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TEACHING ENHANCED LEARNING FOR ENGAGING AND INCLUSIVE LEARNING

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INDICE

1. THE ROLE OF ICT IN LEARNING PRO-CESSES AND UNIVERSITY INCLUSION[1]

by Carlotta Antonelli*

Abstract: *The proposal presents the first outputs of the "Universitabile" doctoral thesis based on the relationship between educational inclusion (Ainscow and Miles, 2009) and ICT. Using a mixed methods approach, the paper analyses interviews administered to operators of dedicated services, exploring the issue of barriers and facilitation mechanisms during the Covid-19 emergency, presenting technology as an element of exclusion.*

Key words: digital inclusion, ICT, Universal Design, barriers and facilitators, students with disabilities.

1. Introductory concepts

The proposal opens by illustrating the concept of Universal Design for ICT (Information and Communication Technology), i.e., «an approach to the design of technologies that pays more attention to the concept of universal usability», in this perspective «buildings and tools should be conceived, designed and constructed in a way as to be usable by all» (Fiocco and Martinati, 2002:232), inspired by the following principles (WAI):

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1. perceptibility: information and user interface components must be presented to users in a way that they can be easily perceived;
2. operability: user interface components and navigation must be operable;
3. understandability: the information and operation of the user-interface components must be easily comprehensible;
4. robustness: content must be robust enough to be reliably interpreted by a wide range of user programmes, including assistive technologies.

To better frame the empirical material that will be the subject of the essay, the role of technology should be reviewed and interpreted linking it to other concepts, such as the lack of growth of digital cultural capital, the digital divide, and related digital exclusion. The latter is to be understood as a lack of access to the use of ICT (Information and communication technologies). This term refers to a range of technologies, including desktop and laptop computers, Internet connections, mobile phones, smart TVs, and assistive technologies (Macdonald and Clayton, 2013). Regarding the other terms analysed, Selwyn (2004) outlines digital (or technological) cultural capital by considering the relationship between capital, technology, and exclusion, further expounding on how it can be acquired, essentially summarised as investing time to improve technological knowledge and skills through informal or formal learning; this acquisition, however, is also possible through socialisation in the use of technology, implemented through sharing with established online support networks (e.g. family, friends, tutors).

These practices are, to date, obstructed by the persistence of the digital divide, which is even stronger for certain groups at risk of social exclusion, among which it is possible to include

persons with disabilities. The concept just mentioned is well defined by Norris (2001) concerning gaps in access to ICTs, focusing on differential patterns of use and skills for their use (Warschauer, 2004; Ragnedda and Muschert, 2013; Van Deursen and Van Dijk, 2014). Despite numerous advances in this field, stronger anti-discrimination legislation, and increasing knowledge of Web accessibility standards, the Internet world remains inaccessible for many people with disabilities (EC, 2008; Adam and Kreps, 2009; Vincente and Lopez, 2010; Easton, 2013).

This statement is confirmed by the research report of the National Telecommunications and Information Administration (NTIA, 2013) of the United States, where it can be read that 53% of people with disabilities owned a computer, 48% used Internet, and 46% had a high-speed broadband connection; however, these numbers are lower than those of able-bodied users, which stand at 79% for owning a PC, 76% for Internet access, and 73% for a high-speed connection. The same trend can also be seen from an in-depth reading of Eurostat 2016 data, which shows that disability condition is associated with lower-than-average levels of basic Internet access, in all European countries (Eurostat, 2016b). The literature on the topic invites us to reflect on the fact that access to the Web as an enabling factor, for people with disabilities, is strongly associated with different levels of exclusion from traditional education in EU countries (Grammenos, 2015).

Today, access to Internet has become a 'sine qua non' condition of everyday life, potentially offering new pathways to economic and social inclusion for people with disabilities and SLD (Specific Learning Disorders). Indeed, those who remain disconnected from technology are more likely to also be excluded from mainstream social, economic and political activities. From this perspective, increased access and use of technology is to be understood as the answer to inhibiting potentially exclusionary

factors, as suggested by research on the digital divide, which shows that social factors influence access to the Internet. However, within the broad theoretical framework presented, disability understood as a social condition, is often neglected (Scholz *et al.*, 2017), although it is a relevant factor that, if not adequately considered, can contribute to further discriminatory conditions.

Evidence on the digital exclusion of this category of subjects is confirmed by additional studies: Macdonald, in 2013, found that 73% of respondents with disabilities reported that they had never connected to the Internet, 18% of whom attributed their lack of use to a lack of confidence in their Internet skills/knowledge. Finally, Dobransky and Hargittai (2016) found that the Internet is used by significantly fewer people with disabilities (48 percent) than those without disabilities (80 percent), and among those who do have access, people with disabilities (67 percent) have a worse connection than able-bodied users (78 percent). In a further study, the authors show that people with disabilities are in 'deficit' compared to those without disabilities in many online activities from which they could benefit (Dobransky and Hargittai, 2006), contributing to exacerbating social inequalities.

Along the same line, the aforementioned study by MacDonald (2013) found that 66% (n = 95) of students with disabilities did not believe that digital technologies improved their academic performance. The trend is reversed for the able-bodied respondents, as 64% (n = 225) of them reported that digital technologies had positively influenced their chances of accessing education. Unfortunately, the analysis did not show any evidence of a positive relationship between digital and assistive technologies and the reduction of social exclusion of people with disabilities. Thus, the research showed that these technologies seem to erect

new disabling barriers as a consequence of the already-mentioned phenomenon of the digital divide.

On the teaching side, most teachers seem not to face accessibility problems in the implementation of online courses. In a study on the subject, 80% of the respondents to an e-learning survey reported that, in their courses, they did not take into account the needs of students with disabilities, while less than 12% had a partial consideration of them (Bissonnete, 2006). In the same vein, many instructors report having no awareness of how to make their online courses accessible to this category of learners (Gladhart, 2010; Roberts *et al.*, 2011), in this sense it can be argued that a course ideally designed following the Universal Design approach should take into consideration the student's preferred mode of access, yet online instructors and institutions, in dealing with accessibility, tend to use an accommodation-only model rather than a proactive model (Kinash *et al.*, 2004; Barnard-Brak and Sulak, 2010; Seale, 2014a). Rather than addressing the inequalities that result from inaccessible instructional design, this approach tends to problematise individual deficits. Some online learning practices erect barriers for people with disabilities and SLDs, these include: videos without subtitles that are inaccessible to deaf learners, content that cannot be detected by screen-readers used by blind people, text organised confusingly on a page that creates barriers for some learners with attention or learning difficulties, and finally, web pages that require the use of a mouse, which are inaccessible to those with physical disabilities. On this topic, Burgstahler (2015) poses the question: "Which online learning practices can facilitate social inclusion for people with disabilities?", tries to isolate ten indicators of accessibility, which we will report below: an accessible site home-page; declaration, not only of intent, to adopt UD principles in the course; clear instructions, aimed at students with disabilities, to request

equipped accommodation; instructions on how to obtain material in digital format; all course materials should be accessible to students, regardless of their disability; for Web programmers consider accessibility guidelines/standards and resources; hold a training course for designers on design for all; for instructors of online courses: adhere to accessibility guidelines; take training courses for solving issues concerning accessibility; adhere to the monitoring system for an in-progress evaluation to concretely implement the UD principles. After constructing potential indicators, the author concludes his paper bitterly, stating that learners with disabilities are rarely considered in the design of distance learning courses, which puts them on the wrong side of the second digital divide, being able to access the technology but not at all of its benefits.

To adequately conclude the premises on technology and its use, it is useful to mention that, to guarantee accessibility to the world of the Internet, there is the organisation of the W3C (World Wide Web Consortium), which has the task of developing protocols for the interoperability of the Web throughout the world, according to Tim Berners-Lee, its founder, «the power of the Web lies precisely in its universality. Access for all regardless of disability is an essential aspect». Currently, WCAG 2.0 is widely considered the international standard for digital accessibility.

However, this lengthy digression aims to illustrate why it is useful to implement Universal Design for technology as an option to support inclusivity, in the knowledge that the effectiveness and accessibility of online services and materials can stand as a key measure of excellence for higher education institutions, as synthesised in the studies of Rowland *et al.* (2010) and Hayhoe *et al.* (2015), the application of ICT principles is a good practice for all students; this is a benefit both to site programmers, who can reach the maximum user potential in this way, and to lecturers of online

courses and the entire university system, since a costly redesign may be required when a student with a disability enrols in an inaccessible course; without taking into account the generic belief that it is unethical to prevent access to a potentially eligible student for reasons of inaccessibility that negatively correlate with their condition, producing an additional disabling factor.

For this purpose, it is useful to mention the GPII (Global Public Inclusive Infrastructure), a project of Raising the Floor (2011), whose aim is to create infrastructures that make the development and use of assistive technologies and services easier, less costly and more effective. The ultimate goal of the GPII is to break down barriers to access and use of the Web related to disability, literacy, technical competence, ageing, or financial resources.

After having illustrated the general terms of the relationship between technology, teachers and students, having highlighted the critical aspects and the relevant bodies for the concrete realisation of design for all, a further focus on the theoretical references and the Italian legislative context will be proposed, to then analyse the salient aspects of the research by initiating a process of critical discussion on the relationship between the inclusion of students with disabilities and SLDs and technology, emerging from the voices of the professionals involved in guaranteeing the right to study during the Covid-19 pandemic.

2. Theoretical and legislative framework

To better understand the theme of the role of ICT (Information and Communication Technologies) in the learning processes and university inclusion of students with disabilities and SLD (Specific Learning Disorder), it seems useful to provide a

terminological clarification on different concepts, but, in equal measure, interrelated to explain the issue: the concept of educational inclusion, the theme of technology as a facilitator (Universal Design) or, vice versa, as an obstacle (digital divide) and, finally, the Covid-19 pandemic, in this meaning extendible to the definition of emergency provided by Perez and Thompson (1994), understood as an event that causes extensive and profound damage, which goes beyond the capacity of any community to cope with it, thus requiring external interventions. This emergency period has overturned, on the one hand, social habits, and on the other, the functioning of institutions, within which it is possible to include the university where, however, «digital technologies have made it possible to continue ordinary activities (...) through the main tool of the e-learning, thus guaranteeing the right to study» (Fasanella *et al.*, 2020:96).

This contribution aims to question how much and in which measure this same right has been guaranteed for students with disabilities and with SLDs, and how much technology has been a facilitator or barrier in the concrete realisation of learning processes, also through the support of professional figures, starting, essentially, from their voices, constituting part of the evidence of the doctoral thesis project entitled "Universitabile: indagine sull'inclusione universitaria degli studenti con disabilità e DSA nel contesto universitario romano".

At this point of the discussion, to complete the theoretical framework, it is perhaps useful to define "educational inclusion" (Ainscow and Miles, 2009), to be understood as a process of systematic improvement that educational administrations and universities must address in an attempt to recognise and remove barriers of various types and at different levels (macro, meso, and micro), which limit the presence, learning, and participation of

students in the university life, with particular care for the most vulnerable ones.

In this sense, the Italian legal system has recognised the potential of digital technologies as a tool for educational inclusion since 1992; in fact, Article 8 of Law No. 104 already provided the inclusion and social integration of persons with disabilities by adopting measures to make the right to study effectively «with particular reference to didactic and technical equipment, programmes and specialised languages (...)» (Law no. 104/92, Article 8, letter d). Subsequently, the law was supplemented and further delimited by Law no. 04/2004 on provisions to facilitate disabled people's access to IT tools, to guarantee the right in particular to disabled people, to «access all sources of information and services, including those that are articulated through IT and telematic tools» (Law no. 4/2004, art. 1, para. 1). Article 2 of the same law also provides a definition of accessibility to IT tools, as well as proposing a further specification on the concept of assistive technologies, to be understood as «tools and technical solutions, hardware and software, that enable the disabled person, by overcoming or reducing their disadvantages, to access the information and services provided by IT systems» (Law no. 4/2004, Art. 2, para. 1, lett. b), by providing for the dispositions of computerised texts for public schools and universities; in this framework, the question the paper will try to answer is if technologies have really configured themselves as an option to reduce this disadvantage or, vice versa, have been a barrier, not fulfilling what is recommended by the EU Strategy 2021-2030, which recognises among the main guidelines for the concrete realisation of inclusive contexts, intended as accessible physical and virtual environments, the strengthening of ICT, implementing digital access through the preparation of the Digital Education Action Plan 2021-2027 (European Commission 2021, art. 8),

which, in one of its six fundamental axes, provides for the allocation of resources to ensure an accessible digital environment, in order to prepare inclusive digitised learning modes, promoting the concept of Universal Design for all. In this perspective, digital accessibility is not an option that higher education institutions can adopt or reject, but rather they are expected not only to provide their materials in digital format, but also to invest actively in the creation of accessible virtual environments and content and in the training of teaching staff (Gui, 2019).

3. The research: design, procedures, and questions

As previously mentioned, this essay intends to address the topic of university inclusion of students with disabilities and with SLD (Specific Learning Disorder), about the role of digital technologies during the Covid-19 pandemic, with the aim of understanding, through the voices of professionals involved in the provision of specific services and through the documents produced by universities, if, and how far, technology has played the role of facilitator of learning, as prescribed by the many supranational and national normative texts, illustrated in the previous paragraph. Having referred to the normative aspects of the issue helps us to bring to the attention of the academic community the first research output of the doctoral thesis project "Universitabile: indagine sull'inclusione universitaria degli studenti con disabilità e DSA nel contesto universitario romano", which intends to answer the following research questions: understand the differences between the three athenaeums through the mapping of the services dedicated to students with disabilities and SLDs in the universities under investigation (La Sapienza, Tor Vergata and Roma Tre); explain how much the inclusion of students with

disabilities and SLDs depends on the type of services offered and in particular on their degree of use; understand whether the use and offer of services dedicated to this category of people have a specific weight on the promotion of social inclusion, compared to other variables such as the ability of students with disabilities and SLDs to build social networks with their peers.

The survey aims to analyse the inclusion strategies of the three main universities in Rome: La Sapienza, Tor Vergata and Roma Tre. Strictly speaking, about the research design, founded on a mixed methods approach (Mauceri, 2017), based on the combined use of qualitative (focused interviews and focus groups) and quantitative (survey) techniques. It is divided into four main phases "background research" (Corbetta, 1999), in which the aim was to verify the existence of a database for each university, while at the same time mapping the services through interviews with the staff of the dedicated offices; design of a online semi-structured questionnaire administered to students with disabilities and SLDs (web survey); monovariate, bivariate and multivariate analysis of the data using regression models (Di Franco, 2011); focus groups (Corrao, 2000) for policy suggestions on a voluntary way. It should be noted that the evidence constituting the contribution refers, almost entirely, to the first of the listed phases ("background research"), in which in-depth focused interviews (Merton and Kendall, 1946) were administered to operators of services dedicated to students with disabilities and SLDs, on a voluntary mode, in the period May-July 2021, which provided insights in the following areas of interest for this paper: criticalities in service delivery related to the Covid-19 emergency (Lombardo and Mauceri, 2020), problems in the use of online platforms, difficulties in finding texts in an accessible format, alienation (Marx, 1875) perceived by professionals in the experience of assisting students with disabilities and SLDs to use distance learning lessons;

perplexities in the complete implementation of the active learning process (Cesareni and Pascucci, 2011), inaccessibility of multimedia university classrooms for assisted learning. However, in accordance with the mixed methods approach, we would like to inform the reader that in the last question of the web survey administered to students "If you could make a proposal to improve the service/sector, what would you change?", many of them, agreeing with what professionals had said, pointed out the lacks of technology, expressing their wishes essentially summarised in a sector that is more social, a simplification of the procedures for the recognition of their disability by university system and for the support of a tutor during exams. Finally, others denounce the inaccessibility of websites and the materials on them, as to propose Drive folders containing compensatory and dispensatory materials. These evidences, in agreement with Pitzalis *et al.* (2016), show that, despite the potential of technology, for students with disabilities and SLDs enrolled in the universities surveyed, it is still far from achieving the ideal of inclusiveness expressed by Universal Design.

4. Evidences from the voices of key informants

In this paragraph, to facilitate the reader, we will present the salient parts of each testimony provided by the employees of the three universities under investigation (La Sapienza, Tor Vergata, and Roma Tre), the managers, the rectors' delegates for disability and last but not least the specialised tutors and peer tutors who support students with disabilities and SLDs.

The interviews were conducted online, on the Meet platform, during the period 13 May 2021-18 July 2021, with a maximum duration of 1 hour 40 minutes and a minimum of 25 minutes.

To facilitate the understanding of the data, the order followed for the twelve interviews will be the one mentioned in the previous paragraph, so it is appropriate to open this section with the topic "critical issues in service delivery related to the Covid-19 emergency".

Regarding the relationship between the pandemic and the provision of services for people with disabilities and SLDs, Witness 8 (rector's delegate disability and SLDs, Tor Vergata), states: «the Covid crisis has completely changed the methods of access, application, etc., everything being telematic», and, again, «we have reduced to the essentials, the essentials meaning that we have focused on the problems that have suddenly arisen as new due to the forced distance". In this regard, Witness 6, an employee in the role of student tutor Tor Vergata, reinforces the concept by stating: «in this pandemic situation I practically only interact with the students [...] because now my job has moved online, so that means I have to follow their lessons online».

The issue is also echoed in the words of Witness 11 (dedicated student office desk, Tor Vergata), who states as follows: «in this last year, unfortunately, there has been more of a focus on addressing the emergency, so there has been a search for remedies for distance learning and all the problems there have been». The interviewee then goes on to point out that the pandemic has burdened the modes of communication between students, lecturers, and the service, as can be seen from the following testimony: «the problems, as you can imagine, have now been accentuated with the pandemic [...]. Perhaps, some communications may still be published and provided in a way that is not entirely usable [...]. So, the criticality is the communication». It seems clear that the witness refers to the online communication modes not always accessible to students with disabilities and SLDs.

However, online communication is not the only element of complexity encountered, in fact, to date, even the use of platforms commonly used for teaching (e.g. Meet, Zoom, Skype, Teams, etc.) also presents several critical issues, as can be seen from the words of witness 2 (staff member disability and SLD) «Sapienza had to organise itself [...] in a very short time and organising distance learning must not have been easy, also because we have some very experienced lecturers, telling a lecturer: 'do the lesson on meet', oh my god! [...] we ended up being computer experts [...]. Almost as if you can't do without it now. "Ah why don't you use this, why don't you use that, ah but you know if you use Zoom you can foreground a person and see the teacher's screen at the same time. On Meet you can't do that because if the lecturer shares his screen, you can't see all the people, you can't see them big, but you see them small". I mean, we have become experts». The testimony refers on the one hand to the individual resilience of the professionals in adapting to the new systems, and on the other hand to the problems in the use of the lectures delivered by the teaching staff.

The employees from all the universities surveyed, who were involved in the qualitative interviews voluntarily, in the exercise of their duties, also revealed problems in providing texts in an accessible format, in accordance with the laws examined in the introductory lines of this discussion, as can be read from the following testimonies, which are given in discursive and sequential form for the clarity with which they make the problem clear.

Witness 8 (rector's delegate disability and SLDs, Tor Vergata): «For example, the one that always emerges is this rigidity of the publishing houses, the granting where it is needed... The accessible material... Especially for the blind or at least the pdf for the accessible formats, we always buy the hard copy, but it is difficult».

Witness 3 (head of disability and SLD sector, Sapienza): «Another of the critical elements is the accessibility from the teaching point of view regarding the operation of certain services, one example above all, that of digital texts. Many times, we have difficulties finding digital texts, this is a national problem, there is a whole problem with publishers that we are trying with the university libraries to solve».

On the same subject, another staff member (Witness 12, rector's delegate Roma Tre) says: «We do everything we can to make these texts accessible, but then you have to deal with the publisher, and I got in touch with the head of digital publishing and she told me 'Yes, it is a matter of national policy, not university policy'. And then we also agreed to the possibility of accrediting ourselves as a body for text accessibility. This was an issue just this year'.

Despite the critical issues encountered in the delivery/use of accessible texts, some excerpts, demonstrate the benefits and resilience of the universities in the delivery of services, the students, at this stage: «preferred to study at home and used our distance tutoring, they studied with the tutor on Skype» (witness 2, staff member disability and SLD, Sapienza); in the same interview, further on, we can read a somewhat surprising fact: «we have students who studied and finished their theses with the tutor from home, sharing the Word file of the thesis on Drive and editing it in real time».

Another professional (witness 5, specialised tutor, Sapienza) on the same topic affirms: «Let's think about the online tutoring, for example, shall we? Study tutoring done via Meet. How many students find it difficult to go to university? And how convenient can tutoring is done in this way? So, we have probably cleared customs in a new way. I'll tell you more, nowadays, for example, the application for study tutoring is also done via online forms. »

On the other hand, the witness, after pronouncing about the positive aspects of technology, in a further excerpt, defines his tasks related to online tutoring as follows: «Marx tells us about alienation, right? Let's talk about alienation at work, you imagine going into a Meet chat and a Classroom, into a lesson and taking notes for someone you've only seen maybe once on Zoom, on Meet». (Witness 5, employee). The interviewee's assertion has the effect of producing some practical criticality, even on the student side, about the realization of the active learning process (Cesareni and Pascucci, 2011), as can be seen from the following excerpt: «I stay at home, I follow the lesson while I do the laundry» (witness 2, staff member disability and SLD, Sapienza).

Quite probably, this last assertion reminds us that technological instrumentation may not be sufficient for this process to be concretely realized, an aspect confirmed by further studies in which, regarding the relationship between distance learning and Covid-19, it is possible to read, «the change in educational offerings seems to have been characterized by a level of structuring and innovation that is not always adequate to keep students' interest alive, making their daily work uncomfortable» (Fasanella *et al.*, 2020:102).

This quote refers to the role of the university as an institution and the processes that are concretely carried out within it, by way of example, through the provision of multimedia classrooms with the following technical equipment, illustrated by one respondent: « the individual PCs that have speech synthesis, the braille keyboard, the mouse pointers for people with motor difficulties, there is so much that the student in case he is here within the university and needs to study in a specific room with specific tools, he can come" (witness 2, staff member disability and SLD, Sapienza); as can be read in the excerpt above this equipment, however, can be used only within the university sites, which, as is

known, during the pandemic period, were inaccessible to the public, as they were subject to closure, as can be found in the following words: «it was a richness that during the pandemic period, we had to interrupt" (witness 2, staff member disability and SLD, Sapienza).

The evidence presented brought out criticalities in every aspect related to the relationship between learning, technology, and inclusion of students with disabilities and SLDs, during the pandemic period, even though there is evidence of resilience on the part of the students and staff involved, well expressed by the testimony previously presented, related to the achievement of the graduation title during the emergency. In the following paragraphs, the proposal will analyse in critical terms the use of technology during the pandemic period, bringing attention to the centrality of the university and the various forms of the digital divide in our country and possibly experienced by people with disabilities and SLDs, trying to give a response tending to the enhancement of individual skills, through the positive contribution of computerization, in the vein of Universal Design, but not as a surrogate for the human being.

5. Discussion

Having presented the empirical material has offered numerous insights concerning the central role of universities as places of inclusion and confrontation with diversity (Moriña *et al.*, 2015; Bolt and Penketh, 2016). They are still confirmed, to date, as one of the main spaces of social life, contributing, as an institution, to breaking down material and immaterial barriers that exclude certain categories of students. As argued by Chiang (2019), the latter, in fact, play a key role both in the implementation of

services and in the recognition of a culture of disability, emphasising the following aspects: providing safe and welcoming spaces, emphasising the positive aspects of disability, educating the university community in non-discrimination, connecting the university and the local community through shared programmes, also using digital technologies, whose benefit in relational needs has been recognised by several studies (Addeo *et al.*, 2020) in an emergency context such as a pandemic. However, these are only an option and cannot replace traditional socialising contexts. This is especially true for students with disabilities and SLDs, for whom the university is also configured as a space for peer socialisation, which the pandemic, with its forced distancing, has contributed to reduce significantly.

The evidence presented so far on the relationship between ICT and disability inclusion raises a question about the role of technology, following Tsatsou's (2020) assertion that if conceived as a facilitator but designed only on the characteristics of able-bodied users, it can represent an obstacle factor, risk not fulfilling their potential for people with disabilities and SLDs, which consists in:

- helping them to perform daily tasks and assisting them to overcome the difficulties associated with their condition;
- allowing them to connect with those who have the same type of disability, which increases their sense of belonging and improves their social integration;
- facilitating processes of self-identification and confidence in communication with others mediated by technology.

Considering the condition of digital exclusion (digital divide) to which our country is exposed, experienced even more by students with disabilities and SLDs, who are often excluded from the design of lessons and activities for them, becoming the object

of what Burgstahler (2015) defines as the second digital divide, having access to technology but not all the advantages experienced by their able-bodied counterparts, as pointed out in the introductory pages of this essay. This conclusion is also shared by Goggin and Newell (2003), who express further doubts on this topic, stating that the promises of digital technologies to overcome the problems of disability are overestimated and have not been fully realised. According to researchers, rather than creating a system of inclusion, these have had the opposite effect, further isolating people with physical impairments and becoming «a double-edged sword» (Byerley and Chambers, 2002:169). A view shared and echoed by Tobias (2003), who pronounces on the UD movement's «uncritical belief in the benefits of technology» (Tobias, 2003:1), for the author the realisation of technological benefits requires the UD movement to adopt a non-deterministic point of view that conceives technology as a socio-cultural construction, embodied and shaped by values, human intentionality, and actions, rather than asserting the independent nature and power of technology by itself.

6. Conclusions

From the evidence presented, it appears that technology risks not fulfilling its function of alleviating the stigma of people with disabilities.

On the other hand, this paper, entering fully into the scientific debate on the impact of digital technologies on the education system (Giancola *et al.*, 2019), invites us to rethink the use of digital technologies as a prerequisite for the development of concrete solutions, since these potentially «break down boundaries and create a new reterritorialized space that can be accessed by a

broader range of users than those represented by traditional students» (Valentini, 2008:17). In fact, the author goes on to say that deterritorialization «creates the prerequisites for carrying out actions and accessing services related to didactics and university training from different places: home, the workplace and other centres that do not coincide with the university's seat, such as decentralised poles» (ibidem:22). The latter process is considerably accelerated by the Covid-19 emergence, which provides the basis for rethinking technology in the direction of innovative learning, i.e., a training approach «marked by the use of a plurality of digital tools and by the discussion and creation of content by the participants (...)» (Fasanella *et al.*, 2020:101). The guidelines drawn up by the universities surveyed also point in this direction, prescribing that «according to the requests of the student with disabilities, it would be appropriate to adapt the teaching material (...) in the format most suited to the type of need and the most congenial method of study» (Vademecum Roma Tre: 9), especially through the use of teaching materials in digital format; in this regard, the university "La Sapienza" goes further, providing criteria for the preparation of *SLD-friendly* slides and lessons (Sapienza Guidelines, 2019, sect. 2, ch. 10), thanks to the use of ICT, reiterating, however, that how these measures and tools are applied is to the discretion of the teacher in the exercise of his or her "didactic autonomy". This refers to the question, repeatedly expressed in the proposal, that technology can properly fulfil its function in support of man and not as a substitute of him. In this new phase that university communities are going through, it would be advisable to build on the positive heritage left by the pandemic situation, in terms of boosting the country's digitalisation, to make the best use of the resources made available by the PNRR ("National Recovery and Resilience Plan"), having as a prerequisite the strengthening of ICT and the reduction of the digital divide

(Ragnedda, 2017), implementing, in this way, if necessary, some forms of blended didactic, taking care not to consider the e-learning (D. P. C. M. 8 March 2020) as a panacea to solve "all ills", since its abuse could lead «in germs the cues for a reversal of perspective, which from the anti-discriminatory strategy and the egalitarian ideal risk opening the door to the most extreme differentialism» (Piccone Stella, 2003:65).

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