamental aspect for learning and individualization since students differ substantially in their involvement and learning motivation. Multiple elements can affect individual variability, such as neurology, culture, personal relevance, subjectivity and basic knowledge, and many others.

Each of these three assumptions originates as many principles that form the guidelines for teachers, practitioners, educators, and all subjects involved in educational processes, to achieve inclusive learning. The Guidelines allow to accomplish in an operative way the three principles of the UDL, through concrete indications applicable to any discipline, and ensure that everyone has equal opportunities to learn and access to training spaces that can promote success. Consistently with the three networks and the three basic assumptions that follow, the UDL is defined as the purpose of education and training of expert students, that is, students who are primarily well-informed and full of resources (the “what” of learning), that via cognitive tools, are able to arrange and activate in a functional way, a considerable amount of previous knowledge, useful for the implementation of new information, that in turn, can be transformed into meaningful and useful knowledge. Secondly, expert students are defined as those who are strategic and goal-oriented (the “how” of learning), formulating schedules to optimize learning, through the organization of resources and tools, the recognition of strengths and disadvantages, as well as the abandonment of inefficient tactics. Finally, expert students are those who are determined and motivated (the “why” of learning), thus, curious about understanding new content, motivated to achieve educational goals and set their own challenges to overcome through the necessary emotional regulation and avoid obstacles or distractions towards a successful training.

In order to achieve meaningful and inclusive learning, and, in order for students to become experts, the UDL considers the creation of Universally Designed Curricula to be a key issue, including numerous options to access, use and interact with didactic material, assuming that no option can be qualified as valid for all learners, Rose & Meyer (2002). Therefore, the UDL, rather than concentrating its efforts on eliminating barriers through compensation tools, focuses upstream on designing flexible curricula that can support all students and ensure greater effectiveness. The creation of an intrinsically flexible curriculum enables teachers to maintain educational integrity and to apply teaching objectives and methods consistently, with a focus on the individualization of learning. Thus, it is clear that the UDL is globally applicable to training systems, to guide the work of

teachers, educators, specialist operators, but also for effective planning and more inclusive use of didactic materials and tools, thus contributing to the educational success, as well as to the development of each individual student, in a school environment promoting growth, comparison and acceptance.

Conclusion

As previously described, the UDL model rises from the concept of universal accessibility for all individuals: the vision of an average user for the product or service is discarded, in favor of the universal accessibility, that we may refer to as one of the critical cores of the UDL model. The logic of accessibility for all, also allows to overcome the perspectives where the readjustment of structures, environments and products, occurred retrospectively, as a form of individual compensation for the subjective difficulties. Overcoming the perspective, favors a conception aimed at considering the universal accessibility of a service or product, starting from its design, and ending to its concrete realization.

As seen already, the applicability of the UDL in the educational context, the usefulness in training environments, and the effectiveness in creating tools are the key concepts that make learning as accessible to all. At the present, what we seek to understand is whether the UDL is also applicable to psychotherapy with the possibility to design universal accessible psychotherapy. Are there known examples of UDL applicability that goes in this direction? We can answer these questions through two complementary considerations: i) Cognitive Behavioral Therapy (CBT), and ii) the usage of technologies at the service of psychotherapy.

CBT is an evidence-based treatment (EBT) in which active learning is a key component, to the extent that, according to Kendall [2], the CBT clinician assumes, the role of educator. In fact, the treatment generally proceeds through a phase of psychoeducation, a form of teaching in which the clinician transmits to the patient the necessary skills about the relationships between thoughts, emotions and behaviors, and the causes and maintenance factors concerning its symptoms and functional deficits [3]. In the later stages of treatment, the learning process proceeds through the teaching of functional strategies for the observation, understanding and management of cognitive, emotional and behavioral patterns [4]. If CBT can be considered as an active learning process, clinicians should also consider pedagogical domains in treatment setting, including UDL as a guarantor of accessibility to learning for all. In connection with the three neural network proposed by the UDL model, in CBT practice the clinician might observe *why* patients establish a significant connection with the proposed material during treatment, *what* is accessible and understood in relation to the content, and *how* the acquired knowledge and skills can be effectively translated into daily life [4]. As in the UDL, educators are encouraged to recognize the interindividual differences between subjects, so in the CBT clinicians identify

these differences to guide themselves towards a patient-centered approach [5]. Adaptation to individual differences reflects its importance in clinical practice: some patients may not be able to understand materials and protocols, teenagers may find some workbooks too childish [4]. For this reason, clinicians shall respect the principle of “flexibility within fidelity” [1], that is to widen the multiple possibilities of presentation of material and content in order to meet the different needs of a plurality of patients, while complying with the evidence-based principles. The application of the UDL model to CBT, comprising principles that are already aligned with a pedagogical approach, would thus allow to overcome those learning barriers that could threaten the success of treatment.

The second consideration to be made about the applicability of the UDL model to the psychotherapy sciences concerns the use of technological tools to reduce possible barriers to accessibility. Among the individual differences, barriers affecting access, course and the outcome of psychotherapy treatment must also be recognized. For example, there are people who refuse to use traditional services, especially those who wish to remain anonymous or those who have travel difficulties; people with physical disabilities (motor, speech, hearing) or who have chronic diseases; children and adolescents who find little motivation in the traditional psychotherapy treatment. For these and many other categories of people, access to psychotherapy and the achievement of positive results could be an uncertain element. For this reason, it is necessary, as the UDL prescribes, to design contents and materials for a psychotherapy accessible to all from its planning, through multiple means of involvement, representation, action, and expression. Among the means that make this process possible, technologies occupy a privileged place. Technology-based interventions (TBIs) can contribute to a consistent overcoming of individual barriers and can be designed for better and wider accessibility of users.

For example, to enrich the content and means of involvement of an audience of teenagers, an important technology can be adopted in Movie-Therapy (MT): films are in fact a suitable tool for observational learning and imply a high [6,7] and multidimensional [8] therapeutic value; they provide biological effects by stimulating emotions through stress hormones and endorphins [9]. MT is a therapeutic technique that includes an accurate selection of films that customers will have to watch, followed by the elaboration of their own experiences in parallel with those experienced by the actors [10]. Among the many advantages, this process can favor problem-solving emulation, encourage development, redefining the problem, and building relationships and common languages between therapist and patient [11].

Among TBIs, another fundamental place for accessibility in UDL is occupied by Virtual Reality (VR): this tool, in fact, allows to overcome many individual barriers and at the same time allows to effectively achieve the desired results. In particular,

the effectiveness of the VR exposure (VRE) treatments have been verified, when the patient is intentionally compared with the feared stimulus allowing gradually an attenuation of anxiety through adaptation and extinction processes. This provides the overcoming of barriers linked to the treatment of exposure compared to phobias: in fact, in the therapeutic setting it is not possible to work directly on the stimulus feared, while instead the VRE therapy can take place in the traditional setting, that can be more controlled and cost-effective than *in-vivo* procedures [12]. VRE is also used with Post-traumatic Stress Disorder (PTSD) war veterans [13,14]. Riva & colleagues [15-17] also used Experiential Cognitive Therapy (ECT), an integrated approach of CBT and VR, in the treatment of eating disorders and obesity. In ECT, VR is used to modify the perception of one's own body image and associated cognitive bias [8,18]. The use of VR has allowed to integrate different methods (cognitive, behavioral, and experiential) within a single virtual experience; it has allowed a controlled sensory modification that unconsciously transforms the body awareness of the patient.

Additionally TBIs can represent multiple means of representation, involvement, action and expression in psychotherapy, for instance: game-based psychotherapy, allowing to overcome barriers in the treatment of children and adolescents (but also of adults) through the so called serious games, namely, entertainment games with a non-entertainment purpose [19]. The inclusion of therapeutic concepts in a game can make the repetition of the task and psychoeducational concepts that were taught during the therapy session more attractive. This type of tool has the advantage to be user-friendly and therefore accessible to children, adolescents and adults [20].

Finally, with the current spread of smartphones, we can refer to TBIs that respect the application of UDL principles, also mobile mindfulness, and text-based tele-psychotherapy. As for mindfulness, there are several programs that follow this approach, such as mindfulness-based stress reduction [21], and mindfulness-based cognitive therapy [22], which have been associated with numerous benefits including the reduction of depressive symptoms, negative affections, stress and anxiety, and the increase in positive affections, life satisfaction and energy [23,24]. However, mindfulness meditation programs remain poorly accessible as they require the presence of highly qualified instructors [25], include multiple individual and group sessions [26], and can be extremely expensive [27]. Mobile applications (apps) for smartphones can overcome these barriers, for example allowing a qualified instructor to reach many more people than face-to-face training, and moreover, the portable nature of the smartphone allows to break down the geographical and economic barriers that could restrict access to this practice [27]. Telepsychotherapy promotes a new perspective on technology that increases customer accessibility to services, Imel et al. (2017), and produces new ways of working in mental care,

Andresson (2018), Imel et al. (2017). In addition to video-based psychotherapy with platforms such as Skype, Zoom, there is also text-based psychotherapy (TBP), which impact of the session and the therapeutic alliance are equally strong (or stronger) compared to face-to-face therapy; an online calming effect has also been identified, so both the therapist and the patient experience the online environment as more comfortable and less threatening than the face-to-face setting [28,29].

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