Article

New Media Literacies and Transmedia Learning . . . Do We Really Have the Conditions to Make the Leap? An Analysis from the Context of Two Italian *licei classici*

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Abstract: In recent years, the integration of new media literacies and, consequently, strategies such as transmedia learning in teaching–learning processes has been a topic of interest among various types of national and international institutions and governments. In this sense, the current article deals with the abilities and habits of Italian students of *licei classici* (Italian classical high schools) to cope with these new formative contexts that are arising. For this purpose, different quantitative instruments (from the field of attitudes, digital skills and multitasking, and corresponding to the transmedia sphere) were administered to 400 students ($N = 400$). The results show that most young people have access to devices and that they prefer the mobile ones when consuming or creating content on the net. Moreover, although they are inclined towards transmedia practices, they have some difficulties in becoming creative agents collaborating and fully participating in digital citizenship.

Keywords: transmedia learning; digital competence; higher education; new media literacies

1. Introduction

Although the Ministero dell'Istruzione published in 2015 the *Piano Nazionale Scuola Digitale* (Digital School National Plan, hereinafter PNSD), the Italian education system, like many educational institutions all over the world, still faces a crucial challenge of ensuring the development of students' digital skills, "con particolare riguardo al pensiero computazionale, all'utilizzo critico e consapevole dei social network e dei media nonché alla produzione e ai legami con il mondo del lavoro" (with particular regard to computational thinking, the critical and conscious use of social networks and media as well as production and links with the world of work), as stated in the Italian Law 107/2015. In fact, the conceptual frameworks related to digital competences or digital literacies always highlight that the education system must guarantee every student acquires them (Ugolini 2016), and because of that, the PNSD states a positive break with the past, with a clear commitment to the inclusion of Information and Communication Technologies (ICT) in daily school life (Cappello 2019) in a transversal way, permeating all learning processes at all educational levels. In this sense, the change links with the dynamics of the rest of Europe (and much of the Western world), which seek to materialize the European Recommendation of 23 May 2018 on lifelong learning, in line with the DigComp reference framework, which suggests educational policies that enable citizens to develop the digital skills they need to participate in the Knowledge Society (Fabiano 2020); that is, to exercise their own citizenship in a digital way.

The challenge, moreover, is not particularly Italian (but universal), and is linked to the classic split between the school and personal realities of children and adolescents, always

straddling the forms of learning in school that do not penetrate deeply into informal forms of learning (Esteban-Guitart 2016), and that prevent what is learned formally from being translated consistently into meaningful experiences that end up solidifying what is learned outside of school. This, moreover, occurs in a context of participatory culture (Jenkins 2006), in which culture is not only consumed, but produced collaboratively; in which, therefore, the informal and the formal (learning) patterns should form a continuum (Buonauro and Domenici 2020) that allows for the efficient management of media convergence.

In this context, media learning can set a profitable pattern, which allows us to confront both the boundaries between the formal and informal learning processes, which responds to the need for adolescents to assume that citizenship is exercised by participating in a society that is digital, and in which they must produce and not only consume, and must do so in a critical, ethical, and responsible manner (González-Martínez et al. 2019). Understood as a social constructivist and connectivist learning that moves towards the production of content guided by a story, in which both the analogical and the digital are combined and alternate (Dickinson-Delaporte et al. 2020; Fleming 2013), it would also seem that transmedia (transmedia learning, in fact) can represent an undoubted opportunity to revitalize classical culture within the educational system (and, therefore, in society itself, where it is in decline). The fact is that although its eternal vitality lies in its commitment to universal vocation (in the themes, in its approaches) (Cavalli Sforza and Cavalli Sforza 2007; Ferrarotti 2014), there is no doubt that one of the disciplinary problems has its cause in outlooks that are outdated, linked to the less universal and disconnected part of that culture with ours (Catafalmo 2020), with which a look of transmedia learning can link the universal of the classic with the personal of the adolescents of the Italian school.

There is no doubt, however, that both transmedia learning itself and the action in this participatory culture we live in (within formal learning contexts or not) involve particular skills and abilities, which convulse the very concept of digital competence and lead us to ask ourselves whether Italian teenagers can use those new media literacies (Jenkins et al. 2009) that we will need and that allow the management of both media convergence and the leap from media consumption to creation (here, for learning purposes). If we consider that transmedia learning (as we will further explain later) offers us interesting opportunities for young people, are we sure that they will be able to assume this challenge? Are their digital abilities enough? This contribution is dedicated to this analysis of the digital and transmedia characteristics of the Italian students of these *licei classici* (classical high schools).

2. Theoretical Framework

2.1. Transmedia and Transmedia Learning

The first usage of the term transmedia, as we understand it here, can be found in the reflections of Henry Jenkins from the 1990s onwards, born within the context of fan culture and the emergence of a media cultural phenomena in which consumers change into participants in processes that are highly mediated by technology. All this flow gives rise to the concepts of media convergence and participatory culture (Jenkins 2006); the former points to a context of overlapping and alternating digital media, neither linear nor pre-established, but multi-branched and varied; the latter, to the possibility for users to intervene in digital creation (thanks to the popularization of devices and the development of Web 2.0), which translates into processes of contribution, creation and dissemination of content and, consequently, into users' cultural practices (precisely with the converging media available to them). On the one hand, individuals go from being consumers to creators, and this creation is produced in a communal, not individual way (although with personal, not predefined paths) and on the other hand, cultural phenomena are conveyed in different media (so that the person who participates must be able to navigate between them, and in several of them, to be able to follow the flows of creation in which they participate and which they feed and not only consume).

Starting from this reference, in the educational field there are different approaches to transmedia, in which the axis is always a story or a narrative, which is developed through

different media and with different participants. Therefore, sometimes a product is evoked that is transmedia because in it the sequentiality of the media is a core element, and of which the 2.0 version of the Cinderella story (Cinderella 2.0. Transmedia storytelling) can be an exemplary version (https://www.youtube.com/watch?v=CP-zOCl5md0, last accessed on 4 May 2021) (Chung 2014; Fleming 2013). It can also be a set of skills (knowledge and skills already acquired or to be developed) that the subject must mobilise across media in order to be able to contribute to the advancement of the story (for instance, looking for new information in the Internet, and elaborating on some materials to be part of a common digital project, also in the cloud), thereby participating in the shared and collective creative process (Benedict et al. 2013; Wiklund-Engblom et al. 2013). Alternatively, and this is what interests us most now, it can be a learning strategy (with a didactic approach of storytelling or not), in which the learner must develop a narrative or story with different educational objectives and in which, among others, they must mobilize in an integrated way the competences already acquired (writing, painting, looking for information) or develop new ones (content curation, dissemination, some digital development) (Benedict et al. 2013; Dickinson-Delaporte et al. 2020).

In this sense, as with the notion of transmedia itself, we cannot find a single definition of transmedia learning either. Broadly speaking, transmedia learning rests on two pillars: Jenkins's (2006) ideas of participatory culture and media convergence, which provide the cultural framework; and the key ideas of Vygotskian socioconstructivism (Biggs 1996; Shepard 2006) and Siemens's (2006) connectivism, which provide the pedagogical framework. With all this, we can propose learning experiences motivated by the need for the person to develop a story, with the resources available and preferred (analogue and digital, together or alternated; in some cases, videos, or podcasts, or text in a blog, or even more classical materials, developed on paper or in a face-to-face meeting) and in a community context (with their learning peers), in which there is no other way of proceeding (and learning) than collaborating with them for reaching a common goal. These are not small elements, no doubt, but neither are they unimportant. Although it is not a new conception of learning, and although as a didactic model it is lax because it is indeterminate, it does imply a novel and potentially interesting way of approaching learning. Apart from these premises, or rather to finish expanding on them, the literature identifies more elements: connections with enactivism (Campalans 2015), ludic elements (Barreneche et al. 2018), a link with foreign language learning (Rodrigues and Bidarra 2015, 2019). As an opportunity (but also as a limitation), transmedia learning is permeable and under construction in terms of the contexts in which it develops, namely, within the school, but also outside it (with direct relation to what happens in the classroom, as a complement to it; independently of the school), with various agents involved (families, educators in the informal sphere), and all educational levels (from early childhood education to university studies or professional military training). It shares, then, a common root (media convergence, collaboration, narrative), but assumes to a certain extent the characteristics of the context in which it occurs (Amador 2013). They are, therefore, processes of media convergence that encourage the active participation of users, considered (pro)sumers (creators and consumers) of the story, narrative or cultural content, who are moved by a particular interest or passion and move through the different media platforms to contribute to that story (Raybourn 2014; Raybourn et al. 2019).

In particular, the opportunities of transmedia learning arise precisely from its ability to concretize pedagogical principles. These are not always easy to articulate (constructivism, connectivism) in motivating experiences (engagement), nor customizable (the narrative allows layers, ramifications, recurring points of connection), coherent (with the digital context we live in but also free of pressure from specific technologies and compatible with the analogical, from which we must not flee), or finally, proposals that make it possible to leap the limits of formal learning (in the broad sense) and of educational institutions (in particular), which is particularly interesting in relation to the need to update the school in Italy (Buonauro and Domenici 2020), and throughout the world.

2.2. Media Education, Digital Competence and Transmedia Literacy

Before considering the details of transmedia learning proposals, we must consider the nature of the subject who learns (in any context). As we have said, an important part of these reflections, when situated in the educational sphere, focuses on the conditions (characteristics, knowledge, skills, attitudes) of the subject who participates in transmedia experiences (Alper 2013a; Anderson 2014). In fact, it is something very close to the concept we talked about before, a kind of transmedia literacy, which allows the subject to participate actively and productively in the participatory and convergent culture that Jenkins (2006) talked about, and which is also yet to be defined and contextualized within the general panorama of digital skills.

Up to a point, it seems clear that participation in all areas of the Knowledge Society in the 21st century requires the mobilisation of different digital literacies (van Dijk 2017), as media education has been responsible for highlighting in the context of the varied and wide-ranging reflections on digital competence–one of the key competences of citizenship in our time (Sánchez-Caballé et al. 2020). The different forms that the digital divide can take undoubtedly threaten the empowerment of the students we serve in the education system of the Western world (physical gaps in access, competence and use, according to van Dijk 2017), especially in a society characterised by media convergence and participatory culture (Jenkins 2006), in which participation means not only consuming, but also actively producing, contributing to a media and multidirectional cultural flow in which it is not only necessary to know how to read digital content, but also how to write, navigate and jump between these contents and formats. Education systems, such as those in Italy and Spain, for example, have essentially taken on two main strategic lines to meet this challenge: making children and adolescents literate (enabling them to develop the necessary levels of digital skills) and digitising schools (providing them with technological resources and training teachers to introduce technologies into the teaching–learning processes (Gremigni 2019; Ugolini 2016); however, digital divides continue to exist, partly because of their diversity, heterogeneity and the multiplicity of forms they take (van Dijk 2017). Among them, we must consider specially the digital gender divide (Clark and Gorski 2002), which not only has repercussions on the low rates of female vocations in the scientific–technological field, but also perpetuates the differences between women and men, from childhood onwards, including in terms of how they feel capable and skilled in the technological field or how we use technology for our personal and professional purposes.

At this point, for the sake of economy of space, we refrain from a wide-ranging reflection on the nature of the new citizens in the coordinates of the Knowledge Society, as interesting as it may be. For the same reason, we do not develop the interesting field of media literacy (Livingstone 2004; Pérez Cervi et al. 2010), where the new media literacies approach comes from, since our reflection focuses more on that part of digital literacies that link with transmedia learning (as we will see in the next section). In this sense, the literature has already abounded in the difference between the relationships that young subjects have with technology in their personal and academic spheres (Bullen et al. 2011; Gallardo Echenique 2012); and some literature is also beginning to be found on the differences when learning is formal or informal (Cappello 2019; Scarcelli and Riva 2016); however, it is necessary to define minimally what we mean by digital competence and what is different about this from transliteracy. In this sense, if we start from the concept of media literacy, we will understand in the Italian context the ability to use digital media and languages (Buonauro and Domenici 2020), to which is added, in a presidential way, the need to increase the skills of analysis, evaluation and critical reflection (Ranieri 2019). In the background, we can recognize an important myriad of reference frameworks and concepts of digital skills not always well aligned (Sánchez-Caballé et al. 2020).

In accordance with the above and considering the infinite number of approaches and definitions that have been made on the concept of digital competence (DC), a good starting point to understand the evolution of this competence is the year 2006, when the European European Commission (2006) listed it among a group of key competences essential for

lifelong learning. At that time, DC was understood as the confident and critical use of information society technologies in various areas of citizens' daily lives (in work, leisure and communication). In 2018, the same organization went a step further and considered this competence as one of the essential ones for any citizen of the 21st century; however, at this point the question is: what is necessary to be a digitally competent citizen?

Obviously, this is a question that can be solved in many ways, given that there are countless frameworks and models that seek to answer it and, obviously, the references chosen may vary slightly. If we follow the DigComp model, which is currently in its 2.1 version and is one of the most recognized at the European level, a digitally competent citizen is one who has technical cognitive and application skills in relation to digital technologies. More specifically, he or she has such skills in relation to: (1) information and data literacy; (2) communication; (3) content creation and development; (4) device security and safety; and (5) technical troubleshooting.

Nevertheless, beyond these conceptions, if we consider that this new media ecology generates new ways of learning, we should also consider that there is a special competence, or set of skills necessary to successfully transit between these media platforms and, at the same time, follow the thread of the construction of the story, a transmedia literacy (transmedia literacy, or transliteracy) (Alper 2013b; Fraiberg 2017; González-Martínez et al. 2018; Kline 2010), the components of which are yet to be developed.

Again, although quite a few years have passed since the first documented use of the term transmedia literacy (Kline 2010), neither do we find a canonical definition of the concept nor, as derived from the above, can we expect logical operationalization in the form of relevant characteristics (González-Martínez et al. 2018); however, some skills involved in the new demands of teaching and learning in the 21st century have been identified. In that sense, within the new media literacies approach, different important skills are identified to live the new digital cultural coordinates: transmedia navigation, game, performance, simulation, appropriation, multitasking, distributed cognition, collective intelligence, judgment, transmedia navigation, networking and negotiation (Jenkins et al. 2009). Beyond this enumeration, no prioritization is offered among them, nor is their special incidence from an educational perspective explored in depth. Therefore, we take as a reference the contribution of González-Martínez et al. (2018), who reviews the literature and identifies particularly important elements, such as transmedia navigation, the leap from simple consumption to the alternation between media consumption and production, the necessary collaboration and interaction between peers and finally, the critical ability to analyse and evaluate information.

2.3. Transmedia Learning, (Possible) Bridge between Two Worlds

In recent years, part of the educational literature on ICT has devoted considerable effort to highlighting and decrying the gap between the literacy and informal learning practices of adolescents and young people (e.g., video games, social networks, fan groups), and the formal learning processes within the school as an institution (Bender and Peppler 2019; Esteban-Guitart 2016; Gee and Esteban-Guitart 2019; Jenkins et al. 2009). This gap tells us partially how young people learn (in many cases via digital devices) in situations where they are the ones who decide what to learn and why to learn it (Esteban-Guitart 2016; Pereira and Pedro 2020), and those in which it is the teacher who formulates the learning proposal with a much more institutionalized vision (Buonauro and Domenici 2020), which does not necessarily manage to translate their efforts into meaningful learning (Esteban-Guitart 2016).

In any case, schools must prepare for life and, therefore, for the exercise of digital citizenship (Fabiano 2020), in line with the European recommendations we mentioned in the introduction. It is therefore important to start from the digital (and transmedia) skills of Italian students, especially if we consider that transmedia learning can be an opportunity to effectively address some of the challenges ahead. In that sense, the digital profile we have of Italian teenagers is diffuse: they are the most constantly connected population cohort,

with a complex and not necessarily uniform variety of digital consumption (Gremigni 2019), which does not always translate into a greater capacity or an advantage from the point of view of social participation. In addition, we find an entrenchment between the personal, family and school worlds (and flows), the latter two of which, as far as the digital is concerned, are vertical (from parents and teachers to adolescents) and unidirectional (not from adolescents to their adults); as opposed to the personal and technological worlds, which develop between peers (Scarcelli and Riva 2016).

On the other hand, from an inclusive education perspective, schools face the challenge of proposing learning experiences aligned with the principles of universal design for learning (Alba Pastor 2016; Castro and Rodríguez 2017; Rapp 2014). The UD-L proposes that teachers, when planning learning activities, in general terms comply with three main principles, which are easy to state but not so easy to put into practice–offering multiple forms of representation, involvement and action. Although the UD-L philosophy is not strictly linked to the field of disability but to inclusive education, there is no doubt that also in the field of formal education that UD-L proposals with technology have been associated with this traditional view of special education (precisely which the UD-L wants to reverse) (Mangiatordi 2017; Savia 2015, 2018), with a clear commitment that links the use of digital technologies with access to the curriculum in the broad sense (Pieri 2011) or with the necessary accessibility as a desirable property of technologies that allow the transition to accessible and inclusive digital didactics (Avalle et al. 2012; Blackall 2007; Midoro 2015). Consequently, the design and implementation of real educational proposals that comply with the UD-L principle (*one size fits all*), that at the same time not only allow the acquisition of the digital competences necessary for the 21st century, but that can also contribute to dissolving or reducing the digital divide (including the gender divide) under an umbrella of inclusive education, remains a pending challenge. All of this, a priori, is at odds with the possibilities of transmedia learning.

Transmedia learning, as we have seen, proposes to a certain extent to disrupt this order, in line with the objectives that the school has been proposing for some time (in line with the PNSD) without substantial progress. For this reason, it may be an opportunity to leap the walls of the school and to involve in a more cohesive way all the elements that make up the ecosystem of adolescents. It can also be a way to revitalize disciplinary areas such as classical culture, which often arouse more interest spontaneously in the informal than in the formal sphere (Catafalmo 2020); however, in order to do this, we first need to know the media (and transmedia) profile of the students who can participate in it, about whom we know little in particular.

Therefore, the objectives of this study are, on the one hand, to identify the competences and transmedia profile of selected Italian students of the *licei classici*, based on different instruments (digital literacy, multitasking, transmedia profile, attitudes towards ICT), and on the other hand, to determine which elements of these profiles favour or hinder the implementation of transmedia learning strategies.

3. Materials and Methods

3.1. Participants and Context

Considering the universe of the *licei classici*, it was decided to work with an accessible and incidental sample formed by students of all courses in any course of the *licei classici* G. M. Dettori and Siotto Pintor of Cagliari (Italy), who agreed to voluntarily answer the questionnaire, administered in a unique way and via an on-line channel, at the request of the research team and under the auspices of the schools' management. The fieldwork was carried out between December 2020 and January 2021. In relation to the sample used, we advance at this point one of the limitations of the analysis we present. Insofar as the sample has not been configured considering the principle of equiprobability (but informants from a real context), we cannot consider it to be representative either in its number or in its nature. Therefore, the value of our analysis lies in the novelty of the knowledge generated and in the applicability of this knowledge in relation to the practical implementation of

this knowledge (considering its usefulness as a diagnosis at the service of transmedia experiences in this specific context).

The *Liceo Classico* is part of the Italian national system of public education based on the transmission of educational values aimed at forming citizens on the basis of the classical-humanistic tradition which is its strong point. The cultural offer that the Liceo proposes is also aimed at enhancing logical-mathematical and scientific skills, skills in the field of foreign languages, art and laboratory methodologies. The Liceo Classico is not a vocational school and is aimed at accessing universities and all the faculties available in universities. It has a two-year formative course and a three-year specialised course: in the two-year course the students take Italian, Latin and Greek grammar, Foreign Language, Geography, Mathematics, Science and, where there is experimentation, History of Art. In the three-year course, subjects such as Philosophy, Physics and the study of Classical and Foreign Literature are added. In the Italian education system, in addition to the Liceo Classico, established by the Casati Law in 1859, there are other types of Liceo: Scientific, Human Sciences, Artistic, Linguistic, Musical and Dance.

Four hundred and two informants responded to the call, of which 400 complete responses could be consolidated (*N* = 400). As can be seen in Table 1, by gender, 78.1% were female (consistent with the larger female population usually found in these schools), 20.5% were male and 0.4% chose not to be classified. By age, most of the sample was between 1 and 18 years old, and between 21 and 25 years old, with less than 10% of the participants over 26 years old, while 56.3% belonged to the Liceo C. Siotto Pintor and the remainder, 43.7%, to the Liceo C. G. M. Dettori (Cagliari, Italy).

Table 1. Characteristics of the participants (* official students' age for each school year).

Variable	Frequency	%
Gender		
Woman	300	75
Man	99	24.75
Non-binary gender	1	0.25
Course and age		
1st (14–15 years *)	118	29.5
2nd (15–16 years *)	61	15.25
3rd (16–17 years *)	92	23
4th (17–18 years *)	53	13.25
5th (18–19 years *)	76	19

3.2. Instruments

For this research it was decided to start from two existing instruments, both coming from the conceptual sphere of new media literacies and media education. The New Media Scale was applied, which develops the categories of Jenkins et al. (2009), in relation to the items of collective intelligence, judgment, transmedia navigation and visualization (Literat 2014). We applied the Media and Technology Usage and Attitude Scale, by Rosen et al. (2013), in order to profile their attitudes towards the use of technology in general contexts. We also applied the Multitasking during homework scale, by Martín-Perpiñá et al. (2019). Finally, to know their level of digital literacy, we selected the Digital Literacy Scale by Rodríguez de Dios (2018), specially designed for European adolescents. All four scales are instruments that have been specifically validated and tested specifically for adolescent subjects in the reference studies. Due to space limitations, we avoid detailing here the validity characteristics of each of them; however, we can summarize part of them. Regarding the Media and Technology Usage and Attitude Scale, Rosen et al. (2013) followed an initial literature review, a first pilot (*N* = 397) and the consequent revision and transformation of the items when needed and a factor analysis which proved the final scale was internally reliable and externally valid. Regarding the Digital Literacy Scale by Rodríguez de Dios (2018), this author performed a pilot study (*N* = 208) to improve initial

items and reduce the first version of the questionnaire, and a sequence of different steps (exploratory analysis, convergent validity scale test, confirmatory analysis), until arriving at solid standardized regression weights for every subscale. Martín-Perpiñá et al. (2019) started from an adapted version of previous materials, validated the scale in an initial pilot (N = 977) with a validation score of alpha of Cronbach = 0.84. Finally, Literat (2014) reviewed the literature, produced an initial version of the different items, piloted them (N = 397), performed a factor analysis in two steps and reached a Kaiser–Meyer–Olkin test result of 0.824.

As for the treatment of the data, a chi-squared test was applied to the non-parametric responses and an ANOVA test to the parametric responses, while for the establishment of the relationships between the different indices we opted for Pearson's correlation coefficient. In both cases, confidence levels of 0.05 or 0.01 were used.

4. Results

4.1. General Overview

In terms of the availability of resources, 98% of informants had a mobile phone or tablet (mostly with IOS operating system, with 72.6%), and this is the device from which they mostly connected to the network (60.5% of them used it to connect when they were at home, 6.4% from the school), as opposed to the computer, from which 21.8% connected when they were at home, 3.2% from the school. They reported spending a considerable amount of time online: 40.7% spent 3–5 h a day online, 35.5% spent 6–8 h a day online, and 11.5% considered that they were always online. It is common for them to have a profile on a social network (93.5% had one), among which Instagram was the most common (91%); on the other hand, WhatsApp was the most widespread messaging service (98.5%).

In terms of general consumption profiles, they used the mobile device (smartphone or tablet) for study-related activities (85.1%), listening to music (88.3%), reading novels or newspapers (23.4%), watching films or series (64.2%), mail (65.2%), photography (taken or shared, 71.6%), shopping (52%), or social networks (82.1%).

With regard to this social dimension, 56.5% reported that they only welcomed people they know; 53.5% responded that they also check the real identity of the people they contact on the net. With those contacts, they discuss issues related to school (53.5%), sports (32.6%), music (65.2%) or leisure in general (books, films, series, TV, 61.3%); anecdotally, there was little discussion about politics (1%), the environment (0.5%) or current affairs (0.2%). Finally, 80.9% stated that they had not felt uncomfortable in situations due to digital attacks on the net, and 83.3% indicated that they had not experienced grooming, sexting or cyberbullying.

Finally, we come to the dimension of academic use, linked to school activities. They reported using the net to extend class activities (61.4%), to carry out learning activities in their entirety (73.6%), to collaborate synchronously with colleagues when they are at home (66.7%) or when they are at school (17.4%), or to communicate with their teachers outside school (35.8%). The most used resource for them was Wikipedia (84.3%) and by fields of study, they connected more with the historical–geographical (78.9%) or linguistic (61.4%), rather than from the scientific–mathematical (51.5%) or technical–artistic (20.6%). Finally, they showed a preference for activities involving foreign schools (64.4%), extracurricular activities (47%), or pupils from other groups (33.8%) or from other schools in the surrounding area (34.3%).

4.2. Transmedia and Digital Profile

If we start with the Digital Literacy Scale, we find the values reflected in Table 2. In this table, in order to serve as a reference, we have also included the values published by Rodríguez de Dios (2018) in her research also with adolescents (Spanish adolescents, in that case). While in some dimensions the values were slightly higher than those documented (for example, personal safety or critical skills), in others they were especially lower (above all, technological or information skills). In addition, the standard deviations were lower (in some cases considerably) than the reference values.

Table 2. Digital Literacy Scale (N = 400 in our data; N = 1462 in reference's values).

			Rodríguez de Dios (2018)	
	Mean	**SD**	**Mean**	**SD**
Technological Skills	3.36	0.44	3.80	0.73
Personal Security Skills	4.12	0.63	4.09	0.83
Critical Ability	3.73	0.63	3.43	0.74
Devices Security Skills	3.20	0.87	3.25	0.93
Information Skills	2.62	0.67	3.37	0.70
Communication skills	3.52	0.61	3.69	0.58

Regarding the four dimensions of transmedia analysed here (Table 3), the informants were especially inclined to transmedia navigation and judgement (the evaluation of the information found on the network), while they presented lower values both in the community dimension (collective intelligence) and in the assumption of other identities (visualization).

Table 3. Transmedia profile (*N* = 400 in our data; *N* = 733 in reference's values).

			Estebanell-Minguell et al. (2021)	
	Mean	**SD**	**Mean**	**SD**
Collective Intelligence	3.89	0.61	4.12	0.56
Judgement	3.91	0.55	3.88	0.59
Transmedia Navigation	4.00	0.59	3.75	0.70
Visualization	3.67	0.52	3.82	0.56

About attitudes, we find interesting elements if we compare them with the reference values (Table 4): the dimension of positive attitudes is on a par; the values of the dimensions of anxiety and dependence or negative attitudes are significantly lower. All of this makes up an attitudinal profile favourable to ICT as a whole.

Table 4. Attitudinal profile towards ICT (*N* = 400 in our data; *N* = 397 in reference's values).

			Rosen et al. (2013)	
	Mean	**SD**	**Mean**	**SD**
Positive attitudes	3.64	0.51	3.66	0.84
Anxiety and depression	2.89	0.95	3.15	1.09
Negative attitudes	2.89	0.81	3.35	0.92

Finally, we can pay attention to the multitasking profile, since multitasking, according to Jenkins et al. (2009) is a skill closely linked to transmedia and transmedia navigation. As shown in Table 5, the values of the sample were significantly lower than the reference values: the students of our two licei classici were more focused on academic tasks than the Spanish students. In fact, except in the most social dimension (messaging and social networks), which to some extent can be linked to the school itself, the values were significantly lower. The standard deviations were very high, which speaks of an important diversity of the sample in relation to multitasking.

Table 5. Rates of multitasking during homework (*N* = 400 in our data; *N* = 977 in reference's values).

	Mean	SD	Martín-Perpiñá et al. (2019)	
			Mean	**SD**
Watching TV	1.34	0.73	2.20	1.16
Listening to music	2.53	1.22	3.11	1.10
Reading	1.43	0.91	2.11	1.13
Calling on the phone	1.96	0.97	2.15	1.14
Sending messages	2.81	1.05	3.08	1.08
Social networking	2.52	1.05	2.53	1.24
Watching films	1.48	0.85	2.07	1.23
Using the computer	2.23	1.03	2.61	1.16
Playing with video games	1.15	0.51	1.79	1.14

Finally, taking the Digital Literacy Scale (Rodríguez de Dios 2018) as a reference, we can create the corresponding terciles and work with the lower (LowTech) and upper (HighTech) groups. As for the transmedia profile, we see significant differences in the four dimensions analysed, so that those who were more digitally competent were also those who were more predisposed to transmedia (Table 6).

Table 6. Differences in the transmedia profile according to digital literacy (* < 0.05) (*N* = 400 in our data; *N* = 733 in reference's values).

	LowLit	HighLit	Estebanell-Minguell et al. (2021)
Collective Intelligence (*)	3.69	4.07	4.12
Judgement (*)	3.58	4.28	3.88
Transmedia Navigation (*)	3.73	4.28	3.75
Visualization (*)	3.40	3.91	3.82

Although the differences in attitudes were not so clear, they were significant in positive attitudes, which were higher among informants with a high competence profile (3.81) and lower among less competent informants (3.50); on the other hand, there were no significant differences (nor a clear pattern) in relation to multitasking.

Finally, from here, we propose an analysis of bivariate correlations between digital competence and the transmedia and attitudinal dimensions, which is shown in our last table (Table 7). In it we can see that all the transmedia dimensions analysed were significant and positive (collective intelligence, judgement, transmedia navigation, visualization) and more digital literacy also implies more propensity to transmedia; the same can be said of positive attitudes, which were also higher when literacy increased (unlike negative attitudes, which did not decrease in the same proportion).

Table 7. Correlations with digital literacy (*N* = 400 in our data).

	Pearson's Coefficient	Sig.
Positive attitudes	0.309	0.000
Anxiety and depression	0.107	0.033
Negative attitudes	−0.119	0.017
Collective Intelligence	0.308	0.000
Judgement	0.573	0.000
Transmedia Navigation	0.392	0.000
Visualization	0.466	0.000

5. Discussion and Conclusions

At this point, we try to recapitulate the main ideas offered by these data and place them in the mirror of the knowledge we have so far thanks to the bibliographical sources. Generally speaking, the students of the *licei classici* who participated in the research appeared to

be well disposed to accept a good transmedia learning approach and this predisposition is based on both positive values in purely digital skills and attitudinal ones. In relation to the former, our sample had values comparable to those of the reference (Rodríguez de Dios 2018), but higher values in critical skills (related to the critical spirit or judgment that enters in the NML of Jenkins et al. (2009) and that stands out as a fundamental part of transmedia literacy (González-Martínez et al. 2018) and in our favour (since these are particularly interesting dimensions for both critical consumption and the ethical and responsible exercise of digital citizenship). As for attitudes, on the one hand, the positive attitudes were higher than the reference ones (Rosen et al. 2013) while on the other hand, the negative attitudes and anxiety and stress were lower, which appears to augur a good reception of an educational proposal that had an important technological weight.

If we go into the specificities, we will see that we also had interesting values in the transmedia elements, as our scores were higher in skills such as transmedia navigation, visualization or judgment (in line with what we have just said about critical consumption, for instance); however, the key element of socialization in the collective intelligence dimension leads us to configure less collaborative forms than we would expect in a transmedia context (and which may be an obstacle for our students to become content creators in a digital world, also an important part of these transmedia learning experiences). Undoubtedly, these data are consistent with the conclusions of Gremigni (2019), as the groups were not uniform, but it is something that should be kept in mind when defining any learning strategy, especially in relation to what Scarcelli and Riva (2016) point out around the isolation of different collectives (which always deserves attention in transmedia proposals). Additionally, in this sense we must take the data regarding multitasking: on the one hand, they were lower than the reference ones (and here we are not talking about predisposition, but about practice, which places us in a different scenario from the previous ones); on the other hand, they were the most dispersed. We had a student body that was not very prone to simultaneous tasks (at least during the performance of academic tasks); or, if we prefer, accustomed to concentrating more than what was expected of them. Perhaps this is a positive if multitasking were proposed at the service of learning and guided by teachers; perhaps it is an element of contradiction and stress. We will have to go deeper into this.

Finally, we take up Gremigni's (2019) idea in his diagnosis of the heterogeneity of Italian adolescents in their relationship with technology, which we can subscribe to in relation to our Italian high school students (and considering at this point the idea of a priori unexpected but existing digital divides among them). The differences between those who have better digital competences in general in relation to their transmedia skills and their attitudes towards technology were evident, and there was a relationship between higher skills and a greater preference for transmediality, something that we must take into account together with the high heterogeneity (standard deviations always high), when planning transmedia learning itineraries, in direct relation with van van Dijk's (2017) reflection on digital divides and gaps. While not in vain, if one of the benefits of transmedia learning is flexibility, which can be translated into personalization, then perhaps it is good to take this into account, to offer adaptable paths and to achieve, at the same time, the improvement of digital competences as part of the didactic objectives, which leads us again to the interesting possibilities of applying transmedia learning experiences according to the principles of UD-L (Alba Pastor 2016; Castro and Rodríguez 2017).

Finally, as limitations of the study, beyond those implied by the sample itself (since it was an accessible one, and from only two Sardinian *licei*), it seems important to consider future research, in which it would be possible to deepen, from one perspective, what opportunities young people can see in transmedia learning, and how they link their formal and informal learning processes with their personal and academic dimensions in the digital context. As Bullen et al. (2011) point out, personal digital skills do not always translate into better learning skills; we might also take the opportunity to link the best personal learning skills with those that we ask to be mobilized in school.

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