LA TRANSLITERACY DEGLI STUDENTI DEL LICEO CLASSICO ITALIANO

Cinzia Runchina

Universitat de Girona

TESI DOTTORALE

La *transliteracy* degli studenti del Liceo Classico italiano

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Riassunto

L'integrazione delle nuove competenze mediali e, di conseguenza, delle strategie come l'apprendimento transmediale nei processi di insegnamento-apprendimento, è stato un argomento di interesse tra le varie tipologie di istituzioni e di governi nazionali e internazionali. L'apprendimento transmediale, con radici socio-costruttiviste e un alto grado di competenza digitale flessibile e aperto, risponde a questa nuova realtà mediatica e cerca di capitalizzare, da un punto di vista didattico, le opportunità di apprendimento generate dal nuovo contesto della cultura partecipativa e della convergenza dei media. In tal senso, questo lavoro si propone di analizzare le competenze, le riflessioni e le aspettative di cui dispongono gli studenti italiani di maturità classica per affrontare i nuovi cambiamenti formativi che stanno arrivando sotto forma di apprendimento transmediale. A tal fine è stato progettato e applicato un approccio metodologico misto (qualitativo e quantitativo) nel contesto di un Liceo classico di Cagliari (Italia): una revisione della letteratura per costruire un quadro teorico, una fase quantitativa con un questionario sulle competenze digitali (N= 128) e una fase qualitativa con una serie di interviste semi-strutturate (N=17) e due focus group (N=14). In relazione al quadro teorico viene presentata una breve concettualizzazione dell'apprendimento transmediale che sottolinea gli elementi caratteristici della circolazione di nuove conoscenze che oggi è a disposizione degli studenti, grazie al continuo sviluppo dei media; vengono poi passate in rassegna le opportunità e i vantaggi offerti dall'apprendimento transmediale in termini di arricchimento, scambio produttivo di conoscenze e collaborazione tra gli studenti anche al di fuori della scuola grazie, soprattutto, alla personalizzazione dell'apprendimento. Infine, vengono descritte le possibili sfide dell'apprendimento transmediale, volte a superare le resistenze ancora presenti nelle scuole per governare con successo i cambiamenti educativi in corso. Per quanto riguarda la fase quantitativa, l'applicazione degli strumenti scelti, tutti convalidati in precedenti ricerche, mostra che la maggior parte dei giovani ha accesso ai dispositivi e che preferisce i telefoni cellulari quando si tratta di consumare o creare contenuti online; inoltre, sebbene siano inclini alle pratiche transmediali, hanno qualche difficoltà a diventare agenti creativi che collaborano e partecipano pienamente alla cittadinanza digitale. In particolare, per quanto riguarda il divario di genere, le adolescenti italiane mostrano competenze digitali e atteggiamenti verso i transmedia positivi, superiori ai valori di riferimento per ogni indicatore; inoltre, in termini di genere, le differenze tradizionali sono generalmente neutralizzate (e addirittura le donne mostrano valori superiori agli uomini). Dal punto di vista dell'apprendimento transmediale (personalizzabile, flessibile e tecnicamente poco impegnativo), i valori in cui le donne sono più abili (alfabetizzazione informativa e navigazione transmediale) rappresentano opportunità di apprendimento favorevoli per loro stesse. Pertanto, il contesto dei Licei classici non solo può ospitare esperienze di apprendimento transmediale, ma l'apprendimento transmediale può anche essere una proposta contro il tradizionale divario digitale di genere. Infine, combinando i risultati quantitativi e qualitativi, possiamo dire che i risultati ottenuti mostrano che, dal punto di vista delle competenze, gli adolescenti sono pronti ad affrontare le sfide dell'apprendimento transmediale (navigazione, gestione delle informazioni), anche se le loro capacità di collaborazione devono essere rafforzate. D'altra parte, da un punto di vista cognitivo e affettivo, i ragazzi sono positivi ed entusiasti di queste nuove possibilità per maggiori interazione, flessibilità, impegno e varietà di risorse e strategie di apprendimento.

Abstract

The integration of new media literacies and, consequently, of 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. Transmedia learning, with socio-constructivist roots and a high degree of digital competence, flexible and open, responds to this new media reality and attempts to capitalise, from a didactic perspective, on the learning opportunities generated by the new context of participatory culture and media convergence. In this sense, this article proposes to analyse the skills, reflections and expectations that Italian students of classical baccalaureate have in order to face these new formative changes that are coming in the form of transmedia learning. To this end, a mixed methodological approach (qualitative and quantitative) has been designed and applied in the context of a classical high school in Cagliari (Italy): a literature review to build a theoretical framework, a quantitative phase with a questionnaire on digital competences (N= 128), and a qualitative phase with a set of semi-structured interviews (N=17) and two focus groups (N=14). In relation to the theoretical framework, a brief conceptualisation of transmedia learning is presented, outlining the characteristic elements of this circulation of new knowledge that is available to learners today, thanks to the continuous development of media; then, the opportunities and advantages offered by transmedia learning in terms of enrichment, productive knowledge exchange and collaboration between learners also outside school thanks, above all, to the personalisation of learning are reviewed. Finally, the possible challenges of transmedia learning are described, aimed at overcoming the resistances still present in schools in order to successfully govern the educational changes that are taking place. In relation to the quantitative phase, the application of the chosen instruments, all validated in previous research, shows that most young people have access to devices and that they prefer mobile phones when it comes to consuming or creating online content. Moreover, although they are inclined towards transmedia practices, they have some difficulties in becoming creative agents who collaborate and participate fully in digital citizenship. Specifically as far as the gender gap is concerned, Italian teenage girls show positive digital competences and attitudes towards transmedia, higher than the reference values for each indicator; moreover, in terms of gender, traditional differences are generally neutralised (and even women show higher values than men). From the perspective of transmedia learning (customisable, flexible and technically undemanding), the values in which women are more adept (information literacy and transmedia navigation) represent favourable learning opportunities for women. Therefore, the context of licei classici can not only host transmedia learning experiences, but transmedia learning can also be a proposal against the traditional gender digital divide. Finally, combining both quantitative and qualitative results, we can say that the results obtained show that, from the point of view of competences, teenagers are ready to take on the challenges of transmedia learning (navigation, information management), although their collaboration skills need to be strengthened. On the other hand, from a cognitive and affective point of view, they are positive and enthusiastic about these new possibilities: more interaction, flexibility, commitment and variety of resources and learning strategies.

Resum

La integració de les noves alfabetitzacions mediàtiques i, en conseqüència, d'estratègies com l'aprenentatge transmèdia en els processos d'ensenyament-aprenentatge ha estat un tema d'interès entre diversos tipus d"institucions i governs nacionals i internacionals. L'aprenentatge transmediàtic, d'arrel socioconstructivista i amb un alt competent digital, flexible i obert, respon a aquesta nova realitat mediàtica i intenta capitalitzar, des d'una perspectiva didàctica, les oportunitats d'aprenentatge que genera el nou context de cultura participativa i convergència mediàtica. En aquest sentit, aquest article proposa analitzar les habilitats, les reflexions i les expectatives que tenen els estudiants italians de batxillerat clàssic per afrontar aquests nous canvis formatius que s'acosten sota la forma de l'aprenentatge transmediàtic. Per això, s'ha dissenyat i aplicat un enfocament metodològic mixt (qualitatiu i quantitatiu) en el context d'un institut clàssic de Cagliari (Itàlia): una revisió de la literatura per construir un marc teòric, una fase quantitativa amb un qüestionari sobre competències digitals (N=400), i una fase qualitativa amb un conjunt d'entrevistes semiestructurades (N=17) i dos grups focals (N=14). Pel que fa al marc teòric, es presenta una breu conceptualització de l'aprenentatge transmèdia, esbossant els elements característics d'aquesta circulació de nous coneixements que està a disposició dels alumnes avui dia, gràcies al desenvolupament continu dels mitjans de comunicació; a continuació, es repassen les oportunitats i els avantatges que ofereix l'aprenentatge transmèdia en termes d'enriquiment, intercanvi productiu de coneixements i col·laboració entre alumnes també fora de l'escola gràcies, sobretot, a la personalització de l'aprenentatge. Finalment, es descriuen els possibles reptes del dit aprenentatge, encaminats a superar les resistències encara presents a les escoles, a fi de governar amb èxit els canvis educatius que s'estan produint. Pel que fa a la fase quantitativa, l'aplicació dels instruments elegits, tots validats en investigacions prèvies, mostra que la majoria dels joves tenen accés a dispositius i que prefereixen els mòbils a l'hora de consumir o crear continguts a la xarxa. A més, encara que s'inclinen per les pràctiques transmèdia, tenen algunes dificultats per convertir-se en agents creatius que col·laborin i participin plenament a la ciutadania digital. Específicament pel que fa a la bretxa de gènere, les adolescents italianes presenten competències digitals i actituds cap als transmèdia positives, superiors als valors de referència per a cada indicador; a més, en termes de gènere, les diferències tradicionals es neutralitzen en general (i fins i tot les dones presenten valors superiors als dels homes). Des de la perspectiva de l'aprenentatge transmèdia (personalitzable, flexible i tècnicament poc exigent), els valors en què les dones són més capaces (competències informatives i navegació transmèdia) suposen oportunitats favorables d'aprenentatge. Per tant, el context dels licei classici no només pot acollir experiències d'aprenentatge transmèdia, sinó que l'aprenentatge transmèdia també pot ser una proposta contra la tradicional escletxa digital de gènere. Finalment, aglutinant tant els resultats quantitatius com els qualitatius, podem dir que els resultats obtinguts permeten comprovar que, des del punt de vista de les competències, els adolescents estan preparats per assumir els reptes de l'aprenentatge transmèdia (navegació, gestió de la informació), encara que cal reforçar les seves habilitats de col·laboració. D'altra banda, des del punt de vista cognitiu i afectiu, es mostren positius i entusiasmats amb aquestes noves possibilitats: més interacció, flexibilitat, compromís i varietat de recursos i estratègies d'aprenentatge.

Resumen

La integración de las nuevas alfabetizaciones mediáticas y, en consecuencia, de estrategias como el aprendizaje transmedia en los procesos de enseñanza-aprendizaje ha sido un tema de interés entre diversos tipos de instituciones y gobiernos nacionales e internacionales. El aprendizaje transmediático, de raíz socioconstructivista y con un alto competente digital, flexible y abierto, responde a esa nueva realidad mediática e intenta capitalizar, desde una perspectiva didáctica, las oportunidades de aprendizaje que genera el nuevo contexto de cultura participativa y convergencia mediática. En este sentido, el presente artículo propone analizar las habilidades, reflexiones y expectativas que tienen los estudiantes italianos de bachillerato clásico para afrontar estos nuevos cambios formativos que se avecinan bajo la forma del aprendizaje transmediático. Para ello, se ha diseñado y aplicado un enfoque metodológico mixto (cualitativo y cuantitativo) en el contexto de un instituto clásico de Cagliari (Italia): una revisión de la literatura para construir un marco teórico, una fase cuantitativa con un cuestionario sobre competencias digitales (N=128), y una fase cualitativa con un conjunto de entrevistas semiestructuradas (N=17) y dos grupos focales (N=14). En relación con el marco teórico, se presenta una breve conceptualización del aprendizaje transmedia, esbozando los elementos característicos de esta circulación de nuevos conocimientos que está a disposición de los alumnos hoy en día, gracias al continuo desarrollo de los medios de comunicación; a continuación, se repasan las oportunidades y ventajas que ofrece el aprendizaje transmedia en términos de enriquecimiento, intercambio productivo de conocimientos y colaboración entre alumnos también fuera de la escuela gracias, sobre todo, a la personalización del aprendizaje. Por último, se describen los posibles retos de dicho aprendizaje, encaminados a superar las resistencias aún presentes en las escuelas, con el fin de gobernar con éxito los cambios educativos que se están produciendo. En relación con la fase cuantitativa, la aplicación de los instrumentos elegidos, todos validados en investigaciones previas, muestra que la mayoría de los jóvenes tienen acceso a dispositivos y que prefieren los móviles a la hora de consumir o crear contenidos en la red. Además, aunque se inclinan por las prácticas transmedia, tienen algunas dificultades para convertirse en agentes creativos que colaboren y participen plenamente en la ciudadanía digital. Específicamente por lo que respecta a la brecha de género, las adolescentes italianas presentan competencias digitales y actitudes hacia los transmedia positivas, superiores a los valores de referencia para cada indicador; además, en términos de género, las diferencias tradicionales se neutralizan en general (e incluso las mujeres presentan valores superiores a los de los hombres). Desde la perspectiva del aprendizaje transmedia (personalizable, flexible y técnicamente poco exigente), los valores en los que las mujeres son más adeptas (competencias informativas y navegación transmedia) suponen oportunidades de aprendizaje favorables para ellas. Por tanto, el contexto de los licei classici no sólo puede albergar experiencias de aprendizaje transmedia, sino que en él el aprendizaje transmedia también puede ser una propuesta contra la tradicional brecha digital de género. Finalmente, aglutinando tanto los resultados cuantitativos como los cualitativos, podemos decir que los resultados obtenidos permiten comprobar que, desde el punto de vista de las competencias, los adolescentes están preparados para asumir los retos del aprendizaje transmedia (navegación, gestión de la información), aunque es necesario reforzar sus habilidades de colaboración. Por otro lado, desde el punto de vista cognitivo y afectivo, se muestran positivos y entusiasmados con estas nuevas posibilidades:

mayor interacción, flexibilidad, compromiso y variedad de recursos y estrategias de aprendizaje.

Ringraziamenti

1. Introduzione

Il lavoro che viene presentato in questa tesi vuole proporre la transliteracy nella scuola italiana come valido contributo di sostegno educativo per il rinnovamento e il cambiamento del sistema scolastico nostrano, spesso vincolato a tradizioni passatiste e classiciste.

La realtà attuale invece conduce la scuola del terzo millennio ad affondare il suo sguardo su un mondo in incessante cambiamento, che porta con sé nuove competenze e nuove professioni che si adattano ai cambiamenti dell'ambiente, non solo a livello personale e individuale, ma anche a livello collettivo e sociale (Jenkins et al., 2009).

La "Transmedia literacy" o "Transliteracy" o "Alfabetizzazione transmediale" (Fraiberg, 2017; Alper & Herr-Stephenson, 2013), travalicando il concetto di Media Literacy, è uno tra i più evidenti cambiamenti degli assetti educativi e si presenta tra gli strumenti più utili per governare il cambiamento in atto dell'insegnamento e dell'apprendimento, perché fonde insieme due saperi che oggi sono inscindibili e paritetici, quello informale, esterno alla scuola, con quello formale, interno alle mura scolastiche.

La presenza ormai ineludibile dell'alfabetizzazione transmediale chiarisce dunque la necessità che esiste, e deve essere riconosciuto, un nuovo modo di imparare da parte degli studenti, e mostra inoltre che l'apprendimento non è più un atto individuale, ma è sempre più un processo collettivo nel quale i ragazzi, connessi in modo continuo con il flusso di informazioni e con altri loro pari, consolidano e accrescono le proprie competenze e conoscenze, operano in gruppo e si confrontano quotidianamente con il contesto reale che il digitale allarga potenzialmente alla dimensione globale.

L'apprendimento transmediale ha l'ambizione di progettare una modalità nuova dell'apprendimento, una sorta di pedagogia transmediale che muove dal docente allo studente, dalla classe all'esterno della classe (Fleming, 2013), modificando nel profondo i canali e gli assetti tradizionali.

1.1.   Obiettivo della ricerca

L'obiettivo generale della seguente ricerca di dottorato è quello di (OG) analizzare l'alfabetizzazione transmediale (traslitterazione) degli studenti del Liceo Classico Italiano come opportunità per l'introduzione di esperienze di apprendimento transmediale.

Come obiettivi specifici si considerano i seguenti:

- OS1. Concettualizzare l'apprendimento transmediale da una prospettiva teorica (fondamenti, radici ed elementi chiave) e pratica (alfabetizzazione transmediale).
- OS2. Analizzare l'alfabetizzazione mediatica e gli atteggiamenti verso la tecnologia degli studenti del Liceo Classico italiano.
- OS3. Esplorare la predisposizione degli studenti del Liceo Classico italiano all'introduzione di esperienze di apprendimento transmediale.

1.2. Gli articoli del compendio

Gli articoli che formano parte del compendio sono i seguenti:

1. Runchina, C. & González-Martínez, J. (2022). L'apprendimento transmediale: oltre le mura della scuola? *Media Education, 13*(2): 21-31. https://doi.org/10.36253/me-13047
2. Runchina, C., Fauth, F., Sánchez-Caballé, A., & González-Martínez, J. (2022). 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. *Social Sciences, 11*(2), 32. https://doi.org/10.3390/socsci11020032
3. Runchina, C., Sánchez-Caballé, A., & González-Martínez, J. (2022). New media literacies for transmedia learning. How students are regarding their transliteracy in Italian licei classici How students are regarding their transliteracy in Italian licei classici. *Cogent Education, 9*(1), 0–16. https://doi.org/10.1080/2331186X.2022.2038344
4. Runchina, C. Sánchez-Caballé, A. & González-Martínez, J., Transmedia, learning and gender in the context of Italian licei classici. *Gender, Technology & Development* (under peer review).
5. Runchina, C. & González-Martínez, J., Transmedia challenge: conversation with adolescents about the opportunities of learning by transmediating. *Frontiers in Education* (under peer review).
6. Runchina, C., Fauth, F., & González-Martínez, J. (2022). Adolescents Facing Transmedia Learning: Reflections on What They Can Do, What They Think and What They Feel. *Behavioral Sciences, 12*(4). https://doi.org/10.3390/bs12040112

I testi completi sono inseriti in Appendice, e tutti sono stati inviati a riviste in open access che vengono rappresentate nella tabella qui di seguito inserita. Quattro articoli hanno già trovato la pubblicazione, uno è stato accettato, ed il sesto è in attesa di revisione. I dati bibliometrici delle riviste dove sono stati pubblicati gli articoli del compendio sono contenuti a continuazione (aggiornati a marzo 2023):

	Rivista, editor, e ISSN	*Indexing SCOPUS*	*Indexing SJR*	*Indexing WoS*	*Status*
1	*Media Education* Firenze University Press 2038-3010				Pubblicato
2	*Social Sciences* MDPI 2076-0760	CS 3,1 Q1 Soc. Sciences	H-I 27 Q2 Soc. Sciences	ESCI JCI 1,07 Q2 SocSci	Pubblicato
3	*Cogent Education* Taylor & Francis 2331-186X	CS 2,0 Q2 Education	H-I 22 Q2 Education	ESCI JCI 0,55 Q3 Ed&EdRes	Pubblicato
4	*Gender, Tech. & Development* Routledge/Taylor & Francis 0871-8524	CS 2,7 Q1 Gender	H-I 24 Q2 Gender	ESCI JCI 1,01 Q2 SocSci	Accettato provv.
5	*Frontiers in Education* Frontiers Media 2504-284X	CS 2,0 Q2 Education	H-I 19 Q2 Soc. Sciences	ESCI JCI 0,89 Q2 Ed&EdRes	Under peer review[1]
6	*Behavioral Sciences* MDPI 2076-328X 2076-528X	CS 3,8 Q1 Development	H-I 29 Q2 Soc. Sciences	SSCI JIF 2,286 Q3 Psych	Pubblicato

Tabella 1. Articoli del compendio e dati bibliometrici.

[1] Evidenziamo in rosso i dati bibliometrici di questa pubblicazione, poiché l'articolo è ancora in fase di revisione.

I requisiti del programma di dottorato stabiliscono che, per la difesa di una tesi di dottorato per compendio, deve essere accreditata l'accettazione di almeno due articoli su riviste indicizzate di riconosciuto prestigio nell'ambito delle conoscenze, uno dei quali deve essere pubblicato su una rivista inclusa nel Journal Citation Reports.

Nel nostro caso, sono stati forniti cinque articoli che soddisfano il requisito di essere pubblicati su riviste indicizzate incluse in tutti i repository rilevanti nel settore scientifico internazionale, con una buona indicizzazione, e uno di essi è anche pubblicato su una rivista inclusa nel SSCI del JCR, *Behavioral Sciences*.

Questo articolo non è rilevante solo perché soddisfa questo requisito, ma anche perché diffonde, al livello più alto del compendio, le conclusioni globali della tesi difesa.

Un articolo è stato infine pubblicato sulla rivista Media Education, classificata in Fascia A da ANVUR, Agenzia nazionale di valutazione del sistema universitario e della ricerca, ente pubblico della Repubblica italiana vigilato dal MIUR.

Per quanto riguarda la contribuzione allo sviluppo della tesi di ogni articolo, viene indicata di seguito la corrispondenza fra articolo e i diversi obiettivi specifici:

	Rivista	*Obiettivo*	*Breve riassunto*
1	*Media Education*	OS1	Fornisce la concettualizzazione iniziale della ricerca sotto forma di revisione sistematica della letteratura.
2	*Social Sciences*		Analizzano, da diverse prospettive, l'alfabetizzazione mediatica degli informatori, lo sviluppo delle competenze più strettamente legate all'apprendimento transmediale e i loro atteggiamenti verso le TIC da una prospettiva quantitativa.
3	*Cogent Education*	OS2	
4	*Gender, Tech. & Development*		Sulla base dell'analisi quantitativa degli articoli 2 e 3, approfondisce l'analisi di genere, in un contesto di divario digitale di genere (*gender digital divide*).
5	*Frontiers in Education*	OS3	Sulla base delle interviste, vengono analizzati i punti di vista degli informatori sull'apprendimento transmediale.
6	*Behavioral Sciences*	OG	Offre una visione agglutinante e globale di tutti i dati raccolti nella tesi (quantitativi e qualitativi) per rispondere all'obiettivo generale della ricerca.

Tabella 2. Articoli del compendio e loro contribuzione allo sviluppo degli obiettivi della ricerca.

2. Background concettuale

Sebbene la struttura della tesi per compendio non preveda necessariamente l'inclusione di un quadro teorico in quanto tale, dopo la presentazione degli articoli della serie, è acclusa una breve riflessione introduttiva che si ritiene possa essere di ausilio a comprendere meglio l'insieme, nella volontà di offrire alcune idee chiave sull'apprendimento transmediale e sulle esigenze della scuola italiana di oggi.

2.1. Il Transmedia: concetti e opportunità

Di Transmedia si parla già a partire dagli anni '90, quando Marsha Kinder (1991) usa per la prima volta questo termine; intercorrono da allora tre decenni di studi e di riflessioni per arrivare a Jenkins (2006) che introduce il concetto di cultura convergente, partecipativa e collaborativa determinata dal flusso e dall'influsso dei media, nell'ambito delle modalità nuove di circolazione di saperi e di interessi che conduce al passaggio dal soggetto che apprende e che usa tecniche mediatiche a soggetto che apprende e produce tecniche mediatiche; si incide in questo modo nelle trasformazioni tecnologiche a tal punto da cambiare i modi di essere, di fare e di pensare (Amador, 2013).

Cambiano pertanto le modalità e i luoghi di apprendimento degli studenti che abitano in un mondo di connessioni e di comunicazioni dove i media tradizionali coincidono con i media digitali, sperimentati in modo diverso, determinando così quella che Bernal (2017) definisce interazione creativa tra docenti e studenti che in classe sperimentano un'esperienza transmediale, creano con l'immaginazione altri mondi narrativi, in cui la transmedialità annulla i confini per spaziare tra realtà e finzione, tra analogico e digitale.

Tali esperienze di apprendimento inoltre passano sulle piattaforme in varie forme che si completano tra di loro, come osserva Davis (2017), con programmi di apprendimento relativi ai modi con cui le storie possono essere sperimentate e le esperienze incoraggiate.

L'approccio transmediale sostiene gli studenti, come osserva Dickinson-Delaporte (2020), nelle loro narrative diffuse sulla piattaforma, reali o immaginarie, rappresentate con parole, immagini e audiovisivi, per creare trame da cucire alle storie principali.

L'informazione viene così creata e non subita, attraverso nuovi modelli di insegnamento che stimolano, pur con distinti profili di competenze tecniche, l'interesse degli studenti con modalità e prospettive diverse, che Wiklund-Engblom et al. (2013) individuano nello sviluppo di abilità quali imparare con l'ascolto, con la collaborazione e con la condivisione.

Molteplici sono i vantaggi dell'apprendimento transmediale in termini di adattamento alla nuova tipologia di studente che vive in un mondo che cambia e che gli educatori devono tenere in considerazione.

Infatti i dati mostrano che l'apprendimento transmediale costruisce inediti mondi narrativi intorno al processo di insegnamento-apprendimento, come risulta dai dati raccolti da Bernal (2017) che confermano che gli studenti avvalorano l'apporto dell'apprendimento transmediale alla loro educazione perché permette un più sicuro possesso delle conoscenze e perché l'uso delle tecnologie rafforza l'apprendimento personalizzato.

Secondo Dickinson-Delaporte (2020), la nuova alfabetizzazione transmediale fa sì che i ragazzi condividano tra loro interessi, che apprendano di continuo e che i più esperti facciano da maestri per i meno abili nelle pratiche di ricerca e di studio.

Buone opportunità si presentano inoltre per gli insegnanti delle scuole di ogni ordine e grado, perché possono ricavare informazioni didattiche importanti sugli interessi dei loro studenti, anche per accertare il livello di autonomia dei ragazzi nell'assimilazione dei diversi contenuti

tematici soprattutto tra studenti con alto rischio di insuccesso e di abbandono, che vengono sensibilizzati all'uso di metodologie di lavoro grazie all'aiuto della tecnologia, come si evince da uno studio condotto da Pereira e Pedro (2020), in una Scuola CEF (Cursos de Educação e Formação).

2.2. I bisogni della scuola

La scuola italiana, oggi più che mai, di fronte alle veloci dinamiche che si susseguono, avverte il bisogno educativo di adeguarsi alla modernità, di formare i ragazzi in vista delle professioni tradizionali rivisitate tuttavia in chiave moderna, oltre che delle nuove professionalità digitali, perché la digitalizzazione sta portando alla ribalta nuove professioni; di fronte a questi scenari la scuola, che vuole essere moderna, deve abbandonare l'idea che competenza digitale sia sinonimo solamente di abilità tecnico-informatiche avulse dalla finalità educativa, accettando e convincendosi invece del fatto che esse permettano ai suoi studenti, futuri professionisti del domani, di cercare informazioni e usarle in modo critico, di comunicare e creare contenuti online utili, di collaborare con altri in ambienti virtuali.

A questo proposito l'Unione Europea, più di un decennio fa, aveva preso atto che l'educazione ai media è in continua crescita e che la media literacy è un dato educativo di fatto, intesa come capacità di accedere ai media, di comprenderne gli aspetti più importanti, di creare comunicazione in una varietà di contesti, riguardando tutti i media, dalla televisione al cinema, alla radio e alla carta stampata, fino a internet e alle altre forme di comunicazione (Comunicazione della Commissione Europea, 2007, pp.3-4).

Da allora sono passati tanti anni e oggi chi frequenta la scuola è ancora più avanti rispetto al quadro tracciato dalla Unione Europea: la scuola oggi ha a che fare con studenti che lavorano in team, che sviluppano conoscenza e apprendono in contesti informali come le biblioteche virtuali, le comunità on-line, i blog e i podcast, che hanno creato il passaggio dalla media literacy alla transliteracy, sviluppando competenze per conto loro, interagendo con la cultura popolare, navigando, creando e valutando diversi media contemporaneamente, leggendo, scrivendo e interagendo attraverso diversi generi, diversi contesti e linguaggi (Fraiberg, 2017).

In accordo con Scolari (2018), mentre in passato la scuola si chiedeva cosa fosse necessario ai giovani per conoscere e utilizzare i media, oggi deve chiedersi cosa i giovani fanno con i media digitali e quali abilità possiedono, se è possibile realizzare un nuovo modo di intendere la didattica che favorisca nuovi modelli educativi in grado di sostenere la cultura partecipativa; ancora, se l'alfabetizzazione transmediale possa diventare una nuova disciplina per offrire agli studenti opportunità di allenamento nelle strade virtuali che percorreranno, connettendo così la scuola alla realtà quotidiana e alle trasformazioni lavorative e sociali (Lancini, 2015).

Una considerazione a parte andrebbe fatta a proposito dei bisogni del docente, che voglia essere moderno e disposto al cambiamento in una scuola moderna; un reale cambiamento infatti può avvenire solo se gli insegnanti ripensano alle pratiche di insegnamento, se prestano attenzione alle abilità sociali e culturali che emergono dai new media, se si convince dell'idea che alle competenze di base si devono affiancare le new media literacies (Jenkins et al., 2009).

In questo modo l'alfabetizzazione transmediale integrata nella didattica come disciplina a sé, potrebbe essere uno strumento valido nelle mani degli insegnanti per attirare e mantenere l'attenzione dei ragazzi, per creare uno spazio educativo dove mondo fisico e mondo virtuale si incontrano (Pence, 2011).

In sostanza, a essere cambiato è il rapporto delle nuove generazioni di studenti con le modalità di studio e con l'apprendimento, perché gli adolescenti navigati dichiarano di essere sempre connessi e sempre in contatto con il virtuale (Lancini & Turuani, 2009), sono precocemente

socializzati e la tecnologia non è solo un ambito di svago, ma un contesto di formazione: la scuola italiana deve assumere che moltissime conoscenze transitano in Internet, nei motori di ricerca, nei dizionari e nelle enciclopedie on line, nelle nuove risorse che la cultura partecipativa e la conoscenza distribuita predispongono per gli utenti.

La sfida lanciata alle istituzioni scolastiche consiste nell'aiutare i ragazzi a sviluppare le abilità che la struttura computazionale del web non possiede, anche per incentivare e potenziare il pensiero critico e creativo.

Altra sfida è dar vita a un processo di rinnovamento radicale della scuola italiana e dei suoi operatori, capace di cambiare il modello di didattica a cui da generazioni si è abituati, per aprirsi al nuovo processo sociale e collettivo in cui si opera in gruppo e ci si confronta con gli altri e con il contesto reale.

Allo stato attuale appare inderogabile e non trascurabile ripensare ai processi di insegnamento-apprendimento, creare nuovi spazi per l'apprendimento in vista dello sfruttamento delle opportunità della tecnologia (Baldacci, 2002; Brophy, 2010), riorganizzando il tempo di fare scuola, cosa che è al centro del dibattito italiano e internazionale sulla scuola (Castoldi, 2017; Indellicato, 2019; Nitsche et al, 2011).

La buona politica attiva della scuola ha bisogno di essere integrata nel territorio, al quale deve naturalmente aprirsi per poter coniugare gli aspetti della partecipazione a quelli della integrazione dell'apprendimento formale e informale: dunque una inversione di tendenza anche nelle politiche di formazione degli insegnanti, senza le quali i docenti non saranno in grado di soddisfare gli indicatori dei processi di educazione digitale che, a partire dal 2015, ha visto impegnato il MIUR (Ministero Istruzione Università Ricerca) con il Piano Nazionale della Scuola Digitale PNSD); il potenziamento, infatti, delle politiche strategiche del MIUR prevede un cambiamento significativo di mentalità da parte degli insegnanti in relazione all'uso delle nuove tecnologie in ambito educativo.

Il PNSD è parte fondamentale del progetto di rinnovamento definito con la Legge 107/2015, nota come La Buona Scuola, volto a lanciare una strategia complessiva di innovazione della scuola italiana.

Con il PNSD si vuole trasformare la scuola in una sorta di piattaforma nelle mani degli studenti che sono così facilitati nello studio delle competenze per la vita.

Il PNSD, che si sviluppa in precisi passaggi e azioni, queste ultime organizzate in ambiti di lavoro che spaziano dall'identità digitale alla formazione del personale, non riguarda solo l'elemento tecnologico, perché propone una visione di innovazione che coinvolge in prima persona gli studenti e il personale delle istituzioni scolastiche.

Per tradurre in azioni concrete il progetto, si punta sulla condivisione delle idee, sull'aggiornamento professionale e sulla collaborazione con la società civile e con le imprese, avendo anche uno spazio web per permettere da un lato a scuole e docenti di essere sempre informati, dall'altro ad aziende, enti e associazioni di avanzare richiesta di sottoscrizione di protocolli con il MIUR, proprio per perseguire specifiche finalità nell'ambito innovativo degli ambienti didattici e per supportare le modalità di insegnamento-apprendimento dei processi organizzativi nelle scuole e del potenziamento delle infrastrutture.

Nonostante i propositi contenuti nel PNSD, molto ancora resta da fare nella scuola, sia dal punto di vista organizzativo, sia da quello della formazione e dell'accompagnamento degli insegnanti.

3. Metodologia della ricerca

3.1. Il contesto

Il lavoro oggetto di questa ricerca è stato realizzato insieme agli studenti di due Licei Classici di Cagliari, "G. M. Dettori" e "G. Siotto Pintor".

Il Liceo Classico è costituito da un percorso quinquennale, organizzato in un biennio ginnasiale di carattere formativo-linguistico, e in un triennio liceale, il cui sbocco è sostanzialmente dato dalla continuità degli studi universitari.

Tra le competenze comuni del Liceo Classico si distinguono, oltre all'approfondimento delle lingue e delle civiltà greche e latine, il saper padroneggiare la lingua italiana in contesti comunicativi diversi; il saper riconoscere gli aspetti fondamentali della cultura e della tradizione letteraria artistica, filosofica e religiosa italiana ed europea; il saper utilizzare criticamente gli strumenti informatici e telematici per svolgere attività di studio e di approfondimento, per fare ricerca e comunicare; il saper comunicare in lingua straniera almeno a livello B2 (QCER).

Tra le competenze specifiche del Liceo Classico emergono, tra le altre, il saper applicare nei diversi contesti di studio la conoscenza delle linee di sviluppo della tradizione e della civiltà occidentale e del suo patrimonio culturale, in particolare per agire criticamente nel presente; il saper utilizzare la conoscenza delle lingue classiche e delle loro strutture linguistiche per padroneggiare le risorse linguistiche e le possibilità comunicative dell'italiano; il saper applicare le conoscenze e le abilità apprese in ambito linguistico, filosofico e scientifico.

Il monte ore settimanale è caratterizzato dalla prevalenza delle discipline classiche e linguistiche Italiano, Latino e Greco, tanto al biennio, quanto al triennio; al biennio si affronta lo studio della Geostoria, un mix di Storia antica e Geografia, della Matematica, delle Scienze naturali, della Storia dell'arte nel corso cosiddetto sperimentale di Arte; al triennio si aggiungono nuove discipline quali la Storia moderna e contemporanea, la Filosofia, la Fisica.

Il Liceo Classico inoltre avvia azioni volte all'inclusione scolastica e alla didattica digitale integrata intesa come metodologia nuova di insegnamento per assicurare a tutti gli studenti il diritto all'istruzione in emergenza da Sars-Covid19.

3.2. I materiali

La ricerca è articolata in tre fasi distinte ma complementari tra loro, caratterizzate da un approccio misto, quantitativo-qualitativo.

Prima fase: questionario somministrato on line agli studenti del Liceo Classico "G. M. Dettori" e del Liceo Classico "G. Siotto Pintor", preceduto da due incontri di presentazione del progetto.

Seconda fase: interviste semistrutturate in presenza rivolte agli studenti del Liceo Classico "G. M. Dettori".

Terza fase: incontri di Focus Group realizzati in presenza con gli studenti del Liceo Classico "G. M. Dettori".

Il questionario on-line, che ha ottenuto 402 risposte, è stato realizzato per indagare l'approccio dei ragazzi nei confronti dei media, il tempo che vi dedicano, le attitudini, gli usi e le abilità tecniche digitali possedute, le competenze digitali, i comportamenti; se sono quindi consumatori critici dei media.

Le interviste sono state realizzate con 17 studenti per conoscerne le caratteristiche transmediali e le pratiche di apprendimento transmediale.

Gli incontri di Focus Group realizzati con 14 studenti hanno avuto lo scopo di conoscere le criticità espresse dai ragazzi nella possibilità di realizzazione, nella scuola italiana in generale e

nella loro in particolare, di un ambiente di apprendimento transmediale, le loro aspettative e i loro suggerimenti per un apprendimento efficace.

3.3. I metodi

Partendo dal contesto scolastico dei due Licei Classici di Cagliari, ma solo per la somministrazione del questionario e per la conduzione delle interviste, si è scelto di rivolgersi a gruppi di studenti di ogni età e di ogni corso; i ragazzi hanno partecipato con grande entusiasmo e in maniera totalmente volontaria alle tre fasi della ricerca, garantiti loro l'anonimato e l'assicurazione che la ricerca cui partecipavano aveva una unica finalità scientifica.

Il questionario, utile per conoscere il retroterra culturale degli studenti, l'uso che fanno dei media, le azioni e i discorsi, è stato proposto online su piattaforma Teams, previa autorizzazione della Dirigenza e consenso informato dei ragazzi; la partecipazione degli studenti dei due Licei Classici è stata massiccia, sono stati infatti raccolti 402 questionari, per la costruzione dei quali sono state utilizzate le seguenti scale: la New Media Scale, che sviluppa le categorie di Jenkins et al. (2009), per quanto riguarda gli items dell'intelligenza collettiva, judgment, navigazione transmediale e visualizzazione; la Media and Technology usage and Attitude Scale da Literat (2014); da Rosen et al. (2013) la scala per conoscere le attitudini dei giovani sull'uso in generale della tecnologia; la scala multitasking per le modalità di svolgimento dei compiti a casa, da Martin-Perpiña et al. (2019); infine la Digital Literacy Scale da Rodrìguez de Dios (2018), flessibile e adattabile alle diverse personalità per conoscere il livello degli studenti, specialmente per quelli europei, della digital literacy.

Le interviste semistrutturate, rivolte a gruppi volontari di studenti del Liceo Classico "G. M. Dettori", rappresentano la seconda tappa della ricerca svolta nel corso del II quadrimestre dell'anno scolastico 2020/2021, durante l'orario curricolare, nella Sala di Lettura; ogni singola intervista ha avuto una durata media di 15-20 minuti ed è stata registrata con l'autorizzazione degli studenti, cui è stato garantito l'anonimato.

Sono state raccolte diciassette interviste di ragazzi frequentanti il biennio e il triennio; sono risultate sufficienti diciassette interviste perché, man mano che le interviste procedevano, si osservava un effetto saturazione, dovuto alla sostanziale uniformità delle risposte.

Le interviste sono state finalizzate a conoscere le opinioni degli studenti in merito alla tecnologia, all'apprendimento formale e informale, alle pratiche di apprendimento informale.

Le interviste sono state convenientemente trascritte e interpretate con l'ausilio del programma NVIVO 11, utilizzato per l'analisi dei dati qualitativi: i dati così ottenuti sono stati quindi trascritti, letti, riletti e codificati per ottenere temi di rilevanza comune ed elementi ricorrenti nelle risposte.

La terza fase della ricerca è rappresentata da due incontri di Focus Groups realizzati nel corso del I quadrimestre dell'anno scolastico 2021/2022 con studenti volontari che già avevano partecipato alle altre due fasi della ricerca, frequentanti il biennio ginnasiale, cui è stato garantito l'anonimato, per conoscere non solo il livello di gradimento del progetto, ma anche le reali possibilità di realizzazione del progetto nella loro scuola, per conoscere le aspettative e ottenere suggerimenti dai ragazzi per il loro apprendimento efficace.

I Focus Groups sono stati realizzati in due incontri con studenti appartenenti alla stessa classe, per esplorare in modo chiaro le loro opinioni e approfondire gli atteggiamenti sottostanti al loro pensiero (Trinchero, 2004); gli studenti sono stati scelti vicini per età, con non più di 2-3 anni di differenza tra di loro, per evitare che differenze anagrafiche eccessive e differenze di linguaggio potessero essere motivo di noia (Spethmann, 1992).

E' stata realizzata una scaletta di domande prestabilite a basso gradiente di strutturazione, per rilevare opinioni complesse che non sono riassumibili in grado di accordo/disaccordo e per analizzare gli aspetti positivi e negativi del fenomeno transmediale.

Durante questa fase operativa è stata scelta una bassa strutturazione per conoscere le opinioni dei ragazzi, in modo quasi da loro autogestito, poiché l'intervistatore si è limitato a porre domande e a fornire le regole di interazione per permettere ai ragazzi di narrare liberamente le loro esperienze soggettive e le loro motivazioni personali (Morgan, 1998).

Gli incontri di Focus Group sono stati registrati, trascritti puntualmente e interpretati con l'utilizzo del programma NVIVO 11.

4. Breve spunto metodologico per ogni articolo

Gli articoli pubblicati, tutti in open access, come si è visto all'inizio, i loro dati identificativi completi, così come le proprietà bibliometriche delle riviste in cui sono stati pubblicati o presentati, si trovano all'inizio di questo documento, nella Tabella 1. Tutti hanno come filo conduttore e come linea di ricerca comune quella di investigare sulla presenza e sulla influenza della tecnologia tra i giovani che oggi frequentano il liceo classico italiano, sulle nuove alfabetizzazioni mediatiche e sulle relative competenze digitali e attitudini.

La linea di ricerca sottesa agli articoli si interroga su quanto la scuola è pronta a governare un cambiamento che i giovani chiedono con insistenza, introdotto dall'apprendimento informale e da quello transmediale, che sconvolge tutti gli assetti tradizionali dell'insegnamento, soprattutto quelli della cultura classica, particolarmente legata alla tradizione.

Per questo motivo gli articoli presenti vogliono conoscere il profilo mediatico-transmediale, che in realtà conosciamo poco, degli studenti intervistati, per evidenziare le caratteristiche e le pratiche transmediali e per verificare quali elementi favoriscono oppure ostacolano la realizzazione di strategie di apprendimento transmediale.

Il primo articolo, inviato alla rivista *Media Education*, ha carattere teorico e utilizza il metodo della revisione sistematica della letteratura per rivedere le fonti rilevanti in questo settore e, con l'analisi del gap tra apprendimento formale e informale e della nuova figura di docente richiesta, offre una concettualizzazione attraverso gli elementi caratterizzanti, le opportunità e i vantaggi, le sfide aperte verso il futuro per vincere anche eventuali resistenze nelle scuole. Questo nuovo assetto fa sì che, in termini di ricerca si risponda a domande importanti, per conoscere in che modo l'uso dei media possa modificare o influenzare l'apprendimento, utilizzando come bussola per orientarsi il transliteracy, che potrebbe essere una pratica utile per condurre tale indagine; indispensabile il contributo dei docenti, spesso resistenti, per formazione o per convinzione, a far proprie metodologie innovative che sembrano scardinare pratiche collaudate.

Il secondo articolo, pubblicato su *Social Sciences* esamina le capacità e le conoscenze degli studenti di due licei classici di Cagliari, come risulta dall'analisi delle oltre 400 risposte fornite al questionario on-line concernenti le attitudini, le competenze digitali e multitasking.

Emerge un profilo di studente che consuma i contenuti in rete attraverso l'uso dei dispositivi soprattutto mobili, che è incline alla pratica transmediale, che si dichiara più collaborativo che creativo.

Il terzo articolo, pubblicato su *Cogent Education*, indaga sulle capacità e sulle abitudini degli studenti che frequentano due licei classici di Cagliari, per verificare le loro attitudini e le loro competenze.

Tra i findings, interessante è scoprire che la maggior parte usa i devices, soprattutto i mobile phones, ai quali sono esposti per il 98%, e che mostra alcune difficoltà a essere creativi nella cittadinanza digitale.

Gli obiettivi di ricerca specifici di questi articoli (1, 2 e 3) sono questi:

- partendo dall'articolo 1, articolo introduttivo che concettualizza teoricamente le caratteristiche dell'apprendimento con i media, attraverso 24 documenti analizzati e presentati tra il 2012 e il 2020, si vuole identificare le competenze e il profilo transmediale di alcuni studenti italiani dei licei classici, sulla base di diversi strumenti (alfabetizzazione digitale, multitasking, profilo transmediale, atteggiamenti verso le TIC)
- si procede quindi a determinare quali elementi di questi profili favoriscono o ostacolano l'implementazione di strategie di apprendimento transmediale.

Le strategie di apprendimento transmediale nella scuola italiana, anche in termini di appartenenza al genere, trovano spazio di riflessione nel quarto articolo inviato alla rivista *Gender, Technology and Development*. I 400 partecipanti al questionario somministrato on line a studenti di due licei classici, hanno buone abilità e attitudini all'apprendimento transmediale e adeguate capacità critiche. Risultati interessanti si leggono se si analizza il profilo digitale dal punto di vista del genere: dal campione, in prevalenza femminile, emerge che le differenze di genere sono abbastanza sfumate se si analizzano le competenze nelle ICT, e, nel caso del transmedia, addirittura neutralizzate, sotto l'aspetto della navigazione informativa; questo dato è in contrasto con la maggior parte della letteratura che valuta i ragazzi più esperti nelle abilità digitali.

L'obiettivo di ricerca specifico di questo articolo è il seguente:

- comprendere le competenze transmediali degli studenti italiani dei licei classici da una prospettiva di genere e in un'ottica di apprendimento transmediale.
-

Il tutto per rispondere alle seguenti domande di ricerca:

- Qual è il profilo degli studenti del Liceo Classico Italiano in relazione alle competenze digitali, alla transmedia literacy e agli atteggiamenti verso le TIC?
- Quali sono le differenze di genere che si possono riscontrare in questo profilo?
- L'apprendimento transmediale può essere un modo per invertire il divario digitale di genere?

La conversazione con 17 studenti del Liceo classico "G. M, Dettori" sulle opportunità di apprendimento attraverso il transmedia, è presentata nel quinto articolo inviato alla rivista *Frontiers in Education*: in termini di risultati viene offerto un quadro omogeneo risultante dalla lettura delle risposte degli studenti, la maggior parte dei quali, partendo da un confronto tra apprendimento passato/presente e fuori/dentro la scuola, ne caratterizza la totale diversità.

Oggi infatti i ragazzi che, a differenza del passato e dai loro genitori, hanno diversi e molteplici sistemi di informazione, usano la tecnologia per i loro bisogni scolastici e per i loro quotidiani interessi, consumano contenuti, mettono in comune con gli altri pari le proprie conoscenze, essendo altresì attenti alla credibilità delle informazioni che trovano in rete. Le vite di questi ragazzi sono permeate dall'uso dei media in maniera positiva, influenzando di fatto il loro modo di rapportarsi con gli altri, il loro modo di imparare e di personalizzare i contenuti di apprendimento.

L'obiettivo di ricerca specifico di questo articolo è il seguente:

- indagare come gli studenti che frequentano una scuola superiore italiana si pongano di fronte a questo scenario di transmedia learning, in cui essi, in prima persona, vivono, creano, fanno e apprendono.

Interessante è scoprire che l'uso dei media non esclude tuttavia l'utilizzo di metodi di apprendimento più tradizionali, come i libri di testo e gli appunti presi durante le lezioni.
I ragazzi intervistati sono consapevoli del fatto che l'uso dei devices li rende più sicuri nelle loro performance a scuola in termini di conoscenze e di abbondanza delle informazioni ricavate.

L' articolo pubblicato su *Behavioral Sciences* espone il lavoro di ricerca nel suo insieme e nelle sue tre fasi di lavoro:

1. un questionario online;
2. un set di interviste semistrutturate;
3. due incontri di focus groups.

L'obiettivo è conoscere non solo le abilità tecniche e digitali dei ragazzi, ma anche gli aspetti più personali, legati ai loro pensieri e ai loro sentimenti, alle loro frustrazioni e ai loro desideri.
Più specificamente, l'articolo affronta i seguenti due obiettivi:

- identificare le competenze e il profilo transmediale degli studenti italiani dei licei classici, sulla base di diversi strumenti (alfabetizzazione digitale, profilo transmediale, atteggiamenti verso le TIC).
- determinare le aspettative e le motivazioni degli adolescenti verso l'apprendimento transmediale.

Tra i finding più interessanti, gli studenti si dichiarano pronti a cogliere i cambiamenti dell'apprendimento transmediale, perché sono entusiasti circa le nuove possibilità offerte da un apprendimento che coniuga sapere formale e informale e che mette loro al centro.

5. Risultati

5.1 Per quanto riguarda il concetto di transmedia literacy

Dalla lettura dei documenti analizzati emergono due primi risultati importanti: il primo colloca il quadro concettuale di Jenkins (convergenza dei media e cultura partecipativa) come contesto generale di riferimento; il secondo, sorprendente, è l'assenza di un modo unico o molto condiviso di intendere l'apprendimento transmediale, al di là di questo quadro culturale comune. La mancanza di un chiaro concetto comune evidenzia che, insieme all'apprendimento transmediale, possiamo parlare di una significativa diversità di possibili applicazioni al campo educativo. Si tratta di quelle che potremmo definire le molteplici facce educative dei transmedia: narrazione transmediale, branding, performance, rituale, attivismo o spettacolo (Dickinson-Delaporte et al., 2020). Indirettamente, in uno dei primi testi di riferimento (Fleming, 2013, p. 371) troviamo le basi di ciò che in qualche modo è stato trovato in seguito, ma formalmente non si tratta di una definizione, né può essere esplicitamente rintracciata nella letteratura successiva in quanto tale (in realtà non c'è nemmeno un riconoscimento in tal senso).

È importante il concetto unificante dell'ambiente di apprendimento, che può diventare un paesaggio per l'apprendimento con pochi, se non inesistenti confini. Poggiando su basi filosofiche nelle teorie costruttiviste e connettiviste, emerge una pedagogia transmediale che utilizza la tecnologia in modo integrato, che consente agli studenti e ai contenuti di fluire senza soluzione di continuità attraverso le piattaforme mediatiche. (Fleming, 2013, p. 371).

Tuttavia, ritroviamo qui alcuni degli elementi essenziali: le radici socio-costruttiviste, l'applicazione didattica della navigazione sequenziale tra diversi media, il superamento dei confini dell'apprendimento formale e l'importanza di una narrazione che si sviluppa attraverso il coinvolgimento del discente (nella sua ecologia o scenario di apprendimento), e che guida il cambiamento cognitivo. In altre parole, si tratta di una forma rilevante di articolazione tra i contenuti pedagogici e le attività che favoriscono il lavoro di gruppo, la condivisione di informazioni e l'interazione. L'approccio transmediale può essere definito quindi come una narrazione condotta attraverso più mezzi di comunicazione e utilizzando diverse tecnologie digitali. Questa prospettiva consente di distribuire il contenuto principale attraverso diversi mezzi, utilizzando il meglio di ciascuno di essi per suscitare interesse negli studenti e mantenere la loro attenzione. Le narrazioni transmediali possono aiutare il processo di insegnamento e apprendimento e consentire lo sviluppo di strategie che stimolino gli studenti a produrre contenuti, diventando partecipanti attivi nel contesto educativo. (Pereira e Pedro, 2020, p. 2)

In termini generali possiamo rilevare alcune riflessioni: viene riaffermata la radice socio-costruttivista che pone il discente come protagonista (Amador, 2013; Davis, 2017; Wiklund-Engblom et al., 2013); l'approccio transmediale dovrebbe quindi basarsi su elementi della vita quotidiana, per garantire il coinvolgimento e potenzialmente un maggiore trasferimento dell'apprendimento (Chung, 2014; Raybourn, 2014; Rodrigues e Bidarra, 2014); l'apprendimento transmediale implica la mobilitazione e lo sviluppo di competenze digitali di ampio respiro (un passo oltre la competenza digitale e l'educazione ai media da una prospettiva di consumo) (Barreneche et al., 2018; Pereira e Pedro, 2020); l'elemento tecnologico è flessibile e liquido e non è predeterminato (né in termini di risorse né in termini di sequenze), si adatta alle esigenze di ogni contesto e, quindi, permette di superare i limiti dell'educazione formale (Davis, 2017; Ellis et al., 2018; Fleming, 2013; Gutu, 2019).

Esiste dunque indubbiamente una dimensione comunitaria nell'apprendimento transmediale (apprendimento in rete, collaborazione), che si collega agli approcci connettivisti (McCarthy et al., 2018). Questo porta alla creazione di comunità di creazione (e di apprendimento) (Raybourn, 2017; Rodrigues e Bidarra, 2015) che collaborano in progetti comunitari. Nasce il concetto di transautorialità (Rodrigues e Bidarra, 2014, 2019).

Infine, si giunge al motore didattico delle proposte, che è sempre una narrazione (narrativa o meno), che rende i progetti sempre storydriven (Barreneche et al., 2018; Chung, 2014). Esiste un ampio consenso sull'importanza di queste narrazioni in relazione al coinvolgimento degli studenti (Chung, 2014). Si sottolinea inoltre che sono flessibili dal punto di vista dell'insegnante e malleabili dal punto di vista dello studente (Ellis et al., 2018; Fleming, 2013; Gutu, 2019; Raybourn, 2017). Sono inoltre potenzialmente infiniti, il che conferisce infinite possibilità di evoluzione e apprendimento (Rodrigues e Bidarra, 2015).

5.2 Per quanto riguarda la transliteracy degli studenti

A questo punto, ricapitoliamo gli spunti principali offerti dai dati quantitativi e vagliamoli alla luce delle conoscenze che abbiamo acquisito finora grazie alle fonti bibliografiche.

In generale, gli studenti dei Licei classici che hanno partecipato alla ricerca sembrano ben disposti ad accettare un buon approccio di apprendimento transmediale: questa predisposizione si basa sia su valori positivi di competenze puramente digitali, sia su valori attitudinali. In relazione alle prime, il nostro campione presenta valori paragonabili a quelli di riferimento (Rodríguez de Dios 2018), ma spiccano a nostro favore valori più elevati nelle competenze critiche legate allo spirito critico o al giudizio che entra nella NML di Jenkins et al. (2009) e che si pone come parte fondamentale della transmedia literacy (González-Martínez et al. 2018), in quanto dimensioni particolarmente interessanti sia per il consumo critico, sia per l'esercizio etico e responsabile della cittadinanza digitale. Per quanto riguarda gli atteggiamenti, da un lato quelli positivi sono superiori a quelli di riferimento (Rosen et al. 2013) e, dall'altro quelli negativi, come l'ansia e lo stress, sono inferiori ad essi, il che sembra far presagire una buona accoglienza di una proposta educativa che ha avuto un importante peso tecnologico.

Se entriamo nelle specificità, vedremo che abbiamo valori interessanti anche negli elementi transmediali, in quanto i nostri punteggi sono più alti in competenze come la navigazione transmediale, la visualizzazione o il giudizio (in linea con quanto abbiamo appena detto sul consumo critico, per esempio). Tuttavia, l'elemento chiave della socializzazione nella dimensione dell'intelligenza collettiva ci porta a configurare forme meno collaborative di quanto ci aspetteremmo in un contesto transmediale, e forse un ostacolo per i nostri studenti a diventare creatori di contenuti in un mondo digitale, anch'esso parte importante di queste esperienze di apprendimento transmediale. Senza dubbio questi dati sono coerenti con le conclusioni di Gremigni (2019), poiché i gruppi non sono uniformi; ma è un aspetto che va tenuto presente nella definizione di qualsiasi strategia di apprendimento, soprattutto in relazione a quanto sottolineato da Scarcelli e Riva (2016) sull'isolamento dei diversi collettivi (che merita sempre attenzione nelle proposte transmediali). Anche in questo senso vanno intesi i dati relativi al multitasking: da un lato, sono inferiori a quelli di riferimento (e qui non parliamo di pre-disposizione, ma di pratica, il che ci pone in uno scenario diverso dai precedenti); dall'altro, sono i più dispersi. Abbiamo un corpo studentesco poco incline alla simultaneità dei compiti (almeno durante lo svolgimento dei compiti accademici); o, se preferiamo, abituato a concentrarsi più del previsto su di essi. Forse questo è positivo se il

multitasking è proposto al servizio dell'apprendimento e guidato dagli insegnanti; oppure forse è un elemento di contraddizione e di stress. Dovremo approfondire questo aspetto.

Infine, riprendiamo l'idea di Gremigni (2019) nella sua diagnosi dell'eterogeneità degli adolescenti italiani nel loro rapporto con la tecnologia, che possiamo sottoscrivere in relazione ai nostri studenti dei liceali italiani (e considerando a questo punto l'idea di digital divide a priori inatteso, ma esistente tra loro). Sono evidenti le differenze tra coloro che hanno migliori competenze digitali in generale rispetto alle loro abilità transmediali e ai loro atteggiamenti verso la tecnologia, e c'è una relazione tra competenze più elevate e una maggiore preferenza per la transmedialità, cosa di cui dobbiamo tenere conto, insieme all'elevata eterogeneità (deviazioni standard sempre alte), quando progettiamo itinerari di apprendimento transmediale, in diretta relazione con la riflessione di van Dijk (2017) su digital divide e gap. Non a caso, se uno dei vantaggi dell'apprendimento transmediale è la flessibilità, che si può tradurre in personalizzazione, forse è bene tenerne conto per offrire percorsi adattabili e per raggiungere, allo stesso tempo, il miglioramento delle competenze digitali come parte degli obiettivi didattici; il che ci porta di nuovo alle possibilità di inter-esting dell'applicazione di esperienze di apprendimento transmediale secondo i principi dell'UD-L (Alba Pastor 2016; Castro e Rodríguez 2017).

5.3 Per quanto riguarda la visione complessiva dei dati

La domanda che come insegnanti ci siamo posti all'inizio di questa riflessione è stata se il contesto dei Licei classici potesse auspicabilmente accogliere l'implementazione di esperienze di apprendimento transmediale, dal punto di vista degli studenti. Questo ha a che fare sia con le loro competenze e opinioni (in relazione a ciò che il TL richiede loro), ma anche con la natura stessa dei Licei classici all'interno del sistema scolastico tradizionale italiano: infatti, sono classici non solo per l'ambito disciplinare su cui si concentrano, ma anche per il peso della tradizione scolastica italiana, soprattutto per quanto riguarda le questioni metodologiche. Inoltre, secondo quanto emerso dal nostro approccio misto (non solo con dati quantitativi, provenienti da un'indagine, ma anche con dati qualitativi, provenienti da interviste e focus group), sembra che le condizioni siano favorevoli, nella misura in cui gli studenti hanno le competenze per sviluppare progetti educativi in chiave transmediale e, inoltre, sembrano motivati a farlo.

Per quanto riguarda la prima questione, abbiamo visto che il livello delle competenze digitali in generale è buono (spiccano dimensioni come la capacità critica o la sicurezza personale; le competenze informative o tecnologiche dovrebbero essere rafforzate, anche se ci permettono di essere abbastanza positivi anche per quanto riguarda il livello di base); per quanto poi riguarda le competenze specifiche legate al transmedia educativo, troviamo valori particolarmente elevati nella navigazione transmediale stessa e nel giudizio (è interessante vedere come, sebbene i livelli di alfabetizzazione informativa non siano particolarmente elevati, quelli di questa dimensione lo siano abbastanza, più orientati alla consapevolezza della necessità di valutare le informazioni che alla tecnica di valutazione in sé); questo è un punto di partenza molto promettente per implementare attività di apprendimento transmediale con questi studenti. Tuttavia, naturalmente, il panorama è piuttosto eterogeneo per quanto riguarda il profilo digitale degli studenti in senso generale; sarebbe necessario accompagnare ciascuno degli studenti nello sviluppo parallelo delle dimensioni meno forti: le competenze di sicurezza, ad esempio, per ognuno di loro; ma anche lo sviluppo delle competenze meno forti in ogni studente. Sarebbe comunque necessario rafforzare sempre quegli aspetti che sono generalmente meno forti nel contesto della scuola italiana, come la dimensione comunitaria,

l'intelligenza collettiva e la visualizzazione, legata a strategie didattiche meno tradizionali e meno presenti nella scuola.

Per quanto riguarda la percezione di una proposta di apprendimento transmediale (e questo è forse l'aspetto più nuovo di questa ricerca, anche se scontato a priori), gli adolescenti sono entusiasti: lo possiamo vedere sia nei dati quantitativi (alti atteggiamenti positivi e bassi negativi) che in quelli qualitativi (interviste e focus group). Riassumiamo qui di seguito gli elementi più importanti di ciò che pensano:

il loro rapporto con la tecnologia, nonostante tutte le riflessioni che sono state fatte al riguardo, è naturale;

utilizzano la tecnologia in tutte le dimensioni della loro vita e, quindi, anche in situazioni di apprendimento al di fuori della scuola (quando imparano per decisione propria e seguendo i propri interessi);

capiscono che è naturale imparare anche con la tecnologia; d'altra parte ritengono che la scuola sia, in termini metodologici, un'istituzione obsoleta che deve essere aggiornata;

hanno una chiara consapevolezza di apprendere in modo diverso dai loro adulti di riferimento; un modo di apprendere molto più efficiente grazie alle tante risorse oggi a loro disposizione (anche tecnologiche). Da qui, per loro è logico considerare tuttoin un unico insieme, in cui gli elementi digitali (e anche le nuove strategie di apprendimento legate al digitale nell'ambiente informale) entrano nella scuola per modernizzarla.

Tutto questo ci porta a una considerazione finale.

Ci siamo mossi dalle aspettative concrete degli adolescenti su un'ipotetica implementazione di esperienze di TL e abbiamo appurato che l'itinerario di ricerca e costruzione di conoscenza con loro (attraverso i questionari, le interviste e i focus group) genera aspettative motivanti per loro, come l'aggiornamento della scuola, la varietà delle risorse di apprendimento (in un approccio UD-L), la maggiore interazione con i coetanei, il coinvolgimento, ecc.

Dopo questa riflessione generale sui dati e sulla loro interpretazione, dobbiamo concludere con altre due domande importanti. La prima ha a che fare con i limiti dello studio stesso, direttamente legati al tipo di ricerca condotta e al contesto. Sebbene i risultati siano chiari e consentano una solida interpretazione, la parte qualitativa della metodologia applicata in questo contesto consente generalizzazioni molto caute, e dobbiamo considerare lo stesso contesto da una prospettiva nazionale o internazionale, considerando il tipo di scuola classica, ecc. D'altra parte, queste conclusioni sono aprioristiche e ci permettono di pensare che le esperienze di apprendimento transmediale saranno ben accolte, ma l'implementazione pratica dovrebbe essere monitorata per vedere quali sono le prestazioni degli studenti in casi reali e qual è la loro reale soddisfazione a posteriori.

5.4 Riflessione finale

In linea generale, emerge con chiarezza l'opinione che gli studenti hanno sull' apprendimento informale mediato dalla tecnologia e, dal momento che la tecnologia è presente nella vita di tutti i giorni, loro ritengono che debba essere sillogisticamente presente anche nella scuola che prepara alla vita e che, proprio per questo motivo, deve essere incline e aperta alle TIC.

Il pensiero e il desiderio degli studenti cozzano con la realtà che i ragazzi lamentano, rappresentata da una scuola con poche risorse tecnologiche, poco moderna e attuale, per la quale sono stanziati pochi investimenti.

I ragazzi invece sono abili nell' integrare le TIC nel processo di apprendimento, perché dicono di imparare in modo del tutto diverso rispetto al passato, soprattutto rispetto ai propri genitori, e

di imparare anche meglio, perché dispongono di tanti e diversi strumenti, in modo particolare di internet.

Tutti i ragazzi partecipanti alla ricerca si dichiarano molto interessati ed entusiasti in merito alle opportunità educative che l'apprendimento transmediale offre loro: possibilità di lavorare collaborativamente, di interagire tra pari, di ottenere informazioni sui vari contenuti legati alle varie materie di studio e ai loro molteplici interessi personali, di accedere inoltre a una enorme quantità di informazione immediatamente e in ogni luogo disponibile.

Ciò che ha colpito particolarmente i ragazzi è la scoperta del tutto inedita che esiste ed è non solo possibile, ma realizzabile, un modo nuovo di imparare, che deriva dall'uso critico della tecnologia a scuola e a casa, che è in netto contrasto con l'idea, di cui i ragazzi si lamentano, che i genitori e gli adulti in generale hanno sulla tecnologia considerata come gioco, svago o perdita di tempo.

Inoltre i ragazzi evidenziano di essere stati favorevolmente colpiti dalla dimensione sociale e comunitaria dell'apprendimento transmediale, ben distante dalla concezione di studio individuale e solitario che vigeva nel passato.

Gli studenti partecipanti affermano di sentirsi coinvolti da questo modo nuovo e innovativo di affrontare i processi educativi legati all'apprendimento in una scuola che vuole e deve essere inclusiva, perché pensano che questa modalità educativa possa concretamente aiutare i compagni in difficoltà di apprendimento in una scuola comunitaria dove gli studenti condividono in piattaforma le informazioni per aiutare gli altri ed essere a loro volta aiutati.

In particolare, i dati ottenuti durante le diverse fasi della ricerca delineano in modo chiaro e pressoché omogeneo le caratteristiche degli studenti per quanto concerne l'aspetto mediatico: frequentano assiduamente gli ambienti virtuali soprattutto con i loro smartphone o con i tablet, portatili e leggeri rispetto al P.C. che appunto usano di meno, spendono online tanto tempo della loro giornata, per i loro interessi personali e per attività di studio (Gutu, 2019; Rodrigues & Bidarra, 2014); tra gli interessi personali spiccano la musica, lo sport, i videogiochi, ma anche temi più impegnati, come la politica.

Studiano inoltre online, ottengono informazioni da risorse come Wikipedia e da Enciclopedie online ritenute affidabili come la Treccani, con buoni risultati di apprendimento; significativo è inoltre l'utilizzo di Youtube per ascoltare e riascoltare spiegazioni su determinati argomenti di determinate materie, soprattutto Matematica e Storia.

Si rileva con interesse che l'uso dei media si configura quasi come un insegnamento one to one, come una lezione privata di recupero di quanto perso o non compreso a sufficienza: i ragazzi intervistati sono infatti ben disposti a un approccio transmediale, perché ritengono che la tecnologia sia non solo utile, ma addirittura indispensabile per risolvere problemi, per ricavare informazioni, per imparare diversamente e più proficuamente.

Da ciò deriva inoltre la conferma da parte degli studenti che esiste un legame stretto tra l'uso dei devices e il proprio rendimento scolastico, perché così si sentono più sicuri e preparati (Cappello, 2019), perché trovano subito le risposte a ciò che cercano a un punto tale che vorrebbero fosse loro consentito l'uso dei devices anche in classe, in particolare per le attività di collaborazione con i compagni.

I ragazzi conferiscono dunque grande importanza al network da loro inteso come spazio non fisico dove possono imparare come vogliono e quando vogliono, in opposizione ad altri spazi fisici che loro non frequentano o frequentano poco, come le librerie, ad esempio, o le biblioteche.

Questi spazi non fisici, utilizzati per apprendere sono considerati da tutti gli studenti con grande entusiasmo, perché permettono e avvalorano la collaborazione e l'interazione, attivano la dimensione comunitaria dell'apprendimento: i ragazzi vorrebbero pertanto essere parte attiva

nei processi educativi, in una sorta di intelligenza collettiva che si sviluppa in itinere con gli altri compagni, accrescendo il potenziale di attrattività formativa.

Questo ultimo aspetto è molto importante da leggere, perché indirizza verso una scuola più digitale, più aperta, più moderna e flessibile.

Un risultato che merita attenzione è che i ragazzi pensano che una scuola al passo con i tempi debba prendere coscienza delle nuove literacies che transitano attraverso i media e le includa nel curriculum, che questa nuova realtà educativa non sia ignorata; questi ragazzi vorrebbero che si realizzino ambienti di apprendimento finalizzati all'uso della tecnologia, che si creino laboratori ad hoc e una piattaforma di condivisione dei saperi, per attualizzare la scuola e preparare al futuro le nuove generazioni di studenti.

Un ulteriore dato che emerge è il pessimismo che risalta da alcune affermazioni dei ragazzi in relazione alla reale possibilità di concretizzare le loro richieste, constatata l'esistenza della loro diversità di apprendimento dentro e fuori dalla scuola; sono infatti molto critici, anche perché pensano che gli studenti italiani e quelli dei Licei classici, in particolare, siano esclusi dalle innovazioni e dalle sperimentazioni, nonostante loro sappiano usare i media, anche criticamente; pensano che il Liceo classico sia un poco indietro rispetto ad altre tipologie di scuole, come gli Istituti tecnici; infine rilevano che certa contrarietà da parte degli adulti non faciliti le cose.

Rileva inoltre annotare che gli studenti auspicano che la tecnologia sia sì ammessa a scuola, ma con il sostegno dei loro insegnanti e che questa ricerca sia fatta conoscere ad altre scuole del territorio regionale e nazionale, perché può dare un contributo al superamento di eventuali difficoltà di apprendimento.

6. Conclusioni

Dato che nella sintesi dei dati abbiamo avanzato la risposta esplicita agli obiettivi e alle domande di ricerca poste nelle diverse fasi del progetto, in questa ultima parte della presentazione del compendio ci concentriamo in forma sintetica sugli elementi prospettici a nostro avviso più rilevanti. A questo punto, dunque, due sono le direttrici in capo alla indagine portata avanti nelle due scuole secondarie di II grado, in particolare nel sistema del Liceo Classico italiano:

1. capire se la scuola di II grado italiana abbia la possibilità di accogliere e far propria un'esperienza di apprendimento transmediale, partendo dal punto di vista e dalle opinioni ricorrenti degli studenti;
2. capire quanto i ragazzi si sentano coinvolti, pronti e preparati a integrare nel loro modus discendi una proposta di apprendimento attraverso i media, partendo sempre dalle loro opinioni e sentimenti.

Le informazioni raccolte in merito al primo punto portano ad affermare che i ragazzi dimostrano di possedere adeguate competenze digitali e competenze specifiche relative ai transmedia educativi: questi dati si allineano con quelli ricavati da ricerche precedenti, dai quali si evince che gli studenti utilizzano bene per i loro bisogni dentro e fuori dalla scuola le risorse tecnologiche, come la piattaforma e la Transmedia App (Chung, 2014; Raybourn, 2014).
Da qui bisognerebbe partire per dare maggiore concretezza alle pratiche di apprendimento transmediale, cercando quindi di mettere tutti gli studenti sullo stesso livello di competenze, dato che non tutti hanno dimostrato di possedere, ad esempio, adeguate competenze di sicurezza e competenze informatiche e tecnologiche.
Risulta inoltre indispensabile e non più rinviabile, rafforzare alcuni aspetti meno potenziati e meno forti nella scuola italiana e nel sistema in particolare dei Licei Classici, come l'intelligenza collettiva e la visualizzazione, che sono a loro volta da collegare a prassi didattiche poco presenti nella scuola.
Il secondo aspetto di questa ricerca è particolarmente interessante, perché mette in risalto una immagine di studente entusiasta di fronte alla proposta di apprendimento transmediale da realizzare nella scuola, come emerge con chiarezza dai dati qualitativi e quantitativi ricavati: il campione infatti di studenti partecipanti è molto ben disposto e pronto ad affrontare un percorso educativo così innovativo attraverso i media e questo si accorda con i dati ottenuti dal campione riferito da Rodrìguez de Dios (2018).
Questa immagine di studente si riconosce in quanto si affida totalmente alla tecnologia per risolvere dubbi e problemi, ricerca e ricava informazioni sia per quanto concerne i propri interessi personali, sia per le esigenze scolastiche; è soprattutto un consumatore di contenuti digitali che, più che creare, trasmette, e condivide conoscenze con gli altri suoi pari e così apprende attraverso la tecnologia.
Questo studente ribadisce con chiarezza la sua totale diversità di apprendimento rispetto agli adulti, al passato, ai propri genitori, perché afferma che oggi si possiedono maggiori risorse a disposizione, si sente poco compreso dal mondo degli adulti, che avverte come distanti, nel momento in cui sostengono che è inutile e deleterio l'uso dei devices per imparare a casa e a scuola; al contrario, esprime la necessità che la scuola sia moderna e aggiornata, dato che appare, in termini metodologici,un'istituzione per molti aspetti superata e da attualizzare: si rende urgente l'aggiornamento del mondo della scuola e la sua apertura alle innovazioni

tecnologiche che preparano alle nuove professioni del futuro (Taddeo & Tirocchi, 2021; Scolari, 2018).

Un'altra considerazione deve essere fatta a proposito dell'utilizzo da parte dei ragazzi dei media come facilitatori dello studio e dell'apprendimento dei contenuti delle diverse discipline: i dati ottenuti confermano che la facilità di comprensione e la ripetitività senza limiti dei contenuti stessi che passano, ad esempio, su Youtube, rendono gli studenti più sicuri di sé e più a loro agio: ciò può far comprendere che la creazione di ambienti di apprendimento transmediale nella scuola accresca nei ragazzi i livelli di sicurezza e di padronanza dei contenuti disciplinari in grande varietà e adattabilità di stili di apprendimento, come risulta, tra gli altri, da uno studio di Fleming (2013); l'apprendimento transmediale mette le ali alla creatività degli studenti, che si sentono così più autonomi nello studio (Dickinson-Delaporte et al., 2020; Rodrìguez & Bidarra, 2019).

In definitiva, anche se le risultanze ottenute attraverso questo lavoro di ricerca sono legate a una visione circoscritta di una realtà scolastica di una particolare tipologia di scuola e a una prospettiva nazionale, possiamo cautamente immaginare che sia accolta una esperienza di apprendimento attraverso i media per venire incontro alle esigenze e alle insistenti richieste degli studenti, per il loro successo formativo e per il loro futuro professionale.

Resta da sottolineare che la crisi sanitaria legata alla pandemia di Covid-19 ha accelerato la necessità di affidarsi alla tecnologia e nella maggior parte delle scuole i docenti hanno trasposto le pratiche svolte in presenza a pratiche di incontri virtuali, districandosi tra mezzi tecnologici diversi e piattaforme varie; il rapporto uno a molti proprio della didattica tradizionale in presenza si è, per così dire, sdoppiato, con l'apertura di canali fino ad allora non sperimentati, come le videolezioni con la classe su piattaforme on line, ma anche con lo studente singolo, con chat private e scambio di e-mail.

Resta da vedere se, quando la pandemia sarà conclusa, le pratiche innovative saranno mantenute e implementate, dunque se, in definitiva, ci sarà una reale inversione di tendenza voluta e pensata; se, in fin dei conti, si riuscirà a tenere saldo il filo conduttore che lega tra loro il ripensamento delle pratiche di insegnamento-apprendimento, la soddisfazione degli studenti e le loro pratiche di studio.

Allo stato attuale emerge il bisogno di riflettere ulteriormente su uno scenario di ricerca che vuole essere più sperimentale che descrittivo, per poter individuare sul campo le modalità con cui la scuola può e deve avvicinarsi al mondo informale degli studenti, per conoscere gli strumenti da loro utilizzati e i contenuti affrontati (Storai & Mori, 2018).

E poiché questo lavoro è il risultato delle opinioni e del punto di vista dei ragazzi che oggi vanno a scuola, una direzione futura di indagine potrà essere intrapresa per conoscere anche le opinioni dei docenti, dei dirigenti scolastici, dei genitori, per ottenere un quadro esaustivo da confrontare con i dati di contesto delle scuole sparse sul territorio nazionale e per triangolare in questo modo tutte le informazioni in possesso.

C'è molto da fare e il cammino è abbastanza inesplorato perché, se da un lato le nuove metodologie rappresentano il quadro del cambiamento, come sostengono, tra gli altri, Santoianni e Striano (2003), il punto di vista dei ragazzi denuncia che la scuola è molto indietro rispetto alle loro esigenze e al loro modo di imparare, anche in preparazione a una professione futura; questo quadro illustra che la tecnologia, per rispondere ai bisogni dei ragazzi, deve essere usata non in casi eccezionali come punto di arrivo di un cambiamento, ma considerata come un tramite grazie al quale si può favorire la trasformazione della didattica e del rapporto scuola-alunno.

I dati raccolti suggeriscono di mettere in pratica processi di insegnamento-apprendimento tecnologicamente potenziati, di rinnovare le metodologie, di trasformare le attività curricolari, di

moltiplicare le azioni e di tenere conto delle relazioni che dalle aule scolastiche si estendono ben oltre il monte ore di lavoro e la scuola.

Queste pratiche servono non certo a dimostrare che l'introduzione delle tecnologie digitali garantiscano un successo formativo sicuro per tutti, ma a mettereR., i docenti nella predisposizione di conoscere le pratiche transmediali dei propri studenti e di selezionare con certezza le situazioni in cui la tecnologia ha maggiore probabilità di utilità pedagogica.

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MEDIA EDUCATION
Studi, ricerche, buone pratiche

L'apprendimento transmediale: oltre le mura della scuola?

Transmedia Learning: beyond school walls?

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Abstract. This work examines the practice of transmedia learning as a valid tool dedicated to the achievement of the student's educational success. First, a brief conceptualisation of transmedia learning is presented, outlining the characteristic elements of this circulation of new knowledge that is now available to learners, thanks to the continuous development of media; we then review the opportunities and the advantages that transmedia learning offers in terms of enrichment, productive sharing of knowledge and collaboration between students also outside school thanks, above all, to the personalisation of learning. Finally, the possible challenges of this learning are described, aimed at overcoming the resistance still present in the school, in order to successfully govern the educational changes taking place.

Keywords: collaboration, opportunities, personalised learning, sharing, ubiquity.

Riassunto. Questo lavoro esamina la pratica dell'apprendimento transmediale come valido strumento finalizzato al successo formativo dello studente. In primo luogo viene presentata una breve concettualizzazione dell'apprendimento transmediale, sono delineati gli elementi caratterizzanti di questa circolazione di saperi nuovi che oggi si trovano nelle disponibilità degli studenti, grazie allo sviluppo continuo dei media; si passano quindi in rassegna le opportunità e i vantaggi che l'apprendimento transmediale offre come arricchimento, condivisione produttiva di conoscenze e collaborazione tra gli studenti fuori dalla scuola grazie, soprattutto, alla personalizzazione dell'apprendimento. Infine si descrivono le possibili sfide volte a vincere le resistenze talora presenti nella scuola, per governare con successo i cambiamenti educativi in atto.

Parole chiave: apprendimento personalizzato, collaborazione, condivisione, opportunità, ubiquità.

1. INTRODUZIONE

La realtà dell'apprendimento digitale e la necessità di mettere al centro lo studente con le sue abilità tecnologiche spingono gli insegnanti a disegna-

re nuovi assetti nell'insegnamento e nell'apprendimento. La scuola è uno dei luoghi dove transita l'apprendimento transmediale inteso come un insieme di abilità e di strategie di apprendimento e di scambio nell'ambito della nuova cultura collaborativa, finalizzato a conoscere cosa fanno i giovani studenti con i media; nella scuola il docente può essere una guida competente anche nella cultura digitale, nel continuo adattamento e cambiamento delle proprie prassi educative, per far sì che le sue competenze siano volte a promuovere e rafforzare le competenze digitali degli studenti, in continuo interscambio di informazioni (Ranieri, 2022).

La scuola italiana si trova ancora a dover affrontare la sfida di potenziare «lo sviluppo delle competenze digitali degli studenti, 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» (Legge 107/2015 art.1 comma7 lettera h).

Per conseguire questi risultati sono stati sviluppati nel tempo diversi percorsi, dalla formazione degli insegnanti ai Piani Nazionali, alla più recente Didattica a distanza durante la pandemia da Covid-19 (Pasta, 2021); tra questi percorsi sono le Indicazioni nazionali per il curricolo del 2018, ove particolare rilievo viene dato al tema della cittadinanza digitale e alle competenze digitali, come l'alfabetizzazione informatica e digitale e l'alfabetizzazione mediatica.

Inoltre, con la Legge 92/2019 viene introdotto l'insegnamento trasversale dell'educazione civica nelle scuole di ogni ordine e grado e la cittadinanza digitale è uno tra gli assi portanti di questa materia insieme allo studio della Costituzione e dello sviluppo sostenibile.

Pertanto, oltre i quadri concettuali legati alle competenze, alle alfabetizzazioni digitali che il sistema educativo deve garantire (Ugolini, 2016), si segnala una rottura positiva con il passato, un impegno significativo per l'inclusione delle tecnologie digitali nella giornata scolastica (Cappello, 2019) in modo trasversale nei processi di apprendimento dei diversi livelli educativi.

Il cambiamento si lega alle dinamiche del resto d'Europa, concretizza la Raccomandazione europea del 23 maggio 2018 sull'apprendimento permanente, in linea con il quadro di riferimento DigComp, che suggerisce politiche educative che permettano ai cittadini di sviluppare le competenze digitali di cui hanno bisogno per partecipare alla Knowledge Society (Fabiano, 2020), per esercitare la propria cittadinanza anche in modo digitale, per ricavare vantaggi informativi e civici, per migliorare i risultati dell'apprendimento e per sfruttare opportunità online (Livingstone et al., 2021).

In questo contesto emerge l'apprendimento transmediale nato dalle *new media literacies*, evidenziato da Jenkins (2006) con le riflessioni sulla cultura partecipativa e collaborativa dei media, poi individuato negli adolescenti da Scolari *et al.* (2018), per capire cosa fanno i giovani oggi con i nuovi media digitali, come li usano e interagiscono tra loro attraverso generi, linguaggi e contesti diversi.

L'apprendimento transmediale ha avuto eco importante anche dal punto di vista educativo: González-Martínez *et al.* (2019) hanno analizzato gli approcci che il concetto potrebbe avere nell'apprendimento, concludendo che il transmedia potrebbe essere affrontato come un prodotto mediatico che richiede un'alfabetizzazione speciale per la progettazione di esperienze di apprendimento. In senso generale e da quanto si trova nella letteratura, possiamo definire il *transmedia learning* come l'uso e l'applicazione delle tecniche dello storytelling combinato con diverse e molteplici piattaforme mediatiche, guidato dall'obiettivo di progettare una modalità nuova dell'apprendimento in una sorta di pedagogia transmediale: tale apprendimento, combinato con la pedagogia, determina un cambiamento notevole del luogo di controllo del sapere che si sposta dal docente allo studente, dalla classe all'esterno (Fleming, 2013).

Ma si può parlare di apprendimento transmediale in senso stretto? Esiste un apprendimento transmediale in quanto tale? Cosa si intende in letteratura con il termine apprendimento transmediale? Quali opportunità offre?

2. METODOLOGIA

Obiettivo di questa revisione sistematica della letteratura è evidenziare il background concettuale delle pratiche educative transmediali, per offrire una panoramica della materia a partire dalla definizione di apprendimento transmediale, delle sue potenzialità e limiti. In questo studio vengono formulate tre domande di ricerca (PI):
- PI1. Quali sono le caratteristiche dell'apprendimento transmediale?
- PI2. Quali opportunità offre l'integrazione dell'apprendimento transmediale nei processi di insegnamento-apprendimento?
- PI3. Quali sfide propone l'integrazione dell'apprendimento transmediale nei processi di insegnamento-apprendimento?

Per individuare e analizzare i documenti più significativi in relazione ai quesiti di ricerca, è stato utilizzato il metodo della revisione sistematica della letteratura (RSL), processo di costruzione teorico il cui scopo è rivedere le fonti rilevanti in una specifica area di conoscenza a partire dall'esplorazione di informazioni ottenute da ricerche in diversi database (Okoli e Schabram, 2010).

2.1 Processo

Per eseguire una ricerca etica e tracciabile sono stati presi in considerazione i criteri definiti nella dichiarazione PRISMA di Urrútia e Bonfill (2010) di inclusione ed esclusione, rilevanza, validità degli studi, eliminazione dei duplicati e applicazione di operatori booleani.

I documenti in esame rispondono alla ricerca delle parole chiave "apprendimento transmediale" in spagnolo e in inglese senza alcun tipo di limite di tempo (la gestibilità dei risultati di ricerca non lo ha reso necessario). Questa ricerca è stata effettuata nei due principali database multidisciplinari internazionali Web of Science e Scopus, nel database internazionale specifico per l'istruzione Educational Resources Information Center (ERIC) e in Dialnet, uno dei più prestigiosi archivi scientifici ispanici.

Fulcro di questa recensione sono i processi transmediali di insegnamento-apprendimento (E-A), dall'inizio dei processi di apprendimento alla formazione post-universitaria. Non c'è un focus specifico di interesse per quanto riguarda la fase educativa, piuttosto si vuole conoscere il concetto di transmedia nell'educazione in una prospettiva globale. Non è stata fatta distinzione tra istruzione formale, non formale e informale. Tuttavia la maggior parte dei documenti ottenuti appartiene al primo gruppo. Nella prima fase è stata effettuata una ricerca dai descrittori precedentemente indicati e sono stati ottenuti un totale di 38 documenti. Dopo un filtraggio dettagliato, è stato ottenuto un campione di 24.

L'analisi dei dati ottenuti è stata effettuata utilizzando il programma NVivo 12, con copia autorizzata dal Dipartimento di Pedagogia dell'Universitat di Girona. Con il suddetto programma è stata effettuata la codificazione e la categorizzazione delle informazioni più rilevanti della raccolta documentaria.

2.2 Elenco di documenti analizzati

Questi sono i documenti analizzati:
1. Amador (2013)
2. Barreneche, Polo e Menénez-Echavarria (2018)
3. Bernal (2017)
4. Campalans (2015)
5. Chung (2014)
6. Crespo (2018)
7. Davis (2017)
8. Dickinson-Delaporte, Gunness e McNair (2020)
9. Ellis, Huff, Rudnitsky, McGinnis-Cavanaugh e Ellis (2018
10. Fleming (2013)
11. Gutu (2019)

12. Marrapodi (2016)
13. McCarthy, Tiu e Li (2018)
14. Paulsen e Andrews (2014)
15. Pereira e Pedro (2020)
16. Raybourn (2014)
17. Raybourn (2017)
18. Raybourn, Kunz, Fritz e Urias (2018)
19. Raybourn, Stubblefield, Trumno, Jones, Whezel e Fabian (2019)
20. Rodrigues e Bidarra (2014)
21. Rodrigues e Bidarra (2015)
22. Rodrigues e Bidarra (2019)
23. Valdés, Gutiérrez e Capilla (2016)
24. Wiklund-Engblom, Hiltunen, Hartvik e Porko-Hudd (2013)

I 24 documenti presentati sono stati pubblicati tra il 2012 e il 2020 e rispondono a diverse tipologie: articoli scientifici (17), capitoli di libri (1), contributi a conferenze (6).

3. L'APPRENDIMENTO TRANSMEDIALE: CONCETTUALIZZAZIONE

L'apprendimento transmediale circola attraverso i media in una nuova sfera educativa pubblico-privata dove interagiscono soggetti, saperi e interessi nuovi, in una convergenza culturale interattiva che realizza il passaggio dal soggetto che apprende e che usa tecniche mediatiche, a soggetto che apprende e produce tecniche mediatiche (Amador, 2013; Gambarato & Dabagian, 2016).

Si tratta di una circolazione di saperi attiva negli ambienti di apprendimento dove transita l'ecologia dei media, favorita dalla partecipazione delle persone alla narrativa digitale e agli ambienti interattivi, in un processo di co-costruzione in cui i soggetti che apprendono incidono nelle trasformazioni tecnologiche al punto tale da cambiare i modi di essere, di fare e di pensare (Amador, 2013).

Secondo Barreneche *et al.* (2018), l'apprendimento transmediale deriva dalla investigazione dell'alfabetizzazione mediatica e informale in un contesto di convergenza digitale e di ecologia mediatica non necessariamente convergente perché, in contrasto con l'apparente processo universale di adozione digitale e di convergenza, i giovani abitano un mondo di connessioni e di comunicazioni in cui i media tradizionali coesistono con i media digitali, entrambi sperimentati in modo diverso; inoltre lo sviluppo dell'alfabetismo transmediale non è un fatto individuale di padronanza delle abilità, ma è sviluppo delle competenze dei soggetti che apprendono in un contesto di cambiamento in cui l'apprendimen-

to con i media occupa un ruolo importante nel campo dell'educazione; secondo Bernal (2017) tale sviluppo è interazione creativa tra docenti e studenti che nella classe familiarizzano e vivono un'esperienza transmediale, creano con l' immaginazione un mondo narrativo altro, vivono una storia in un universo concettuale in cui la transmedialità annulla i confini per spaziare tra realtà e finzione, tra analogico e digitale.

La connettività e la iperconnettività partecipano all' apprendimento talvolta in modo invisibile per i soggetti (Campalans, 2015) non a livello informativo, ma come coordinamento di azioni che favoriscono la partecipazione degli studenti nella rete di conoscenza e di apprendimento.

A questo proposito Chung (2014), nel definire tale modalità partecipativa degli studenti, riporta che negli USA vengono stimolate esperienze di apprendimento transmediale negli studenti attraverso diversi media e piattaforme, anche con l'uso di transmedia Apps che includono giochi integrati con i media dell'apprendimento formale e altri programmi educativi. Proseguendo su questa riflessione, Davis (2017) evidenzia che nel modello transmediale le esperienze di apprendimento passano sulle piattaforme in varie forme che si completano tra loro, con programmi di apprendimento relativi ai modi con cui le storie possono essere sperimentate, soprattutto nell'apprendimento professionale che sfrutta i media digitali per migliorare la possibilità di collaborazione tra studenti; gli strumenti on-line forniscono piattaforme per la condivisione e l'incoraggiamento delle esperienze fatte, la creazione di comunità virtuali in campo professionale e la sua convalida.

La piattaforma diventa luogo per condividere riflessioni anche da parte degli insegnanti impegnati in questo tipo di apprendimento: il progetto The Open Storybox di cui parla Davis, sperimentato tra gli insegnanti australiani della prima infanzia, sviluppato secondo un modello denominato Transmedia Learning Model, ha mostrato che diversi insegnanti hanno vissuto una esperienza che li ha motivati a connettere tra loro le vecchie pratiche di insegnamento con le nuove, a modulare professionalità e ruolo grazie al coinvolgimento, alla collaborazione, alla creatività.

L'approccio transmediale (Dickinson-Delaporte et al., 2020) usa le piattaforme per venire incontro ai bisogni degli studenti impegnati attraverso narrative e storie diffuse sulle piattaforme reali o immaginarie rappresentate con parole, immagini, audiovisivi, per creare trame da cucire alle storie principali; le varie tipologie di transmedia offrono buone opportunità in ambito formativo ed educativo: transmedia storytelling suscita interesse perché è focalizzato nell' adattare storie e perso-

naggi attraverso diversi media, mantenendo la centralità della storia (Ellis et al., 2018).

L'apprendimento transmediale usa le tecniche dello storytelling combinate in molteplici piattaforme, per creare un apprendimento immersivo che abilita molti punti di vista in entrata e in uscita con pochissimi limiti, con una continuità nell'apprendimento che coinvolge attivamente lo studente (Fleming, 2013); McCarthy (2018) afferma che tale apprendimento racchiude in sé illimitate risorse, digitali e non, come ad esempio Spy Hounds che utilizza differenti media e incoraggia i bambini e i loro familiari a esplorare insieme le STEM (Science, Technology, Engineering, Math).

Pereira e Pedro (2020) sottolineano l'attrattività legata all'uso di mezzi di comunicazione e tecnologie digitali differenti, dato che il contenuto principale di una storia è distribuito attraverso vari media e suscita l'attenzione degli alunni; determinante è il contributo dei docenti che a partire dall'uso delle tecnologie digitali rinnovano le modalità organizzative per affinare le abilità degli studenti di sintetizzare criticamente le informazioni tratte dai molteplici canali mediatici; per raggiungere questo scopo, l'apprendimento transmediale sfrutta nuove tendenze, come la comunicazione tra pari dei social e lo storytelling per supportare gli studenti (Raybourn, 2014), transitando in ogni luogo e per tutto. il tempo, in un mondo sempre connesso in cui le abitudini e le aspettative tecnologiche cambiano e gli studenti raccontano come piace loro imparare e chiedono di essere ascoltati e di lasciare la loro impronta nel mondo (Raybourn, 2017).

Lo storytelling offre questa possibilità come sistema misurabile di messaggi che rappresentano un'esperienza narrativa che si distende da molteplici media, attira gli studenti e li include in esperienze di apprendimento allargato ai più urgenti cambiamenti educativi, promuovendo attraverso narrazioni immersive e interconnesse molteplici literacies, fra le quali quelle testuali e visive, le media literacies (Rodrigues & Bidarra, 2014, 2019).

In definitiva, l'apprendimento transmediale richiede la partecipazione attiva delle persone che creano l'informazione senza subirla e utilizzano nuovi modelli di insegnamento che, pur con distinti profili di competenze tecniche, stimolano l'interesse con modalità educative e prospettive diverse, che Wiklund-Engblom *et al.* (2013) individuano nello sviluppo di abilità quali imparare con l'ascolto, con la collaborazione, con la condivisione.

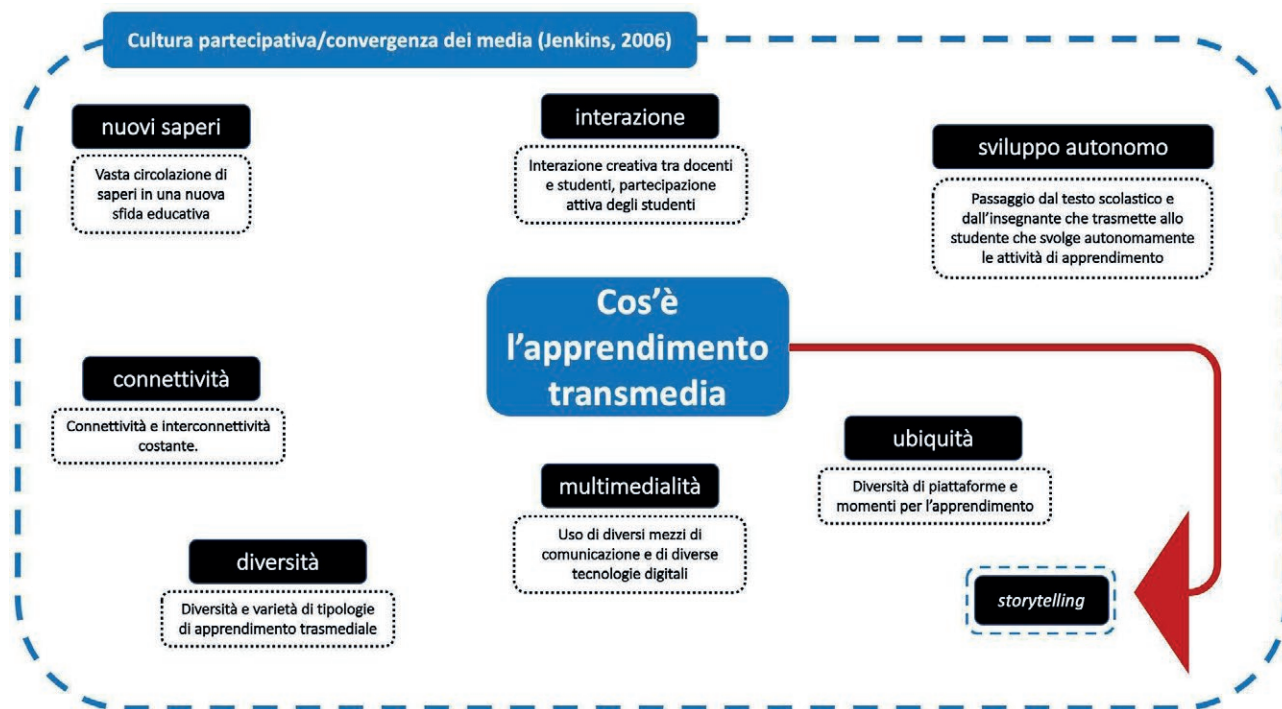Quanto esposto si può schematizzare nella Figura 1.

Figura 1. Elementi dell'apprendimento transmedia.

4. VANTAGGI E OPPORTUNITÀ DELL'APPRENDIMENTO TRANSMEDIALE

Anche se le esperienze di apprendimento transmediale non appaiono come le più ortodosse perché non seguono modelli collaudati, ben si adattano agli studenti contemporanei che vivono in un mondo che cambia e che gli educatori devono considerare, come viene sottolineato da Barreneche *et al.* (2018).

Confermano questo adattamento i dati raccolti da Bernal (2017) con il modello del collettivo Madeja, creato per studenti e docenti dell'Università Sergio Arboleda di Bogotà, relativi all'uso della narrativa transmediale nei processi di apprendimento-insegnamento per sviluppare competenze comunicative tra gli studenti dell'Istruzione superiore.

Tali dati mostrano che l'apprendimento transmediale costruisce attraverso diverse sperimentazioni inediti mondi narrativi intorno al processo di insegnamento-apprendimento che è, a sua volta, inserito in un registro mediatico.

Tra i risultati del post test, si osserva che gli studenti avvalorano l'apporto dell'apprendimento transmediale alla loro educazione con l'argomentazione che permette un più sicuro possesso delle conoscenze e che l'uso della tecnologia rafforza l'apprendimento personalizzato.

Tutto questo potenzia grandemente l'efficientamento del lavoro educativo, come dimostra lo studio di Davis (2017) sullo sviluppo di un programma professionale di apprendimento delle Arti nei primi anni della scolarizzazione in Australia, cui hanno partecipato gli insegnanti che si sono destreggiati tra vincoli di tempo e problemi tecnologici.

Il modello sviluppato è stato utile per colmare il gap nelle opportunità di crescita professionale degli insegnanti della scuola primaria e della prima infanzia, alimentando la confidenza nel lavorare con le varie tematiche di studio, con conseguente beneficio per gli studenti (Raybourn, 2014).

Altri vantaggi sono la condivisione di interessi tra studenti, come si conferma dalla lettura di Dickinson-Delaporte e collaboratori (2020), l'apprendimento continuo e il coinvolgimento dei meno abili da parte degli esperti nelle pratiche di ricerca e di studio.

Inoltre gli insegnanti possono ricavare informazioni didatticamente rilevanti sugli interessi degli studenti: media come Google Plus, Twitter e Wordpress, forniscono una visione dei contesti di apprendimento che attirano gli studenti, garantendo una opportunità per gli insegnanti di affinare i media narrativi e comunicativi per allineare le esperienze in classe con le tendenze del mondo virtuale e globale: quello che Fleming (2013) chiama Transmedia Learning World (TLW), nuovo modello di apprendimento a livello globale che fonde le tecnologie della ubiquità, le esperienze di vita reale, le pedagogie

incentrate sullo studente, in sinergia con vari modelli di apprendimento in grado di condurre studenti e insegnanti in giro per il mondo.

Un buon esempio di risorsa transmediale è la novella digitale "Inanimate Alice"[1], che può spingere e motivare gli studenti a realizzare un'esperienza di apprendimento intenso e motivante (Fleming, 2013); scandita in diversi episodi che crescono in complessità, costringe gli studenti a vedere e rivedere le storie sulla base del loro sviluppo di apprendimento.

La pratica utilizzata in "Inanimate Alice" può incoraggiare insegnanti e studenti ad andare oltre i materiali forniti e le storie raccontate da altri, per esplorare altri soggetti di interesse mentre si relazionano nell'ambiente come adulti, ragazzi e cittadini, in un esperimento di apprendimento per sempre.

Gli insegnanti possono modellare contenuti diversi su diverse piattaforme mediatiche, cercando il successo formativo per lo studente, non più lettore isolato, ma colettore che crea il soggetto da leggere; si rafforza l'opportunità di chiarire, in accordo con Gutu (2019), come gli studenti consumano, producono, diffondono, creano e imparano nel digitale; si consolidano le basi derivanti dalla pratica dell'apprendimento transmediale, come confermano McCarthy e collaboratori (2018), anche in termini di motivazione da parte degli studenti a impegnarsi nei contenuti di studio, di perseveranza nel problem solving, di creazione di esperienze di apprendimento significative.

Le opportunità offerte sono molteplici in termini di motivazione, di varietà dei contenuti di studio che passano con diversi supporti per i diversi stili di apprendimento e con diverse tecnologie, come quella dei games che regolano i livelli del gioco per assistere gli studenti nei loro bisogni educativi in vista di un apprendimento ottimale, soprattutto nei primi anni di scolarizzazione, secondo quanto scrivono McCarthy e collaboratori (2018) sui risultati apprezzabili nell'apprendimento transmediale della matematica in una Preschool and First grade school di San Francisco.

Vantaggi e opportunità dell'apprendimento transmediale si osservano nelle scuole di ogni ordine e grado: nella Early school-aged children frequentata da bimbi dai 6 ai 10 anni, Paulsen e Andrews (2014) descrivono una esperienza di apprendimento transmediale chiamata Spyhounds che, attraverso la trasformazione di una serie basata sulla TV in una serie basata sul web, presenta una narrativa coinvolgente che si svolge nel tempo attraverso diversi media, incorpora sfide circoscritte nel tempo e incoraggia bimbi e loro familiari a esplorare insieme le tematiche STEM; il contributo familiare è determinante perché, grazie alla maggiore flessibilità per le famiglie impegnate nelle attività di SpyTime, cresce l'entusiasmo dei bambini liberati dal timore di frustranti insuccessi.

Nell'ambito della scuola professionale, Pereira e Pedro (2020) hanno divulgato uno studio svolto in una scuola CEF (Cursos de Educação e Formação), con motivazioni dinamiche durante l'esplorazione di ambienti collaborativi transmediali e con interessanti riflessi nella simulazione dei contenuti matematici, per accertare il grado di autonomia degli studenti: l'approccio collaborativo ha accresciuto i livelli di autonomia nell'assimilazione dei contenuti tematici tra studenti con alto rischio di insuccesso e di abbandono, sensibilizzati all'uso di metodologie di lavoro con l'aiuto della tecnologia.

Nella progettazione e nella misurazione dell'apprendimento è cruciale la capacità dell'insegnante di monitorare l'interazione dello studente, il suo feedback e ciò che viene generato attraverso i dati; le esperienze di apprendimento transmediale come i Serious Games usati nella formazione dalla NATO e da organizzazioni non governative sono applicabili alla formazione e all'educazione, perché tracciano le esperienze di tale apprendimento, mettono a frutto i commenti di chi apprende attraverso i social, affinché siano valutati grazie anche all'utilizzo di diverse piattaforme multi-agent per l'e-learning, come ad esempio la Multi-Agent Systems for Learning and Skill management (Raybourn, 2014).

Queste esperienze mostrano che lo sviluppo di modelli di apprendimento transmediale è una opportunità per trasformare i Serious Games e altri strumenti educativi in una esperienza di apprendimento collaborativo, coesivo e ben integrato.

In accordo con Raybourn *et al.* (2019), l'apprendimento transmediale ha l'obiettivo a lungo termine di adattarsi alla personalità dello studente, facilitato dalla tecnologia condivisa nell'ecosistema, dall'apprendimento basato sui dati che, partendo dalla realtà ibrida del cross reality, in cui gli oggetti virtuali e gli oggetti fisici coesistono e interagiscono fra loro in tempo reale, supporta molti punti di vista e molte percezioni in spazi multipli.

Il mondo dell'educazione dovrebbe percepire queste trasformazioni che creano una nuova dimensione che dilata l'ecosistema dell'apprendimento, permette di coniugare l'accessibilità delle tecnologie digitali con le reali esperienze di vita degli studenti, applica una pedagogia centrata sullo studente grazie all'uso delle tecniche dello storytelling combinate con l'uso di molteplici piattaforme, per creare un apprendimento immersivo con molteplici punti di partenza e di arrivo (Rodriguez & Bidarra, 2014).

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[1] Inanimate Alice (2005). *A digital novel.* http://www.inanimatealice.com
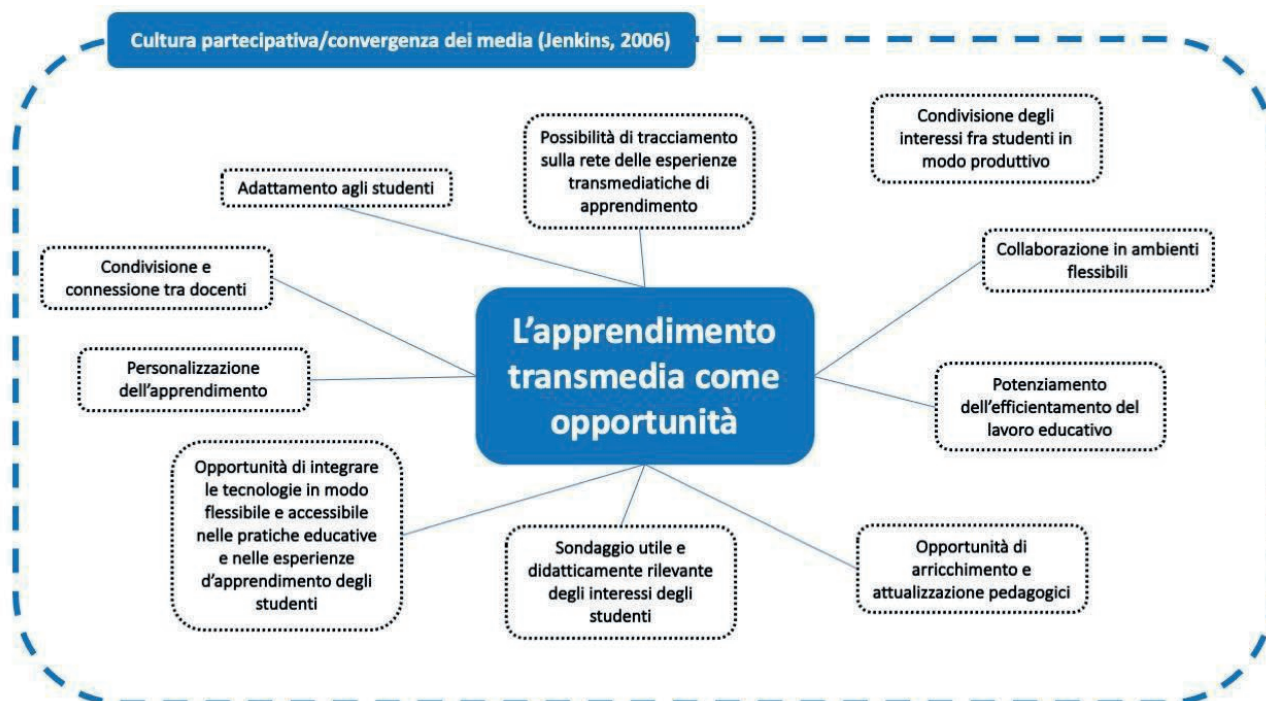
Figura 2. Opportunità dell'apprendimento transmedia.

Pratiche di apprendimento transmediale, come Transmedia Play e Connected Learning, evidenziano la necessità di coinvolgere di più e meglio lo studente attraverso l'uso dei media per colmare la distanza tra apprendimento formale e informale e capitalizzare l'uso dei nuovi media, perché la creatività della narrativa stimoli gli studenti a creare storie loro, mentre sviluppano personali percorsi di apprendimento (Rodriguez e Bidarra, 2015).

L'apprendimento transmediale inoltre avvia un processo di comunicazione realizzato dal docente che sostituisce al messaggio globale formato in egual modo da storie indipendenti, un messaggio personalizzato rivolto all' alunno; inoltre si favoriscono nelle aule dinamiche in cui coesistono lavori individuali e collettivi, teorie e pratiche, attività libere e guidate, scenari virtuali e reali (Valdes et al., 2016; Campalans, 2015).

Le idee principali emerse dall'analisi delle opportunità e dei vantaggi vengono schematicamente illustrate nella Figura 2.

5. LE SFIDE DELL'APPRENDIMENTO TRANSMEDIALE

La realtà dell'insegnamento, tecnologie spesso obsolete che ancora si trovano nelle scuole, eventuali resistenze di carattere ideologico da parte di alcuni insegnanti, possono rappresentare, nel caso di disagio scolastico di studenti demotivati, un ostacolo non sempre facile da superare quando si avverte come insanabile lo stacco tra la vita di tutti i giorni e la realtà dell'aula.

Bernal (2017) precisa che alcuni docenti affrontano situazioni di disinteresse da parte di ragazzi che non trovano senso nelle lezioni né nello studio; per aiutare questi studenti è utile, quando si prepara un piano di lavoro, organizzare l'attività educativa anche sotto forma di Transmedia Play per un lungo periodo, per pianificare le opportunità attraverso modalità di collaborazione (Dickinson-Delaporte et al., 2020).

La buona volontà degli insegnanti tuttavia da sola non basta, perché nelle pianificazioni a lungo periodo bisogna tenere conto dei costi aggiuntivi associati all'uso di Transmedia Play, come i software e le ore di lavoro necessarie per monitorare gli elementi interattivi che permettono l'apprendimento transmediale; degli aspetti logistici come l'accesso equo per tutti ai vari media; della diversità degli studenti nelle competenze digitali, poiché quelli alle prime armi imparano con un approccio meno rigido nel disseminare conoscenze.

Si conviene con Fleming (2013) che gli insegnanti devono essere aiutati nell'invito a prepararsi al cambiamento delle pratiche didattiche e supportati per integrare la tecnologia nei loro programmi.

L'approccio digitale può aiutare nella sfida di governare i cambiamenti educativi con standard pronti in
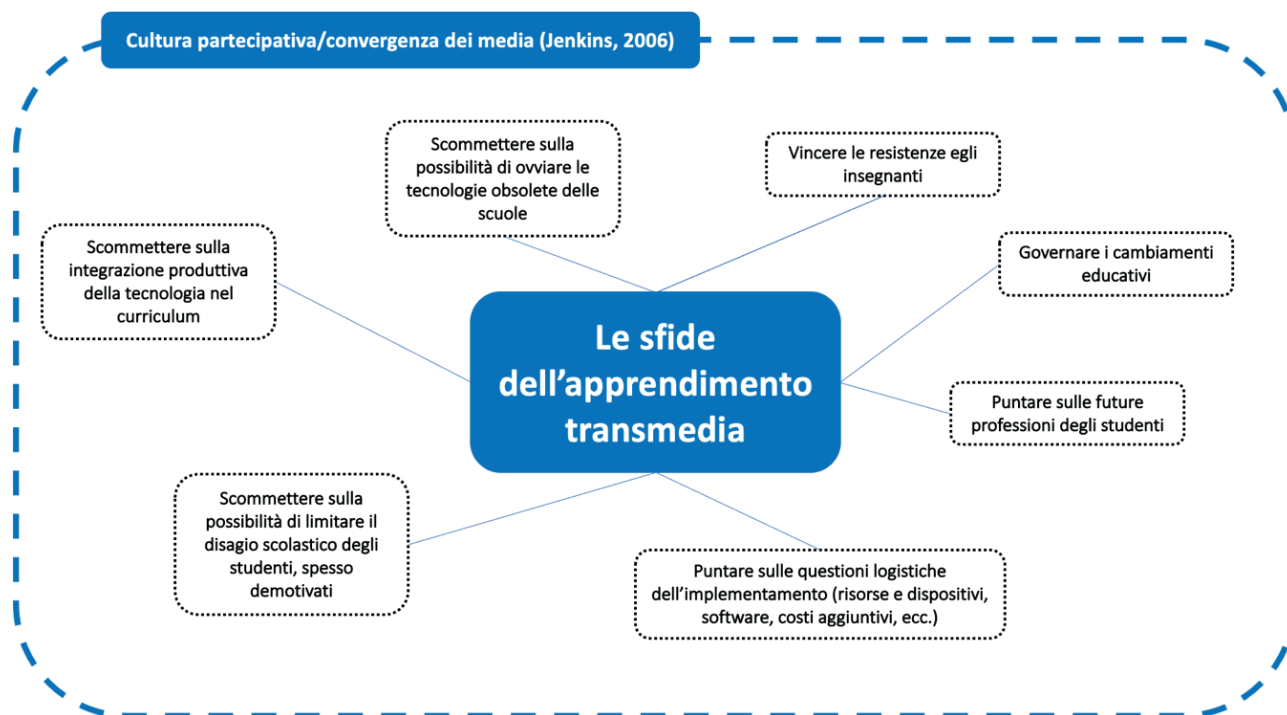
Figura 3. Le sfide dell'apprendimento transmedia.

vista delle future professioni degli studenti; piuttosto che prevedere un processo nel quale la tecnologia è semplicisticamente nominata nel curriculum, bisognerebbe integrarla in ogni aspetto dell'insegnamento attraverso le pratiche transmediali, per essere naturalmente componente attiva per gli obiettivi da raggiungere.

Creare un ambiente di apprendimento transmediale significa offrire agli studenti l'occasione di immergersi in un argomento di studio, di usare contemporaneamente gli strumenti tecnologici per esplorare, di sviluppare la loro narrativa per fornire ad altri un'esperienza di apprendimento, oltre che di gioco (Rodrigues e Bidarra, 2015).

Un'ultima considerazione deve essere fatta riguardo l'importanza del fattore tempo nella costruzione di una narrativa che voglia essere efficace: il tempo, se ben utilizzato nella sua estensione, permette agli studenti di interagire positivamente tra loro e con la *storyworld*, di esplorare le piattaforme durante l'apprendimento e di usare la conoscenza fuori dalle piattaforme (Rodrigues e Bidarra, 2019).

Nella Figura 3 vengono evidenziate le sfide dell'apprendimento transmediale.

6. CONCLUSIONI

Scopo di questa revisione sistematica della letteratura è stato quello di analizzare caratteristiche costitutive,

opportunità e sfide dell'apprendimento transmediale nel contesto di scuole di diverso ordine e grado, dalla scuola primaria (Fleming, 2013), all'Università (Bernal, 2017) in diversi paesi.

Gli studi esaminati definiscono in modo chiaro il fatto che l'apprendimento transmediale è un aspetto innovativo utile nelle prassi didattiche e nella crescita dello studente, nella sfera scolastica pubblica e istituzionale e in quella privata (Amador, 2013), come fatto individuale e personale, come sviluppo in contesti collettivi di cambiamento dove circolano saperi e interazioni nuove.

L'apprendimento transmediale passa dalla scuola ad altri luoghi come la piattaforma, comunità virtuale di condivisione di saperi dove studenti e insegnanti si incontrano e dove si concretizza una modalità diversa di conoscenza che si sviluppa in itinere, non preconfezionata e pronta per l'uso (Foti, 2014).

Gli studi oggetto di questa revisione mettono in risalto vantaggi e opportunità dell'apprendimento transmediale, soprattutto in scenari di disagio scolastico e di abbandono, come importante risorsa in grado di favorire l'insegnamento personalizzato, di potenziare lo sviluppo autonomo delle conoscenze nella crescita educativa e nelle abilità grazie alla costante connettività e alla interconnettività, alla condivisione di interessi e di saperi che circolano fuori dalla scuola; si suscita così l'interesse degli studenti che si sentono protagonisti di una conoscenza che

loro stessi creano, nel rispetto della diversità nell'apprendere, nelle maggiori libertà e fiducia nelle proprie capacità.

Agli insegnanti si offre la opportunità di arricchire la didattica attraverso risorse come la novella digitale "Inanimate Alice" che si realizza sulla base dello stile di apprendimento dei ragazzi che in prima persona sviluppano la storia sperimentando motivazione, entusiasmo e coinvolgimento, soprattutto nei primi anni di scolarizzazione (McCarthy et al., 2018).

Questo, tuttavia, non potrebbe realizzarsi senza il coinvolgimento convinto e spontaneo da parte degli insegnanti, e su questo gli studi presi in esame, sono concordi; la sfida è vincere eventuali resistenze dei docenti, impiegare risorse economiche più cospicue per sostenere i costi dell'acquisto di nuovi dispositivi, delle ore di lavoro aggiuntivo e dell'aggiornamento. Le esperienze svolte in diverse scuole in diverse parti del mondo rivelano che gli insegnanti coinvolti hanno compreso meglio le esigenze dei loro studenti e il loro modo invisibile di apprendere attraverso i media nel nuovo ecosistema dinamico educativo ormai globale, in cui le opportunità offerte dall' interattività e dalla connettività possono disegnare scenari educativi coinvolgenti.

Tutti gli studi esaminati sono realizzati fuori dall'Italia; ciò potrebbe indicare una direzione futura di ricerca della pratica transmediale nella scuola italiana, per capire quanto gli studenti italiani siano simili agli studenti di altri paesi e quanto possa essere realistica l'introduzione di questa pratica didattica.

Future ricerche potrebbero investigare se nella scuola italiana sussistano situazioni didattiche paragonabili o totalmente diverse da quelle oggetto degli studi qui esaminati e se gli esiti ottenuti siano adatti anche per gli studenti italiani, per conoscerne da vicino caratteristiche e esigenze, per vedere se sussistono grandi differenze tra il sistema scolastico e il curricolo italiano e quello europeo ed extraeuropeo.

In definitiva l'apprendimento attraverso i media potrebbe avere grande spazio nello sviluppo e nel miglioramento delle prassi di insegnamento-apprendimento, fino a diventare curricolare, grazie ai benefici e vantaggi in termini di interazione, di collaborazione, di partecipazione; se introdotto nel curricolo in maniera partecipata e non impositiva, può vincere le diffidenze di alcuni insegnanti, tanto da far sì che i loro studenti diventino co-creatori del sapere.

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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 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).

	Mean	SD	Rodríguez de Dios (2018)	
			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).

	Mean	SD	Estebanell-Minguell et al. (2021)	
			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).

	Mean	SD	Rosen et al. (2013)	
			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	Martín-Perpiñá et al. (2019) 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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New media literacies for transmedia learning. How students are regarding their transliteracy in Italian *licei classici*

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New media literacies for transmedia learning. How students are regarding their transliteracy in 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 the 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 that Italian students of *licei classici* have in order to face these new formative contexts that are coming. For this purpose, two quantitative instruments (one referring to digital attitudes and skills and the other corresponding to transmedia attitudes) were administered to 400 students. The results obtained show that the majority of young people have access to devices and that they prefer mobile phones. Furthermore, although they are inclined towards transmedia practices, they have certain difficulties in becoming the creative part that collaborates in a digital citizenship.

Subjects: Multimedia; Information & Communication Technology (ICT); ICT; Secondary Education

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PUBLIC INTEREST STATEMENT

Description: The spreading of ICT is opening new learning possibilities in schools. One of these is transmedia learning, which links to the idea of media convergence and the motivational potential of transmedia narratives. These are initiatives not only by teachers, but also by national and international institutions and governments. In this context, this article analyses the skills and habits of Italian licei classici students to cope with these new learning approaches: they seem often a highly technological generation, but this does not necessarily mean they are able to participate fruitfully in these digital learning experiences. We administered different questionnaires (one on digital attitudes and skills and one on transmedia attitudes) to 400 Italian students. The results show that most students are generally inclined towards transmedia practices; therefore, transmedia learning could be appropriate for them; but they have some difficulties in producing on-line content and to collaborate in a network. Therefore, we must help them to develop also the skills they require for these transmedia learning experiences.

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

1. Introduction

Despite the publication in 2015 of the *Piano Nazionale Scuola Digitale* (hereinafter PNSD), the Italian education system, like schools all over the world, still faces a major challenge in terms of the need to ensure the development of students' digital skills, with all that this entails, as set out in Law 107/2015. In fact, beyond the conceptual frameworks relating to the digital competences or literacies that the education system must guarantee (Ugolini, 2016), the PNSD marks a positive break with the past, with a significant commitment to the inclusion of Information and Communication Technologies (ICT) in everyday school life (Cappello, 2019) in a transversal way, permeating all learning processes and in all educational levels. In this sense, the desired change is related to the educational actions in the rest of Europe (and generally all over the world), which looks for to concretize 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 competences they need to participate in the Knowledge Society (Fabiano, 2020).

The challenge is related to the classic split between the school and personal reality of students whose ways of learning in the academic environment are not usually transferred to their informal everyday life (Esteban-Guitart, 2016). All this takes place in a context of the rise of participatory culture in which we do not only consume culture, but also produce it in a participatory way (Jenkins, 2006). Given this situation, it would be interesting to blur the lines between the formal and the informal in order to create a continuum of efficient and convergent media learning.

In this context, it is possible to consider that transmedia learning can offer an interesting approach, that can allow us to set a bridge between the formal and the informal learning strategies; and this can be an opportunity to satisfy to the need for adolescents to learn that citizenship is put into practice by participating in an also digital society; a society where they produce and not only consume, and must do it in an ethical, responsible and critical way (González-Martínez et al., 2019). Transmedia learning is a socioconstructivist and connectivist learning approach that guides us towards the production of content guided by a narrative, where both analogical and digital resources are used and alternate (Dickinson-Delaporte et al., 2020; Fleming, 2013). It can also represent a clear opportunity to revitalize classical culture within the educational system (and, therefore, in society itself, where it is in decline). And the fact is that, although its eternal vitality lies in its commitment to universal vocation (in the themes, in its approaches; Cavalli Sforza & Cavalli Sforza, 2007; Ferrarotti, 2014), there is no doubt that one of the disciplinary problems has its cause in outlooks that are not very updated, 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.

However, there is no doubt that both transmedia learning and action in this participatory culture that we live in involve particular skills and abilities, which convulse the very concept of digital competence and lead us to ask ourselves whether Italian teenagers possess those *new media literacies* (Jenkins et al., 2009) that are essential for both media convergence and the leap from media consumption to creation (here, for learning purposes). This paper aims to analyse of the transmedia literacy of Italian students in the context of the *licei classici*.

2. Theoretical framework

2.1. Transmedia and transmedia learning

The term *transmedia*, as we understand it, was coined by Marsha Kinder in the 90s (Kinder, 1991) and has known an important dissemination since Henry Jenkins used it in his reflections about

convergence culture in the 21st century. Specifically, it stems from fan culture and the emergence of cultural media phenomena in which consumers change their role and also become participants thanks to technologies. In this context, the concepts of media convergence and participatory culture appear (Jenkins, 2006). On the one hand, we can define media convergence as the overlapping and alternation between digital media in a non-linear but branching way. On the other hand, participatory culture refers to the participation of society in the process of digital creation through its devices. At this point, it is when we move from conceiving the consumer as a mere passive element to becoming a community creator (this whole process does not occur in an individualized way).

In the educational context, there have also been several definitions of the transmedia concept. The focus of most of these is a story or narrative that is produced through various media and different participants and participations (Chung, 2014; Fleming, 2013). However, it can also be a set of skills (developed or to be developed) that the individual must mobilize (Benedict et al., 2013; Wiklund-Engblom et al., 2013). And finally, it can also be understood as a learning strategy in which those involved must develop a narrative with educational objectives (Benedict et al., 2013; Dickinson-Delaporte et al., 2020). It is this last definition that is the focus of this paper.

Although there is no single definition of *transmedia learning*, the concept is supported by two pillars: the ideas of participatory culture and media convergence by Jenkins (2006), which provide the cultural framework; and the key ideas of socioconstructivism with Vygotskian roots (Biggs, 1996; Shepard, 2006) and connectivism by Siemens (2006), where we can find the pedagogical framework. Whithin them, learning experiences are focused on the the need for the student to develop a narrative; and in this process students can use the resources they have and they prefer (analogue and digital, mixed or alternated) and they do that in a community context, where they have no alternative to develop it (and to learn) than collaborate with their peers. This is a big statement, no doubt; and the recipe is quite complex at this moment, since some important elements have been put on the table. This learning approach is not a new one, of course; and it must be said that as a didactic model it is even vague, since it is indeterminate; but it does imply a new and potentially interesting way of approaching learning (specially from the digital perspective). Besides from these ideas, or to finish their development, the literature highlights some more elements: connections with enactivism, since learning experiences are seen as meaningful when students value them in relation to their own lives (Campalans, 2015); ludic elements, since quite often transmedia learning experiences include elements coming from gamified proposals (Barreneche et al., 2018); or, finally, a common link with foreign language learning, since sometimes transmedia learning seems a good strategy for achieving didactic linguistic goals at the same time the story is being developed (Rodrigues & Bidarra, 2015, 2019). It is also an opportunity (also a limitation) because transmedia learning can fit into multiple contxt and it is under construction according to the contexts where it is performed: within the educational institutions, but also outside them (with direct connection to what can be played in the classroom, like a complement to it; independently of formal learning), with different agents involved (teachers, educators in a wide sense and families), every educational level (early childhood education, secondary education, university studies or professional training). Therefore, transmedia learning shows always certain elements (media convergence, collaboration, narrative), but is concretized to some extent according to some characteristics of the context where it happens (Amador, 2013). Among the first ones, then, we can find processes of (trans)media convergence that imply user's participation, considered at the same time consumers and producers (prosumers) of their story or their cultural content. Users moved by their interest or passion (like fans), who alternate different media platforms to collaborate in the development of that story (Raybourn, 2014; Raybourn et al., 2019).

Particular, transmedia learning opportunities are born just from the possibility of concretizing pedagogical principles that are so often quite difficult to put into practice (constructivism, connectivism) in engaging experiences (intrinsic learning motivation), customizable (the story offers

different layers, opportunities, recurring learning experiences), harmonious with our surrounding digital context (but, at the same time, with no restrictions regarding specific technologies and very compatible with the analogical side of media and cultural dimensions).

2.2. Media education, digital competence and transmedia literacy

However, before considering the details of transmedia learning proposals, we must consider the nature of the subject who learns (in any context). As we 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, 2013; Anderson, 2014). 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.

In this moment, since we must take care of the economy of space, we cannot offer here a broad synthesis of the existing knowledge on the digital nature of citizenship within the Knowledge Society, although it may be very interesting. In this regard, research has already gone deeply exploring the relationships between young subjects and technology in their personal and academic roles (Bullen et al., 2011); and some research is also starting to be found related to those differences when learning experiences are formal or informal, institutionalised or not (Cappello, 2019; Scarcelli & Riva, 2016). However, we must define briefly what we understand by digital competence and why it is different from our concept of *transliteracy*. Regarding this, we can start in the concept of *media literacy* in the Italian context, understood like the ability to use digital media and languages (Buonauro & Domenici, 2020). To this, we can add, in a key position, the need to improve the strategies of information analysis, content curation and critical reflection (Ranieri, 2019). In the background of these reflections, we can see a complex myriad of theoretical frameworks and approaches to *digital skills* (Sánchez-Caballé et al., 2020) which cannot even be summarised here.

Considering the previous ideas and the increasing number of approaches and definitions that have been made on the concept of digital competence, a convenient initial point can be the year 2006, when the European Commission included it among a list of key competences we need as citizens for lifelong learning. By that moment, digital competence was the confident and critical use of information and communication technologies in different domains of citizens' daily lives (work and leisure, for instance). In 2018, also the European Commission went a step beyond this definition and considered this competence essential for any citizen of the 21st century. However, after those statements, the question should be: what do we need to be digitally competent citizens?

Obviously, this question can be resolved in very different ways, since there is a large number of frameworks and models that try to solve it and the referents chosen for doing that may vary slightly. For doing that, according to the DigComp model (currently in its 2.1 version), commonly recognized in Europe; Carretero et al., 2017), a digitally competent citizen shows technical, cognitive and application skills when performing with digital technologies (in the digital worls). And it implies skills referring 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 approaches, we must think that these new digital ecologies offer new ways of learning; and as a consequence of that, we must also consider that students may need a special competence (or specific skills) to successfully perform through those media platforms and, at the same time, fold and unfold the thread of the development of the story. That is what we call *transmedia literacy* (*transmedia literacy*, or *transliteracy*; Alper, 2013; Fraiberg, 2017; González-Martínez et al., 2018; Kline, 2010), whose components are still to be determined. Different skills are listed as important for living the new digital cultural contexts: negotiation,

networking, transmedia navigation, judgment, game, collective intelligence, performance, or distributed cognition. In our reflection on transliteracy, we must also foresee a certain age cut-off, which makes it more close to young people than to older people. This is the direction of the research, for example, of the Transmedia Literacy project (Scolari, 2018), which investigates how a new way of consuming and producing can be found among adolescents, and attempts to go beyond the classic analyses of media education. His ethnographic analysis focuses on adolescents' (trans)media literacy in the formal and informal spheres and, from there, suggests a new taxonomy of elements of this transmedia literacy. With all these practices, adolescents undoubtedly learn; and this leads us to reflect on which of these practices and skills are most useful in the relationship between transmedia and education.

However, besides these lists and analysis, no prioritization is offered among those skills, and their special incidence from an educational perspective is still to be explored in depth. So, we can consider as a reference the proposal by González-Martínez et al. (2018), who highlight four particularly important elements: transmedia navigation, presumption (the movement from consumers to the alternation between media consumers and producers), collaboration (and interaction among peers); and, finally, critical skills (the ability to curate content and evaluate information).

2.3. Transmedia learning, a possible link between two worlds

In recent years, some educational research on Information and Communitacion Technologies (ICTs) has highlighted and decried with great effort the gap between adolescents and young people' informal learning practices (and the literacies they show and need) (for instance, fan groups, social networks and video games), and the learning processes that occur within the institutional context of the school (Bender & Peppler, 2019; Esteban-Guitart, 2016; Gee & Esteban-Guitart, 2019; Jenkins et al., 2009; Zhang & Cassany, 2019). This gap is undoubtedly related to the distance between, on the one hand, how adolescents learn (quite often using digital devices) in experiences where they decide what to learn and why to do it (Esteban-Guitart, 2016); and, on the other hand, those situations where the teacher offers the learning proposal in a completely institutionalized approach (Buonauro & Domenici, 2020). While the first experiences are engaging and completely satisfactory to young people, the second ones not always imply in the end meaningful learning for them (Esteban-Guitart, 2016).

However, we can agree that educational institutions must prepare for everyone's life and, therefore, for being digitally competent citizens (Fabiano, 2020), according to the European recommendations we highlighted above. Because of that, it is important to analyse the digital (and transmedia) literacy of Italian adolescents, especially when we consider that transmedia learning is an opportunity to effectively take care of the challenges we have ahead. In this sense, we don't know that much from research about the digital profile Italian teenagers: they are constantly connected (more than every other population cohort), and they are a complex and not uniform regarding their consumption habits (Gremigni, 2019); besides, it is not always translated into an important capacity or even an advantage from the perspective of social participation or cultural production. Finally, the research confirms a deep division between the different dimensions of adolescents' lives: personal, family and school. Of these, the worlds of family and school maintain relationships with vertical and unidirectional flows as far as digital technology is concerned: from parents and teachers to teenagers and not the other way around; in their personal world, on the other hand, technological practices are developed between peers (Scarcelli & Riva, 2016).

As we have seen, transmedia learning offers to a certain extent an opportunity to change this order, according to the goals that the school has been following from some years ago (and written, for instance, in the PNSD) without clear progress. For this, transmedia learning can allow us to go beyond the walls of the school and to engage adolescents with a learning approach that uses in a more cohesive way elements closer to their ecosystems. 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 present study has the following objectives:

- To identify the competences and the transmedia profile of Italian students of the *licei classici*, using different instruments (digital literacy, multitasking, transmedia profile, attitudes towards ICT).
- Determine which elements of these profiles can favour or hinder the implementation of transmedia learning strategies.

It also aims to answer the following questions:

- What is the transmedia profile of the Italian students of the classical lyceum?
- What elements of this profile favour or hinder the implementation of transmedia learning strategies?

3. Methodology

For analysing the universe of adolescent students, it was set to focus on an accessible and incidental sample formed by subjects from all courses at the *licei classici* G. M. Dettori and Siotto Pintor of Cagliari (Italy). Those subjects decided to voluntarily answer the questionnaire we proposed to them; it was administered in a single way and by an on-line channel, at the request of the research team and under the auspices and the supervision of the principals of the partici- pating high schools and the teachers involved. The fieldwork was performed between December 2020 and January 2021.

The *liceo classico* is part of the public education system in Italy. A *liceo classico* offers training in the different classical-humanistic fields (equivalent to what we know as baccalaureate on other different contexts). Besides, this educational itinerary also focuses on the development of scientific and logical-mathematical skills, scientific methodologies, art, and foreign languages. This educa- tional period is the step prior to the access to university and implies two general years and three years of specialization. In the first part of it, students take subjects related to Italian, Latin, Greek, geography, history and art history, mathematics, and science. The second period also include subjects such as literature (classical and foreign), philosophy or physics. In recent years, the *liceo*

Table 1. Characteristics of the participants		
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

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Table 2. Reliability indices (*Item discarded for analysis due to low reliability)		
Scale	**Variable**	**Crombach Alpha**
Literat (2014)	Collective intelligence	0.669
	Trial	0.693
	Transmedia navigation	0.691
	Display	0.742
Rosen et al. (2013)	Positive attitudes	0.660
	Anxiety and dependence	0.756
	Negative attitudes	0,686
	Multitasking trend	0.135*
Rodríguez de Dios (2018)	Digital Literacy	0.735

classico has been and option specially considered by girls, while boys are more inclined to take technical-vocational studies (in other kind of *licei*). As a matter of fact, for instance, in 2019, 60.5% of *licei classici* students were female according to the public information of the Italian Ministero dell'Istruzione dell'Università e della Ricerca.

In this context, a total of 402 informants answered 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, 20.5% were male and 0.4% chose not to be classified. By age, the majority of the sample was between 14 and 18 years old, and 21 and 25 years old, while less than 10% of the participants were above 26 years old. 56.3% belonged to the Liceo C. Siotto Pintor and the rest, 43.7%, to the Liceo C. G. M. Dettori.

3.1. Instruments

For this research, it was decided to use two existing instruments, both from the conceptual sphere of *new media literacy* and media education, to which probing (non-psychometric) questions on the availability and consumption of digital resources were added, in order to better define the media profile of the informants. On the one hand, the *New Media Scale* (Literat, 2014) was applied, which develops the categories of Jenkins et al. (2009), in relation to the items of collective intelligence, judgment, transmedia navigation and visualization. On the other hand, the Media and Technology Usage and Attitude Scale, by Rosen et al. (2013), was applied in order to profile their attitudes towards the use of technology in general contexts; this scale provides information on positive and negative attitudes, preference for multitasking and anxiety and dependence on ICT. To delve deeper into multitasking habits, and insofar as it is a skill linked to transmedia processes, we also applied the Multitasking during homework scale, by Martín-Perpiñá et al. (2019). And, finally, to know their level of digital literacy, we selected the Digital Literacy Scale by Rodríguez de Dios (2018), which provides information on technological, personal safety, critical, device safety, informational and communicative skills; it is a scale developed in convergence with the theoretical models with European validity in digital competences and specially designed for adolescents. This questionnaire was administered in digital format with informed consent.

Regarding data treatment, we managed those with the SPSS 17.0 statistical package. Significance tests were a chi-square test for the non-parametric responses and an ANOVA test for the parametric responses, with confidence levels of 0.05. As for reliability, our results are considered acceptable for the ranges commonly considered in the educational field, as can be seen in Table 2.

4. Results

In order to better organize the results, we first offer some general characteristics on the availability of technological resources and the usage and consumption profiles; and secondly, we will look at the digital profile indicators.

4.1. Overview

From a general perspective, and in terms of the resources available to the participants in the research processes, they mainly have mobile devices (98% of the participants) and mostly with an IOS operating system (72.6%). These types of devices are the ones mainly used to connect (when at home 60.5% choose to connect via mobile devices, at school 6.4%). On the other hand, the computer is the option used by 21.8% of students when they are at home and 3.2% when they are at school. In terms of time spent online: 40.7% of students spend 3 to 5 hours a day; 35.5% spend 6 to 8 hours a day and 11.5% consider that they are online all the time. Part of this online time is spent using social networks, with 93.5% of students having such profiles. In fact, the social network they use the most is Instagram (91%) and, in terms of instant messaging, they prefer WhatsApp (98.5%).

If we follow this general analysis by focusing on the consumption profiles of the participants, we can consider that they mainly use mobile devices (such as smartphones and tablets) for: study-related activities (85.1%), listening to music (88.3%), reading novels or newspapers (23.4%), watching movies or series (64.2%), mail (65.2%), photography (taken or shared, 71.6%), shopping (52%), or social networks (82.1%).

From a more social perspective and in terms of the contacts they accept on networks, 56.5% say that they only accept people they previously know and, in addition, 53.5% say that they verify the real identity of the subjects they are in contact with on the Internet. With these contacts, students establish conversations around: topics related to school (53.5%), sports (32.6%), music (65.2%) or leisure in general (books, movies, series, TV, 61.3%); anecdotally, there is little discussion about politics (1%) or the environment (0.5%) or current affairs (0.2%). In reference to safety on the Internet, and in this type of online relationships, 80.9% consider that they have never felt unsafe in situations of attacks on the Internet and 83% state that they have never suffered gooming, sexting or cyberbullying experiences.

To conclude this general analysis, we focus on the more academic component of the use of these devices and social networks. Participants state that they use these digital resources for the following activities: 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 of school (35.8%). most participants consider that they use them to extend class activities (61.4%). As far as information is concerned, they mainly use Wikipedia (84.3%). In reference to the fields of study they are most concerned about are mainly the historical-geographical (78.9%) or linguistic (61.4%), than from the scientific-mathematical (51.5%) or technical-artistic (20.6%). Finally, as regards the type of activities related to the teaching-learning processes in which they prefer to be involved: those involving foreign schools (64.4%), extracurricular realities (47%), or students from other groups (33.8%) or from other schools in the surrounding area (34.3%).

4.2. Digital profile

Regarding digital literacy according to Rodríguez de Dios (2018), we find the values reflected in Table 3, in which we also incorporate the reference values. In it we can see that while in some dimensions our informants' values are slightly higher than those documented by this author (for example, personal safety or critical skills), in others they are especially lower (above all, techno-logical or informational skills). In addition, the standard deviations (which provide information on the homogeneity of the group) are lower (in some cases considerably) than the reference values.

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Table 3. Digital literacy scale			Reference values	
	mean	**SD**	**mean**	**SD**
Technological skills	3.36	0.44	3.80	0.73
Personal safety skills	4.12	0.63	4.09	0.83
Critical Skills	3.73	0.63	3.43	0.74
Device security skills	3.20	0.87	3.25	0.93
Information literacy	2.62	0.67	3.37	0.70
Communication skills	3.52	0.61	3.69	0.58

If we look at the behavior of the scale according to the profile variables, we see that there are significant differences in some dimensions according to gender (Figure 1). Thus, male informants have more confident patterns in the safe use of devices (3.1 for women, 3.5 for men; 3.25 was the reference value), but are more confident in the management of information (2.67 for women, 2.47 for men, 3.37 was the reference value).

Age (or school group) is also interesting, although in a different sense, as shown in Figure 2. Here we can see an evolution in crescendo in all dimensions, with a certain curve (or regression) in the last year (perhaps explainable by maturity and awareness, which modulates the assessment of personal digital skills). In any case, there are significant differences both in technological skills and in personal security, so that students in the last year feel more capable than those in the first year.

Related to this, we find both the transmedia and attitudinal profiles. Regarding the four dimensions of transmedia analyzed here (Table 4), our informants are especially inclined to transmedia navigation and to everything that has to do with the evaluation of the information found on the network (judgment), while they present more contained values both in the community dimension (collective intelligence) and in the assumption of other identities (visualization). As in the previous case, we offer the reference values, in this case from Estebanell-Minguell et al. (2021):

Figure 1. Digital Literacy Scale according to gender (* significant differences <0.05).
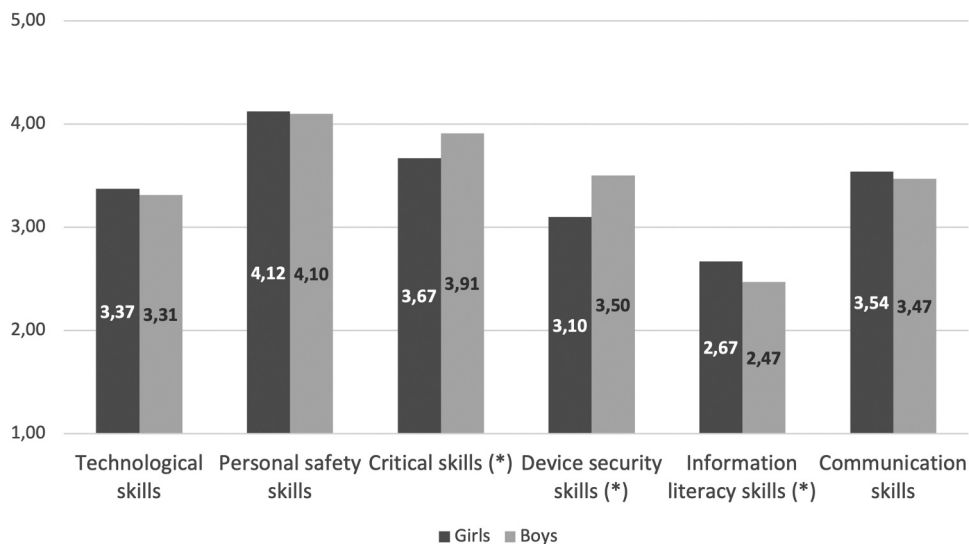
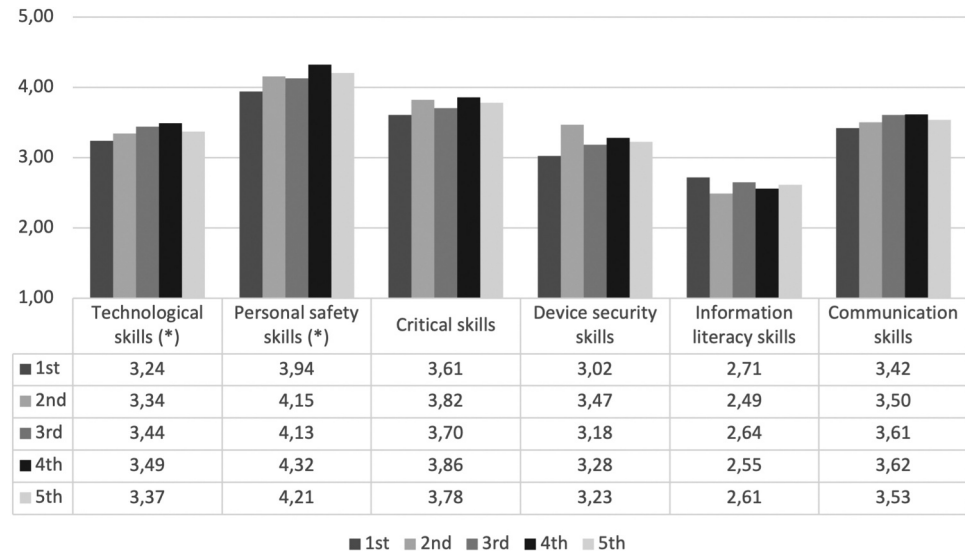**Figure 2. Digital Literacy Scale according to age (* significant differences <0.05).**

	Technological skills (*)	Personal safety skills (*)	Critical skills	Device security skills	Information literacy skills	Communication skills
■ 1st	3,24	3,94	3,61	3,02	2,71	3,42
■ 2nd	3,34	4,15	3,82	3,47	2,49	3,50
■ 3rd	3,44	4,13	3,70	3,18	2,64	3,61
■ 4th	3,49	4,32	3,86	3,28	2,55	3,62
■ 5th	3,37	4,21	3,78	3,23	2,61	3,53

■1st ■2nd ■3rd ■4th ■5th

Table 4. Transmedia profile				
			Reference values	
	mean	SD	mean	SD
Collective intelligence	3.89	0.61	4.12	0.56
judgment	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

Table 5. Attitudinal profile towards ICT				
			Reference values	
	mean	SD	mean	SD
Positive attitude	3.64	0.51	3.66	0.84
Anxiety and dependence	2.89	0.95	3.15	1.09
Negative attitude	2.89	0.81	3.35	0.92

Also in this case we find interesting differences in relation to gender (always higher values for girls than for boys), although only in relation to transmedia navigation are the differences statistically significant: in this case, girls indicate higher values than boys (4.05 for girls, 3.83 for boys; 4.00 was the reference value). There is also a note regarding age, although in this case there is no general pattern (and informants in higher grades do not always show themselves to be more transmediated than those in lower grades). In this case, the differences are significant only in the judgment dimension, in which students in 5th grade score 3.98 while those in first grade score 3.82 (the reference value was 3.88).

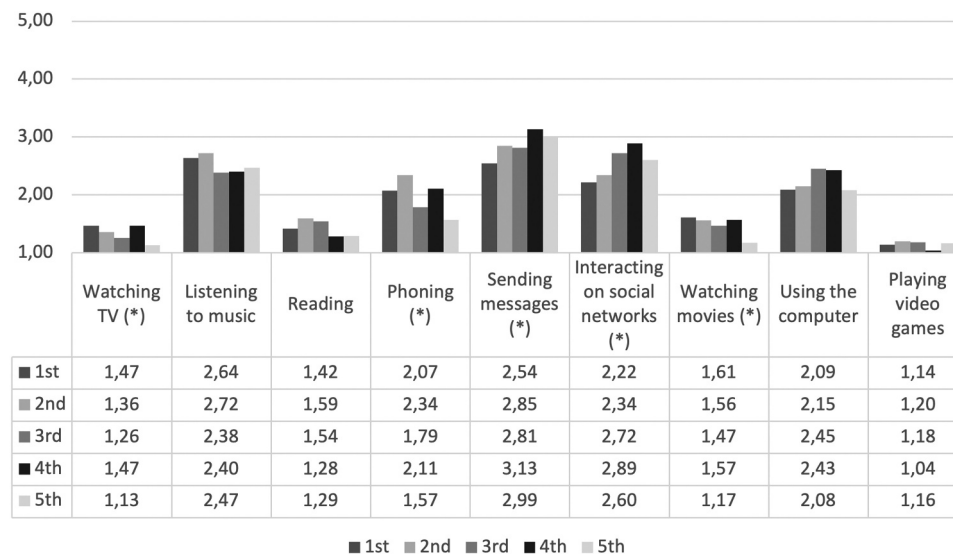| Table 6. Rates of multitasking during homework			Reference values	
	mean	**SD**	**mean**	**SD**
Watching TV	1.34	0.73	2.20	1.16
Listening to music	2.53	1.22	3.11	1.10
Reading	1.43	0.91	2.11	1.13
Phoning	1.96	0.97	2.15	1.14
Sending messages	2.81	1.05	3.08	1.08
Interacting on social networks	2.52	1.05	2.53	1.24
Watching movies	1.48	0.85	2.07	1.23
Using the computer	2.23	1.03	2.61	1.16
Playing video games	1.15	0.51	1.79	1.14

Regarding attitudes, we find interesting elements if we compare them with the reference values (Rosen et al., 2013) Table 5: on the one hand, the dimension of positive attitudes is on a par; on the other hand, the values of the dimensions of anxiety and dependence or negative attitudes are significantly lower. All of this makes up an attitudinal profile that is favourable to ICTs as a whole.

Also in this case we found some slight differences in terms of gender and age. In relation to gender, women present significantly higher values than men, both in anxiety and dependence (2.96 women, 2.66 men, 3.15 was the reference value) and in negative attitudes (2.97 women, 2.64 men, 3.35 is the reference value). As a whole, the negative attitudes of the whole sample are lower than those indicated by Rosen et al. (2013); but it is clear that in the case of the informants this is especially intense. As for age, there is no clear pattern linking attitudes with age; it would seem that, again, we should pay attention to negative attitudes, which increase with age (2.79 in first grade, 3.17 in fifth grade; 3.35 is the reference value). Therefore, as we said in terms of gender, all the values in our sample are lower than the reference values for negative attitudes, but they are especially so in the youngest students.

Finally, we can look at the multitasking profile (even more interesting, insofar as the reliability data have led us to discard the corresponding dimension of the previous instrument), since *multi-tasking*, as stated in the New Media Literacies of Jenkins et al. (2009), is a skill closely linked to transmedia in general and transmedia navigation in particular. In this sense, as shown in Table 6, the values of the sample are significantly lower than the reference values (Martín-Perpiñá et al., 2019), which indicates that the students of our two *licei classici* are 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 may be linked to the school itself, the values are appreciably lower. As in the reference study, the standard deviations are very high, which speaks of an important diversity of the sample in relation to multitasking.

There are few significant differences in this case in relation to gender, although the girls message more than boys (girls 2.88, boys 2.60, the reference value was 3.08); in any case, in the rest of the situations we do not even find a constant gender pattern. In terms of age, we do see some interesting issues. On the one hand, it would seem that in the more individual complementary activities (watching TV or movies) there is a tendency for students to decline in them as they move up the grades (the values of younger students are lower than those of older students); and, on the other hand, the social dimension (messaging and social networks) increases as they get older. An exception to this is the last of the situations in which there are significant differences according to age, talking on the phone, in which there is also

Figure 3. Differences in multi-tasking by age (* significant differences <0.05).

	Watching TV (*)	Listening to music	Reading	Phoning (*)	Sending messages (*)	Interacting on social networks (*)	Watching movies (*)	Using the computer	Playing video games
1st	1,47	2,64	1,42	2,07	2,54	2,22	1,61	2,09	1,14
2nd	1,36	2,72	1,59	2,34	2,85	2,34	1,56	2,15	1,20
3rd	1,26	2,38	1,54	1,79	2,81	2,72	1,47	2,45	1,18
4th	1,47	2,40	1,28	2,11	3,13	2,89	1,57	2,43	1,04
5th	1,13	2,47	1,29	1,57	2,99	2,60	1,17	2,08	1,16

a decreasing trend (in curve) between the first and fifth grades. All of this is shown in Figure 3:

5. Conclusions

As a first conclusion, we confirm wide access to devices that facilitate access to the network. In this specific case, practically all the informants of the *licei classici* have a phone, tablet or computer that allows them to access the information found on the network and to have a notable presence on it, a sine qua non condition for any transmedia reflection. And, going a step further, their preferred tools or resources or, failing that, the ones they use most frequently, are those that ensure ubiquity (mobile phones or tablets) and omnichannel connection. This same situation seems not to be exclusive to the Italian context, for example, in a study conducted with Spanish first-year university students the results obtained were similar (Sánchez-Caballé et al., 2019). Likewise, the 2018 report of the Association for Media Research indicated that there is currently a natural trend towards the use of this type of devices.

In this sense, when they decide to make use of ICT they tend to have a positive attitude towards it. If this information is viewed from an academic perspective, Edmunds et al. (2012) indicate that students have a positive predisposition towards the use of ICT, especially when these have a direct and obvious application to the academic tasks they have been given. However, their attitude in academics is also closely linked to the difficulty of the task or content they have to deal with (Erdener & Y Kandemir, 2019). In this case, students have not transferred a significantly lower score in reference to anxiety and dependence on ICT with respect to Rosen et al. (2013).

Regardless of all that has been explained so far, the students present a good level of digital competence, a fact that coincides with other studies of similar characteristics such as those of Son et al. (2017) or Maderick et al. (2015). In addition, specifically, the group of studies analysed stands out especially in skills related to personal safety and critical thinking. On the other hand, they show difficulties in relation to skills linked to information and technologies. It is precisely this last skill, the one related to technologies, which is one of those that the HORIZON reports consider essential to include in current curricula (Becker et al., 2017).

As for the transmedia profile, although it is true that they have a considerable predisposition for transmediality, they are contained in collective intelligence and the assumption of other identities. This circumstance is even shocking: on the one hand, because the item referring to transmediality is closely

related to the informational skills in which they score relatively low in digital competence; on the other hand, because this type of transmedia practices is normally related to multitasking, although our informants do not tend to do so, and less so as they grow up (perhaps due to the pressure of a very traditional educational system, the Italian one). In other words, on the one hand we see elements that make us think that transmedia learning is well received (both competency and attitudinal), which brings us to the sphere of Fleming (2013) or Rodrigues and Bidarra (2019); but on the other hand we see that idea of Esteban-Guitart (2016) in relation to the splitting of personal and academic practices is still valid and we cannot take for granted that these positive elements for transmedia learning are necessarily sufficient (and they are sufficient for the whole student body, which we have confirmed to be diverse). In short, although in some ways students are becoming more and more accustomed to technology-mediated and transmediated contexts, there are still many challenges to be faced in order to usefully include these didactic strategies in E-A processes, as Scolari et al. (2020) point out, is considerably complex. Finally, a brief reflection about this research limitations and strengths. Undoubtly, our results only refer to two specific contexts and, therefore, the knowledge provided by this research should be generalised very carefully. However, analysing the transmedia profile of these adolescents in Italian *licei classici* clarifies some doubts about how the actions envisaged in digital education plans (such as the Italian PNSD) can be deployed: not only in relation to media education in a broad sense, but also as an opportunity, in this context, to design innovative didactic experiences with the use of technologies. This is where we can find the importance of these findings: our students can participate in these experiences, and we can even expect them to find them motivating; but we must consider that they are diverse in terms of their digital competences, and we must plan to accompany them also when acquiring them. And maybe that's also a way setting a bridge bewteen their academic environment and their informal everyday life, according to Esteban-Guitart's (2016) initial ideas.

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

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1 # Transmedia, learning and gender in the context of Italian *licei classici*

2 ## Abstract

3 This paper analyses the digital profile of Italian licei classici students in terms of gender,

4 focusing on the competences required by transmedia learning strategies. To this end, a

5 quantitative methodology is applied to 400 adolescents based on a questionnaire

6 composed of indicators in the field of new media literacies. Italian teenagers present

7 positive digital skills and attitudes towards transmedia, higher than the reference values

8 for each indicator; moreover, in terms of gender, the traditional differences are generally

9 neutralised (and even women present higher values than men). From the perspective of

10 transmedia learning (customisable, flexible and technically undemanding), the values in

11 which women are more adept (information skills and transmedia navigation) mean that

12 learning opportunities favourable to them. Therefore, the context of licei classici can not

13 only host transmedia learning experiences, but there transmedia learning can also be a

14 proposal against the traditional gender digital divide.

15 ## Keywords

16 transmedia; media education; gender divide; digital skills; transmedia learning.

17 ## Introduction

18 The first article of the Declaration of Human Rights affirms that all human beings are

19 born with freedom and equality in both rights and dignity. However, the reality is far

20 from such a declaration and is not so simple. Especially regarding at gender, numerous

21 research and reports show that there are striking differences in several directions. For

22 example, the General Labour Organisation (2019) points out that women in the 21st

23 century still face difficulties in gaining access to both the labour market and

1

1 management positions. In addition, women are often penalised in the labour market due

2 to factors such as caregiving or the conception of offspring.

3 　　　In the labour market described above, and more specifically in the STEM

4 (Science, Technology, Engineering and Mathematics) field, women do not find their

5 corresponding equal representation either, given that it is a market dominated by men.

6 In contrast, the male profile prioritises goals aligned with success (Sáinz et al. 2017).

7 The low presence of women in the technological work context and in their respective

8 university studies can be partially explained by social constructions (also educational

9 ones) and end up directly affecting the self-perception of women in STEM fields (Bian

10 et al., 2017). In fact, this can already be observed in secondary education, where

11 students show differences in their attitudes towards the use of digital technologies: boys

12 tend to view their technological skills more positively than girls. In contrast, at this age,

13 young women have a lower self-image of their technological skills (Colley and Comber,

14 2003). To address these inequalities, one of the main pillars is education, which must

15 work to increase the number of women who have access to and are accessing training in

16 science and technology (Antoninis, 2020) and which must offer them, too, opportunities

17 to develop along the paths they freely choose (and also those that are most comfortable

18 for them).

19 　　　The challenge of gender equality, moreover, has become more evident than ever

20 at a time in history when having access to technology and developing digital skills is

21 essential to remain integrated and form part of 21st century society (OECD, 2017). A

22 society in which culture has become participatory (Jenkins, 2006), and is not only

23 consumed, but produced collaboratively, eliminating the barriers between the formal

24 and the informal (Buonauro and Domenici, 2020). Further, all the information presented

25 above, together with the situation arising from COVID-19, has highlighted the

2

1 importance of using digital technologies appropriately (Pew Research Center, 2020).

2 Consequently, in this digitalized context of media convergence, media learning can be

3 beneficial to the extent that it blurs the boundary between the formal and the informal in

4 order to show that citizenship is exercised by participating, consuming and producing

5 information both digitally and analogically (González-Martínez et al., 2018). In other

6 words, transmedia learning can be defined as learning with socio-constructivist and

7 connectivist roots that leads participants to the construction and consumption of a

8 collective history (Dickinson-Delaporte et al., 2020; Fleming, 2013). Precisely because

9 of this flexible and dynamic component, linked to the digital but not particularly a

10 technical, transmedia learning can be an opportunity from the point of view of universal

11 learning design (Alba Pastor, 2016), and it can be an opportunity for students.

12   For this reason, this research aims to understand the profile and digital skills of

13 the students of the *licei classici in terms of* gender, with a focus on the potential of

14 transmedia.

15 **Conceptual framework**

16 *Gendering digital technologies*

17 As we have seen previously, when the subject of technologies is approached from a

18 gender perspective, there are usually two main axes that underpin the debate. On the one

19 hand, there is the difference in digital competence (DC) itself, as different studies

20 indicate that it is female people who tend to have a lower level of development in

21 relation to male people, at least from a self-perceived perspective (De Moya et al., 2011;

22 Prendes et al., 2019).

3

1   On the other hand, there is a more structural and community issue, which has to

2   do with most men still dominating scientific and technical studies, especially in the

3   STEM field (Stoet & Geary, 2018). In addition, this fact is transferred directly to the

4   labour market, as most positions are filled by men, especially in positions of

5   responsibility (International Labour Organisation, 2019). Even so, regardless of whether

6   women do not choose to study in these areas or opt for these job positions, as indicated

7   by the European Schoolnet (2018), the grades obtained in STEM subjects are often

8   equal among students of both genders. Thus, all points towards to a digital divide in

9   access but not in performance.

10   Based on the above, it should be noted that in order to address and better

11   understand such a situation of inequality, it is essential to know the reasons why these

12   differences occur. As Wang and Degol (2017) point out, some of the main ones are: (1)

13   labour market and occupier interests; (2) the role of women in society; and (3) societal

14   beliefs about the digital skills of each gender. This last item has a direct influence on

15   students' self-perception of their own digital skills: as Bian et al. (2017) indicates, this

16   perception starts to materialise around the age of 6 and usually are boys who self-

17   perceive themselves better than girls. Moreover, this digital gender gap is perpetuated

18   and can be further reinforced later in secondary school. At this educational stage, this

19   gender digital divide can imply a different choice when it is necessary to choose

20   between a more scientific-technological or one belonging to humanities or social

21   sciences (Vázquez-Cano, 2017), or can have as a result different levels of self-

22   perception of DC at the university stage (Flores-Lueg & Roig-Vila, 2017).

23   In any case, and regardless of the reason, there is clearly a situation of inequality

24   with strong implications which makes women a more vulnerable group, not only in

25   terms of their self-perceived skills and labour market insertion, but also in their

4

1 personal, civic and academic dimensions. For example, if attention is focused on the use

2 of digital technologies and social networks, usually young girls are those who are at

3 greater risk of using them excessively (Malo-Cerrato et al., 2018) and who find

4 themselves in situations of cyberbullying with more harmful consequences (Donoso-

5 Vázquez et al., 2017).

6 　　　Furthermore, while it is clear that the root problem does not lie in the skills

7 available to women, it is important to intervene to ensure that they are not left out of the

8 labour market. Given that the jobs on offer today increasingly require digital skills

9 (European Commission, 2016). To this end, organisations such as the International

10 Labour Organisation (2019) or the OECD (2017) indicate that it is essential to carry out

11 reports and analyses, campaigns to promote equality, infrastructure improvements to

12 achieve equal participation of women in the labour and technological context and to

13 facilitate access to training and resources from early childhood onwards with gender

14 equality.

15 　　　In short, it is clear that there is a need to improve training in technological skills

16 and to combat gender stereotypes (UNESCO, 2017). Even so, it should be noted that

17 this type of debate is becoming partially obsolete, insofar as expressions relating to

18 gender identity have become a topic that is increasingly on the agenda and is now open

19 to more realities than binary gender (Quinan and Hunt, 2021), which will have to be

20 seen how they reconcile and overlap with this general vision of gender and ICT.

21 　　　Yet, in addition to structural issues, we must speak of a gender digital divide.

22 Clark and Gorski (2002) in their classic text call the gender digital divide, consider that

23 there are three major gaps: (1) gaps in support and encouragement to value (as their

24 own) and penetrate technologised domains; (2) gaps in how women and men use the

5

1 Internet (and technologies) differently; and (3) gaps in access to digital content and

2 culture that is not hostile to women.

3 In this sense, Gil-Juárez et al. (2012) say that the digital divide can be very

4 heterogeneous in terms of gender: for some groups of women it is closing while for

5 others (e.g. female university students in scientific and technical fields) it has been

6 neutralised. The gender digital divide is thus not linear and at the macro level it even

7 seems to be non-existent (e.g. when analysing the gender digital divide in EU member

8 states, Elena-Bucea et al. (2020) conclude that there is no difference in their access to

9 public administration e-services or social networks). However, it is clear that the gender

10 gap in no way conditions how we get to this point: perhaps women who are already in

11 the STEM field have neutralised the difference in terms of digital skills and are as

12 competent as their peers; but it is clear that there is a gap that prevents women from

13 accessing the STEM field on equal terms and that in this there is undoubtedly a bias (or

14 prejudice) according to which the technical (including the digital) is unsuitable for them

15 (Palomares-Ruiz et al., 2020), which ends up discouraging them from becoming digital

16 references in their communities. In a similar vein, Sánchez-Prieto et al. (2020) in

17 relation to the general digital skills of in-service teachers: on the one hand, it would

18 seem that gender is not as productive a variable as would be expected (the digital skills

19 of the sample are average, and there are no significant gender differences in them),

20 although there is no doubt that, as in all professional sectors, even in teaching, which is

21 so feminised, the gender gap exists (in this respect, for example, Ruiz-Palmero and

22 Sánchez-Rodríguez (2010) did not observe significant differences from the digital point

23 of view between centres coordinated by men or by women); but the coordinators are

24 mostly men, which speaks of this liquid duality of the gender and ICT binomial).

6

1   *Transmedia, digital competence and media education*

2   Once the gender digital divide has been addressed, in order to analyse the possibilities

3   for the latter to become a tool for transforming the former, we need to introduce other

4   concepts that concern us, transmedia learning and media education,.

5   The concept of transmedia was originally coined by Henry Jenkins in the 1990s

6   in the heat of the flowering of fan culture and media phenomena in which its consumers

7   changed their role to also become participants (and producers) thanks to the use of

8   technologies. This is the birth of the concepts of media convergence and participatory

9   culture (Jenkins, 0206). Firstly, media convergence can be understood as the

10 overlapping that occurs in digital media in a non-linear but sequential and non-

11 sequential way. Secondly, participatory culture corresponds to that type of participation

12 in society that involves a process of creation by the individual using his or her own

13 devices. The union of these two concepts has implied the reconception of the media

14 consumer, who ceases to be passive and becomes a user who, in addition to consuming,

15 contributes, creates, and shares content. Moreover, over the years, this definition has

16 been adapted to the educational context and transmedia has become a didactic strategy

17 (Dickinson-Delaporte et al., 2020).

18   On these two pillars, media convergence and participatory culture, the cultural

19 framework of transmedia learning is anchored. In addition, from a pedagogical

20 perspective, it is built on the sociocstructivist ideas of Vigotstky (Biggs, 1996) and the

21 connectivist ideas of Siemens (Siemens, 2006). Based on all of this, teaching-learning

22 experiences (E-L) can be based on the need for the learner to develop a story using the

23 available resources that he/she likes the most and sharing it in a community context,

24 which implies collaboration in order to build knowledge. This initial definition

25 amalgamated with more contemporary nuances such as the possibility of integrating

7

1　playful elements (Barreneche et al., 2018) and the ubiquity of current devices and omni-

2　connection (mobile phones or tablets) (Romero-Rodríguez et al., 2021) turns transmedia

3　into an opportunity for the construction of permeable learning beyond the educational

4　centre (Amador, 2013). Finally, in addition to its novelty and its potential attractiveness

5　for younger students, it stands out for its flexibility and possibilities for personalisation

6　(which means that each subject can decide which transmedia path they want to follow

7　and which technological resources they want to use to follow it).

8　　　However, what do learners need to participate in such an transmedia teaching-

9　learning process? To participate in such a process, in which content must be navigated,

10　consumed, contributed to, created and shared in both digital and analogue formats

11　(Jenkins et al., 2009), we would say, it is essential to have digital competence in a

12　general sense and what the Jenkinsian called new media literacies. The reason for this is

13　that digital competence is a set of knowledge, skills and attitudes that citizens of the

14　21st century must develop in order to be part of society (Sánchez-Caballé et al., 2021).

15　The requirements for a citizen to be considered digitally competent may vary given that

16　there are numerous national and international frameworks that seek to define the

17　elements that make up DC. For example, taking the DigComp 2.1 framework as a

18　reference, it can be considered when it provides skills related to: (1) information and

19　data literacy; (2) communication; (3) content creation and development; (4) device

20　security and safety; and (5) technical problem solving (Carretero et al., 2017).

21　　　At this point, it is worth looking at the extent to which the gender digital divide

22　takes the form of different digital skills. In this sense, for example, Cabezas et al. (2017)

23　in their study with university students say that men show higher levels of ICT

24　knowledge and management, while women are better in their attitudes towards them.

25　On the complexity of delving into the real nature of this digital gender gap, in fact,

8

1 Vázquez-Cano et al. (2017) state that men always seem to evaluate themselves more

2 positively than women in relation to their digital skills, although more in-depth studies

3 (with techniques using, for example, the Bayes factor) suggest that men and women are

4 equally digitally competent. That men feel more capable of using ICT is common

5 (Flores-Lueg and Roig-Vila, 2017); and this is even more pronounced the more we

6 focus on the purely technical dimensions of these skills (Aranda et al., 2019).

7   In relation to this non-linearity of digital skills in terms of gender (neither the

8 skills themselves are a totem, nor do women form a uniform group in this respect),

9 Grande-de-Prado et al. (2020) point out that in some dimensions women may

10 outperform men, for example in advanced use of word or image processors, respect for

11 intellectual property or familiarity in digital social environments. Or, on the other hand,

12 the digital gender gap may take other, non-competence forms, such as the dominance of

13 androcentric communication patterns (Clark and Gorski, 2002).

14   At this point it should be noted that, although it is true that participation in

15 transmedia ecologies requires digital competence, participation in these ecologies also

16 improves the skills needed to navigate in these discourses and to be able to follow the

17 thread of the stories (Alper, 2013; González-Martínez et al., 2018; Kline, 2010).

18   In short, transmedia learning is an option that, on the one hand, requires the

19 availability of DCs and, on the other, allows for the further development of these digital

20 skills. And, due to its flexibility and open approach, it can also be an open door to the

21 personalisation of learning (along the lines of universal learning design (Alba Pastor,

22 2016). This is because, in certain way, such practices allow for different modes of

23 representation and, above all, of action). In a context of a gender digital divide, it may

24 also make it possible to take advantage of those points where women feel stronger

9

digitally (Cabezas et al., 2017; Grande-de-Prado et al., 2020) to empower them and combat it.

Thus, in accordance with this idea and linked to the gender discourse presented previously, this study aims to understand the transmedia skills of Italian students of *licei classici* from a gender perspective and with a view to transmedia learning. All of this, at the service of the following research questions:

- What is the profile of students at the Liceo Classico Italiano in relation to digital competence, transmedia literacy and attitudes towards ICT?
- What are the gender differences that can be established in this profile?
- Can transmedia learning be a way to reverse the gender digital divide?

Methodology

Participants and context

We started from the population of Italian pupils attending the Italian *licei classici* and worked with an accessible and incidental sample attending the G. M. Dettori and Siotto Pintor schools in Cagliari (Italy). One group from each year group (1st to 5th) was invited to participate in the research; the final sample was drawn from among them, who voluntarily answered the proposed questionnaire, administered in a single, on-line format, at the request of the research team and with the authorisation of the management and teaching teams involved. Field access took place between December 2020 and January 2021.

In the Italian context, the classical secondary school is part of the Italian national public education system based on the transmission of educational values aimed at training the citizen on the basis of the classical-humanist tradition, which is its strength.

10

The cultural offer offered by the baccalaureate is also aimed at enhancing logical-mathematical and scientific skills, skills in the field of foreign languages, art, laboratory methodologies. The education at the *liceo classico* is not vocational, so it is oriented towards university entrance. At the lyceum the education covers two general years and a specialisation period of three years: in the first biennium, students study in depth: Italian, Latin and Greek Grammar, Foreign Languages, Geohistory, Mathematics, Science and History of Art. In the third year, subjects such as Philosophy, Physics, Classical and Foreign Literature are added. In the Italian education system, in addition to the liceo classico, established by the Legge Casati in 1859, there are other types of secondary school: Scientific, Human Sciences, Artistic, Linguistic, Music and Dance.

In the end, 402 informants responded to the request, among whom 400 useful answers could be consolidated (N=400). According to gender, 78.1% were female, 20.5% were male and 0.4% chose not to classify (Table 1). In recent years there has been a clear predominance of the female gender in the *licei classici,* due to the fact that male students are more inclined towards technical-vocational studies of which they constitute the majority. On this point, as far as the female vocation for the classical baccalaureate is concerned, 60.5% of the new students enrolled in 2019 are female, with peaks related to the specialisation Maieutic-Music amounting to 90.6% and reaching 88.6% in the specialisation Human Sciences. In the technical and scientific institutes, on the other hand, there is a decline in female vocations: 70% of students are male. The data are provided by the Ministry of Universities and Research, updated in April 2019 (according to the official source: MIUR, Gestione Patrimonio Informativo e Statistica: https:// www.miur.gov.it/documents/20182/2155736).

11

1   In terms of age, the age groups below 18 years are logically predominant (less

2   than 10% of the participants are above 26 years of age). 56.3% belonged to the Liceo C.

3   Siotto Pintor and the rest, 43.7%, to the Liceo C. G. M. Dettori.

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

4   Table 1. Sample and biodata (own elaboration).

5   *Instruments*

6   It was decided to start from different existing questionnaires, born in the heat of new

7   media literacies and media education; to these we added an initial (non-psychometric)

8   inquiry section on the availability and consumption of digital resources, to better define

9   the media profile. On the one hand, the New Media Scale (Literat, 2014), which

10   addresses Jenkins et al.'s (2009) categories of collective intelligence, judgement,

11   transmedia navigation and visualisation, was partially administered. On the other hand,

12   the Media and Technology Usage and Attitude Scale by Rosen et al. (2013) was

13   administered to determine attitudes towards technology (positive attitudes, negative

14   attitudes, preference for multitasking and ICT anxiety and dependence). To delve into

15   multitasking habits (a skill intrinsic to transmedia), we used the Multitasking during

16   homework scale (Martín-Perpiñá et al. , 2019). Finally, in terms of digital literacy, we

17   applied the Digital Literacy Scale (Rodríguez de Dios, 2018), on technological, personal

18   safety, critical, device safety, information and communication skills; it is a scale

12

1   specially designed for adolescents.

2   All these instruments were translated into Italian by the main researcher, a native

3   Italian speaker; in addition, a comprehension test was carried out by target informants to

4   confirm their validity. Finally, this questionnaire was applied with the corresponding

5   informed consent, in a virtual version, with the intention of speeding up not only the

6   response, but also the emptying of the data, as well as its custody within the servers of

7   the University of XXX.

8   To analyse the data, we used SPSS 17.0. In the significance tests we applied a

9   chi-square test for non-parametric data and an ANOVA test for parametric data; for the

10   analysis of relationships we opted for Pearson's correlation coefficient. Confidence

11   levels of 0.05 or 0.01 have been used, which are specified in each case.

12   After analysing the reliability coefficients, they are considered acceptable for the

13   ranges commonly accepted in the educational field. They are detailed in table 2.

Scale	Variable	Crombach Alpha
New Media Literacies	Collective intelligence	0.669
	Trial	0.693
	Transmedia navigation	0.691
	Visualisation	0.742
Attitudes	Positive attitudes	0.660
	Anxiety and dependence	0.756
	Negative attitudes	0.686
	Multitasking trend	0. 135*
Digital Literacy Scale	Digital literacy	0.735

14   Table 2. Reliability indices (*Item discarded for analysis due to low reliability) (own
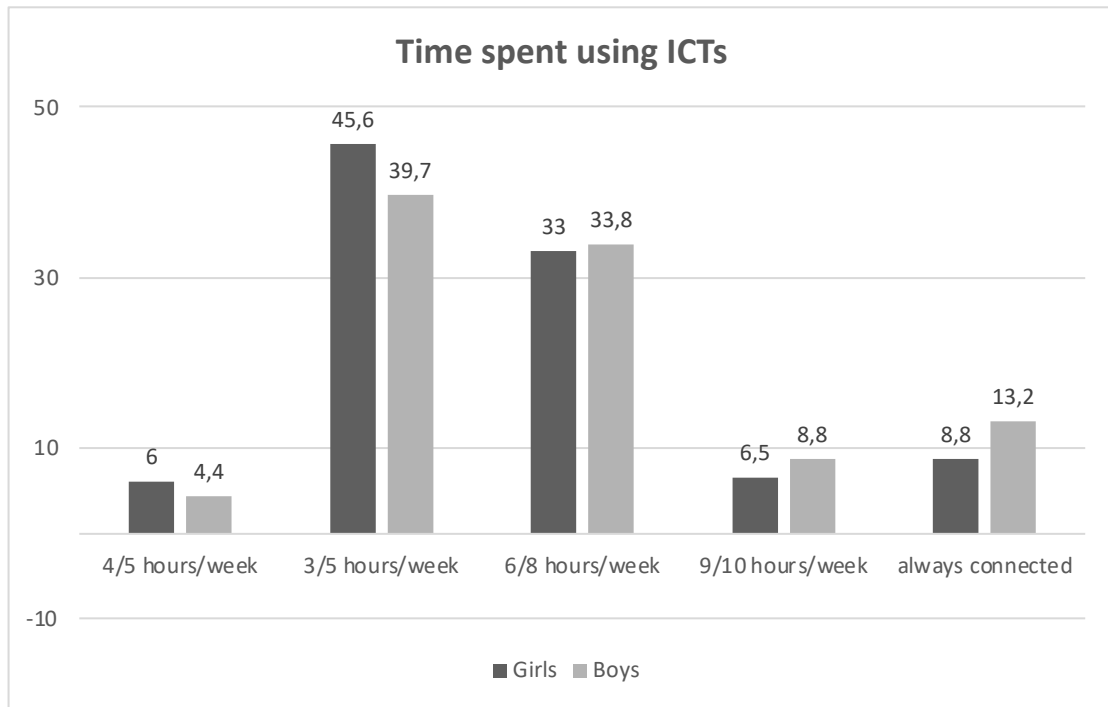
15   elaboration).

    13

1 **Results**

2 In order to better structure the summary of results, we will first analyse the general

3 characteristics of the subjects in terms of availability of technological resources and

4 usage and consumption profiles; secondly, we will analyse the indicators obtained with

5 the instruments detailed in the previous section.

6 *Overview*

7 In relation to the availability of resources, 98% of the subjects have a mobile phone or

8 tablet (with a clear predominance of IOS, 72.6%), and it is this mobile device from

9 which they prefer to connect (60.5% use it to connect from home, 6.4% from school), as

10 opposed to the computer, used by 21.8% from home, 3.2% from school. They go online

11 a lot: 40.7% go online 3-5 h/d, 35.5% spend 6-8 h/d online, and 11.5% say they are

12 always online. They usually have a profile on a social network (93.5% say so);

13 Instagram predominates (91%); WhatsApp is the predominant messaging service

14 (98.5%).

15   In terms of gender, it seems that women go online less than men (Figure 1), that

16 they use the telephone more from home to do so (Figure 2) and that they are more

17 present on social networks (Figure 3): although fewer women indicate that they have a

18 profile on social networks as a percentage, they are more frequent users of Instagram

19 and significantly fewer indicate that they do not use them on a regular basis. In any

20 case, all these differences are slight and not statistically significant.
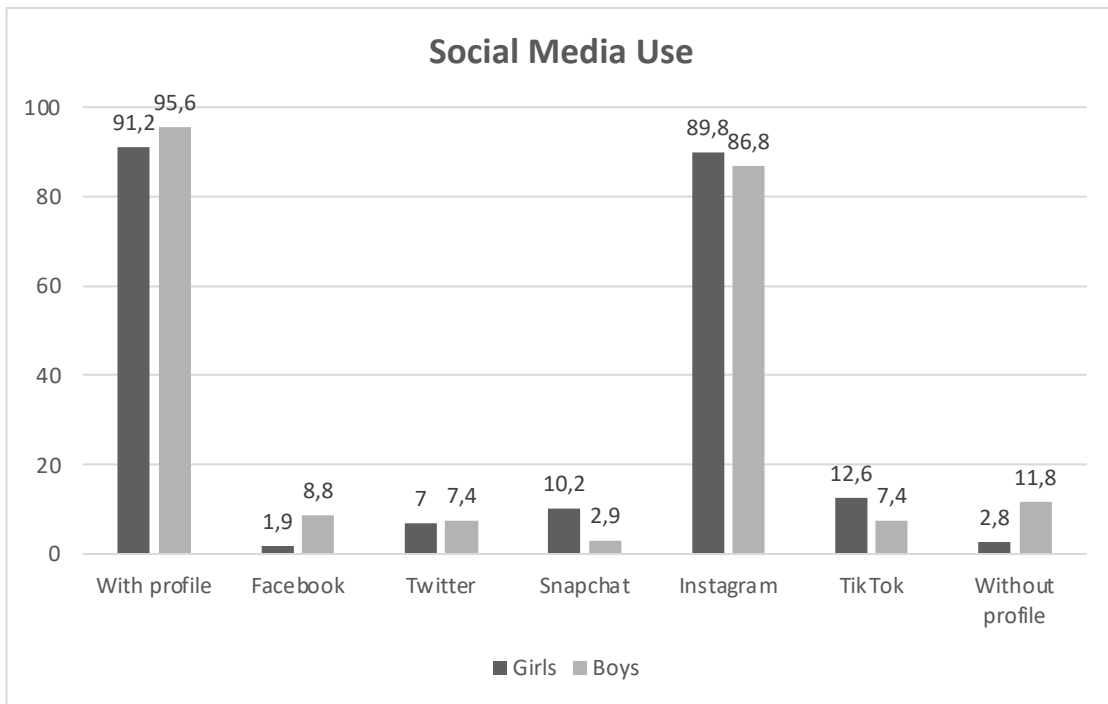
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1

Figure 1. Time devoted to ICT (% of subjects in each group who use ICT in each time

slot) (own elaboration).
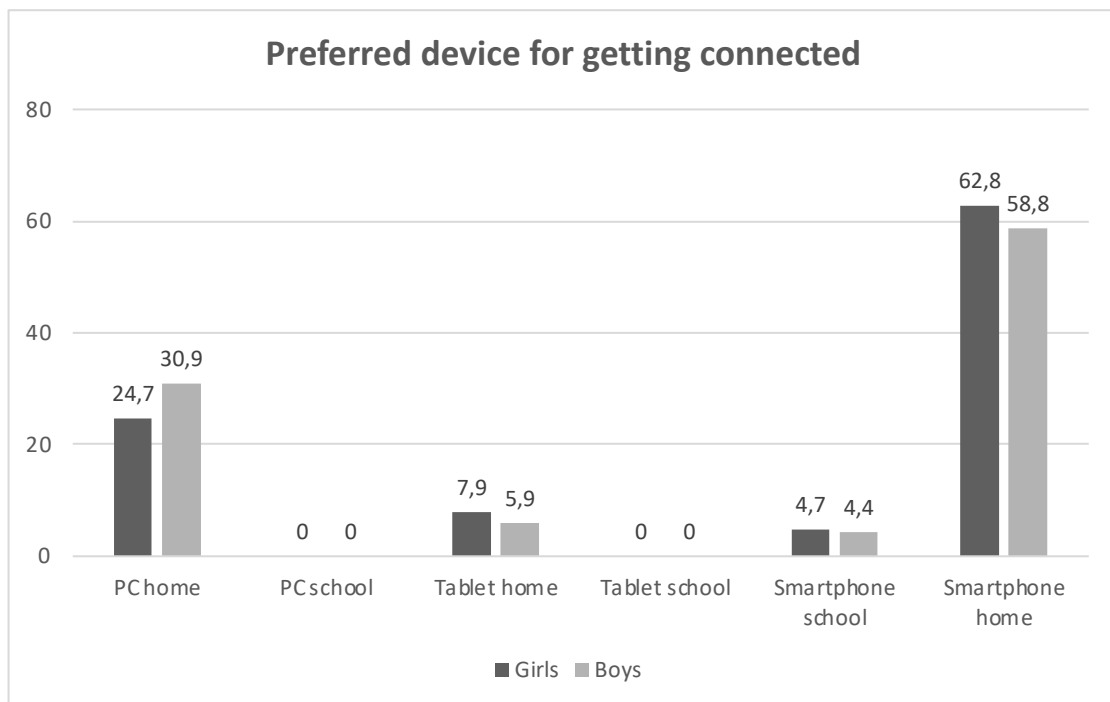
Figure 2. Device from which informants perceive they prefer to connect (in %) (own

elaboration).

15

Social Media Use
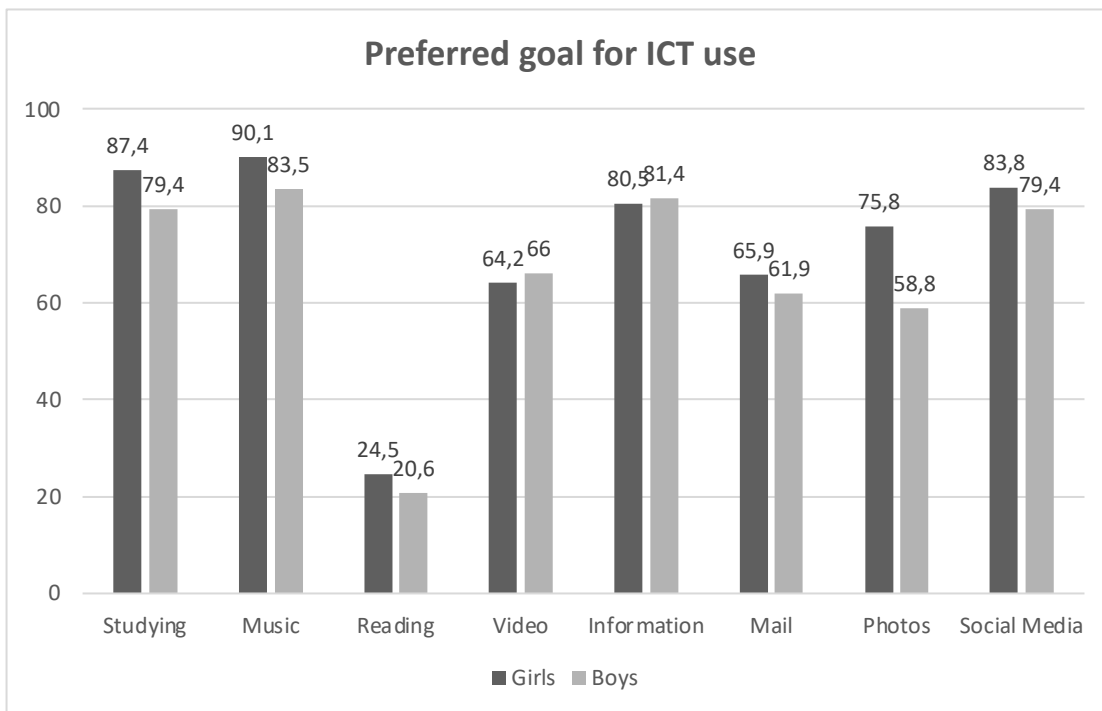
Figure 3. Presence in social networks (% of subjects from each group present in each category) (own elaboration).

As for the purposes of this technological consumption, they use ICTs for academic activities (85.1%), listening to music (88.3%), reading novels or newspapers (23.4%), watching films or series online (64.2%), checking e-mail (65.2%), photography (71.6%), shopping (52%), or interacting on social networks (82.1%). Gender differences are not significant in this case either, nor, in their slightness, do they point to a clear pattern (Figure 4).

16

Preferred goal for ICT use

	Girls	Boys
Studying	87,4	79,4
Music	90,1	83,5
Reading	24,5	20,6
Video	64,2	66
Information	80,5	81,4
Mail	65,9	61,9
Photos	75,8	58,8
Social Media	83,8	79,4

1

2   Figure 4. Preferred uses of ICT (% of subjects in each group who use ICT for each

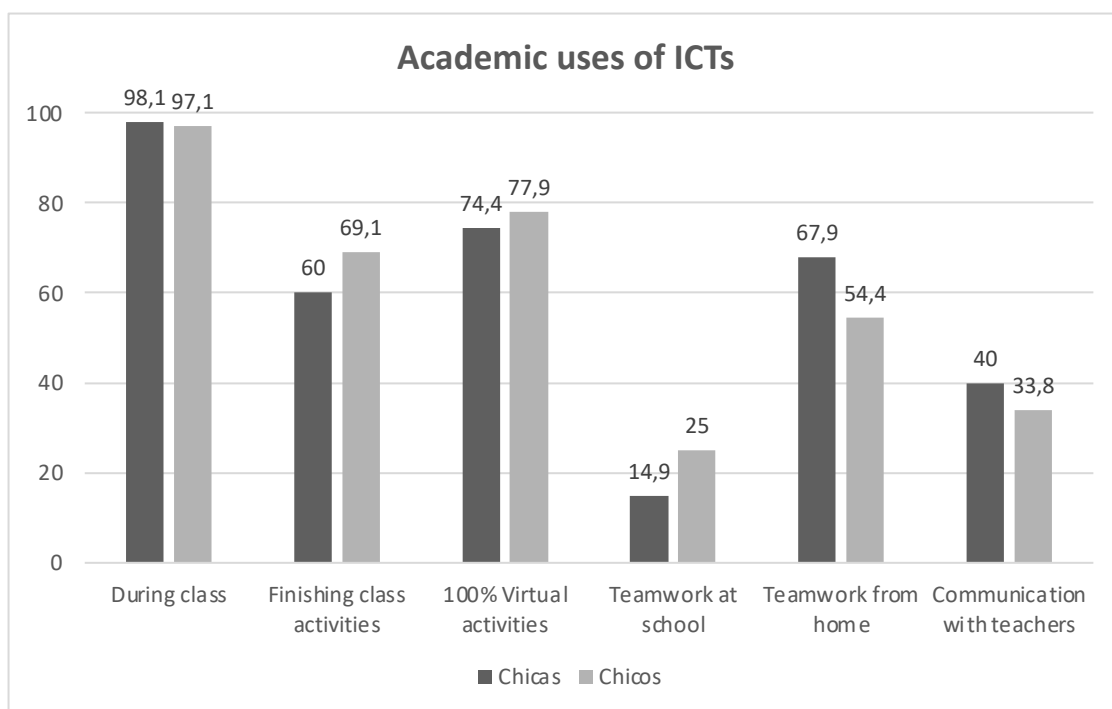3   purpose) (own elaboration).

4

5   In this social sphere, 56.5% say they include only people they know; 53.5% say

6   they check the identity of their contacts on the Internet. With these contacts, they

7   discuss academic matters (53.5%), sports (32.6%), music (65.2%) or leisure in the

8   broadest sense (television, series, books; 61.3%); as oddly residual topics, we find

9   politics (1%), the environment (0.5%) or current affairs (0.2%).

10

11   Finally, in terms of the purpose of academic ICT use, they state that they use the

12   net during academic activity in general (97.7%), to finish class activities (61.4%), to

13   complete learning activities completely online (73.6%), to collaborate synchronously

14   with their peers when they are at home (66.7%) or at school (17.4%), or to communicate

15   with their teachers outside school (35.8%). Although girls seem to be more interactive

17

1 outside school and boys more so at school (Figure 5), again the difference is not

2 significant and the pattern of ICT use is generally shared.

3

4 Figure 5. Purpose of academic use of ICT (% of subjects in each group who use ICT for

5 each purpose) (own elaboration).

6 ***Students' digital profiles***

7 If we first analyse the overall digital literacy values, taking as a reference the Digital

8 Literacy Scale by Rodríguez de Dios (2018) (Table 3), we can see that the values of

9 some dimensions are slightly higher than the reference (personal safety or critical

10 skills); on the other hand, others are lower (above all, technological or information

11 skills). Moreover, the standard deviations are also lower (sometimes significantly so),

12 which tells us about a more homogeneous sample.

Rodríguez de Dios

(2018)

18

	Media	SD	Media	SD
Technological skills	3.36	.44	3.80	.73
Personal security skills	4.12	.63	4.09	.83
Critical skills	3.73	.63	3.43	.74
Device security skills	3.20	.87	3.25	.93
Information skills	2.62	.67	3.37	.70
Communication skills	3.52	.61	3.69	.58

1   Table 3. Digital Literacy Scale (own elaboration).

2   There are also gender differences (Figure 6): on the one hand, female informants

3   have less confident patterns of device use (3.1 girls, 3.5 boys; 3.25 was the reference

4   value), but are more confident in information management (2. 65girls, 2.47 boys).

5   Differences in critical, information and device security skills are statistically significant

6   (< 0.05).
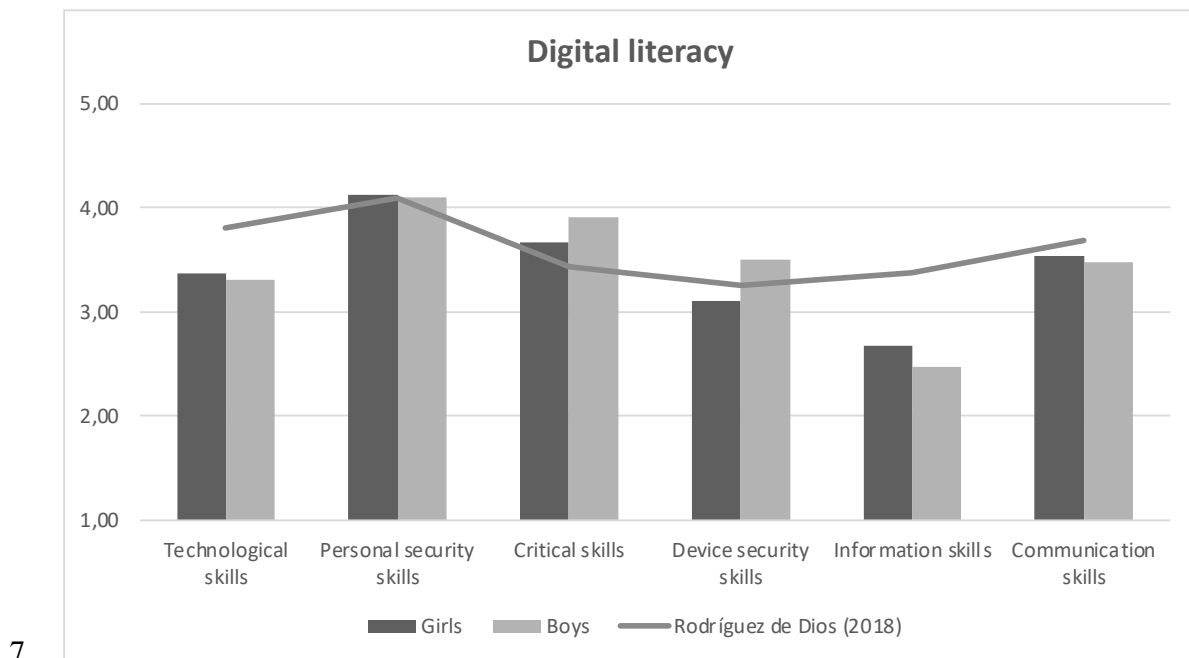
8   Figure 6. Digital Literacy Scale according to gender (own elaboration).

19

As for the New Media Literacies (Table 4), the sample shows particularly high values in transmedia navigation, as well as in the evaluation of digital information; but lower values in the community sphere (collective intelligence) or when assuming other identities on the net (visualisation):

	Media	SD	Estebanell et al. (2021) Media	SD
Collective intelligence	3.89	.61	4.12	.56
Judgement	3.91	.55	3.88	.59
Transmedia Navigation	4.00	.59	3.75	.70
Visualisation	3.67	.52	3.82	.56

Table 4. Transmedia profile (own elaboration).

There are now also significant differences in terms of gender (with scores generally higher for girls) (Figure 7). In the specific case of transmedia navigation, these differences are statistically significant (< 0.05): 4.05 for girls, 3.83 for boys; 4.00 was the reference value.

20
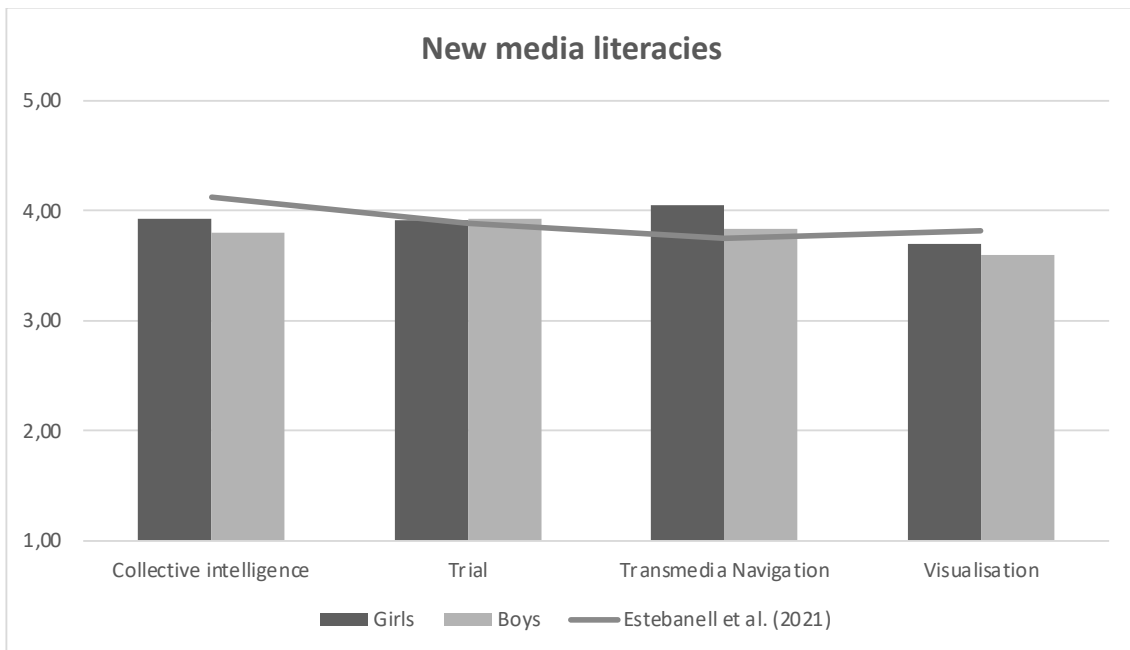
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2 Figure 7. New Media Literacies according to gender (own elaboration).

3   On the attitudinal component (Table 5), we also see some interesting insights

4 (especially when comparing our data with the benchmark data): the positive attitude

5 dimension is at a similar level to Rosen et al. (2013); however, the dimensions of

6 anxiety and dependence or negative attitudes appear as clearly lower. Thus, an overall

7 positive attitudinal component towards ICT is depicted.

21

	Med ia	S D	Rosen et al. (2013) Med ia	S D
Positive attitudes	3.64	.51	3.66	.84
Anxiety and dependence	2.89	.95	3.15	1.09
Negative attitudes	2.89	.81	3.35	.92

1 Table 5. Attitudinal profile towards ICT (own elaboration).

2   Next, we present the variations according to gender (Figure 8). Girls show

3 significantly higher values than boys for anxiety and dependence (2.96 for girls, 2.66

4 for boys) and for negative attitudes (2.97 for girls, 2.64 for boys) (< 0.05). On the one

5 hand, therefore, it seems that the whole sample has positive attitudes towards ICT, as

6 we said, better than the baseline; but this is particularly strong in the case of boys.

22
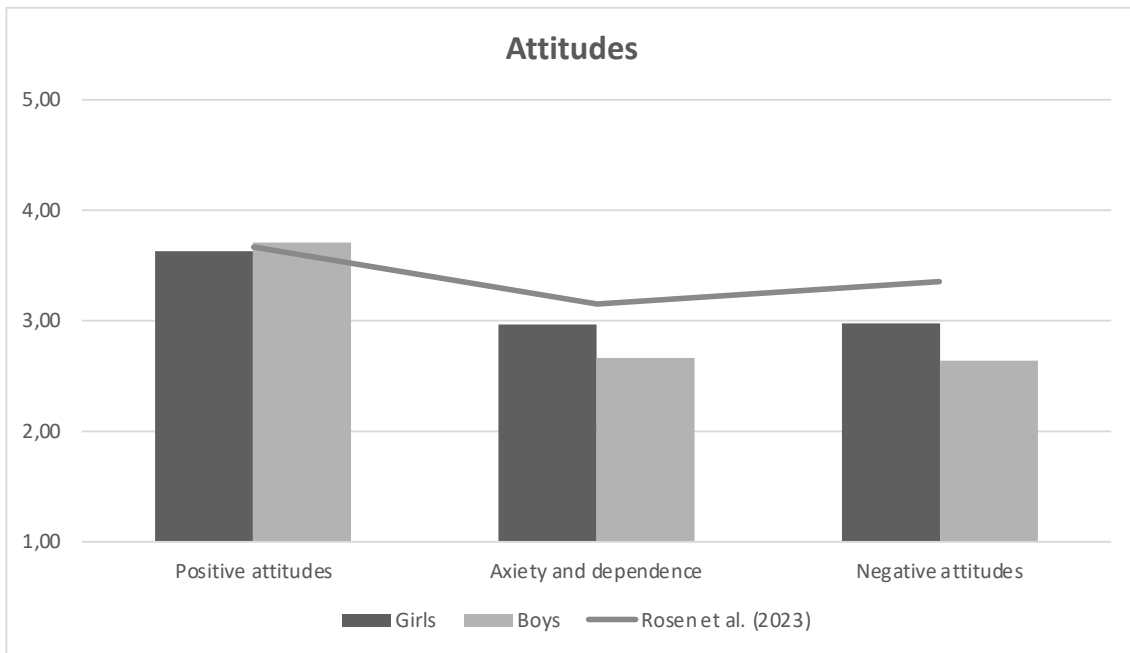
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2 Figure 8. Attitudes towards ICT according to gender (own elaboration).

3   Finally, we focus on the multitasking profile, a skill closely linked to transmedia

4 and transmedia browsing in particular (Table 6). Our values are considerably lower than

5 those of the benchmark (Martín-Perpiñá et al., 2019): students in these two schools

6 concentrate more on homework, without distractions, than Spanish students. In general,

7 if we exclude the more social part (messaging and social networks), partly linked to the

8 school activity itself (contact with peers), the values are always lower (and not a little).

9 In any case, as in the model study, the standard deviations are high, which points to

10 considerable diversity in the sample in this respect.

			Martín-Perpiñá **et al. (2019)**	
	Media	**SD**	**Media**	**SD**
Watching television	1.34	.73	2.20	1.16
Listening to music	2.53	1.22	3.11	1.10
Read	1.43	.91	2.11	1.13

23

Talking on the phone	1.96	.97	2.15	1.14
Messaging	2.81	1.05	3.08	1.08
Social media	2.52	1.05	2.53	1.24
Watch films	1.48	.85	2.07	1.23
Using the computer	2.23	1.03	2.61	1.16
Video games	1.15	.51	1.79	1.14

1 Table 6. Rates of multitasking during homework (own elaboration).

2   Here, there are few significant differences according to gender (Figure 9):

3 women (2.88) send more messages than men (2.60; the reference value was 3.08) ($<$

4 0.05); but, in any case, in the rest of the situations we cannot establish a constant gender

5 pattern.
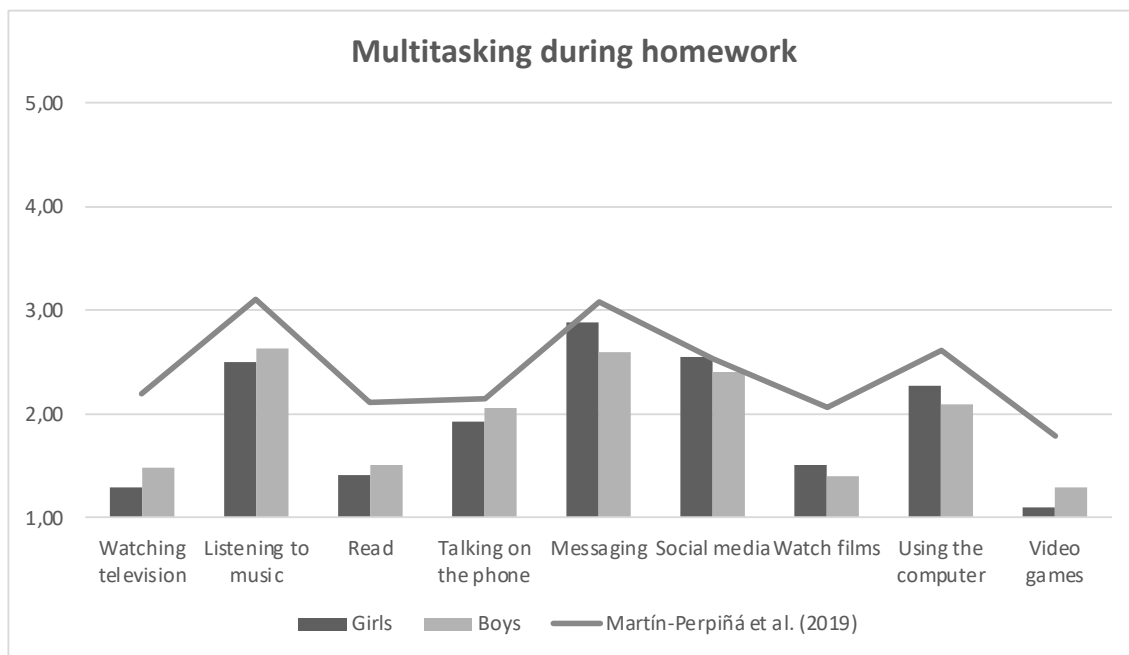
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7 Figure 9. Multitasking during homework according to gender (own elaboration).

8 **Discussion**

9 Based on the results we have just presented, it seems that our informants have a digital

24

profile that is suitable for transmedia learning experiences, both in terms of their general

skills and in terms of their attitudes and specific skills linked to transmedia: from the

point of view of digital use, they are great consumers and very social online, their

digital competence is important in all areas and they feel comfortable with it; and,

although they are not particularly multitaskers, they can respond fluently in situations

where this is necessary, in the service of transmedia browsing. Beyond this general

profile, we would even say that it is a favourable profile, insofar as the sample in

general stands out in some of the elements that the literature considers important, such

as informational and critical skills or the social and collaborative dimension (Dickinson-

Delaporte et al., 2020; González-Martínez et al., 2018; Jenkins et al., 2009).

This is particularly interesting if we analyse it in terms of gender, for two

reasons. On the one hand, because in our study, gender differences seem to be generally

blurred. We saw that the literature, on the one hand, always assumes that men are

perceived as superior in terms of their digital skills (Bian et al., 2017; De Moya et al.,

2011; Vázquez-Cano et al., 2017, among others). In most cases, however, these

differences are not real, but rather beliefs that all subjects have in relation to the gender-

ICT binomial, which always disadvantage women (Palomares-Ruiz et al., 2020; Wang

and Degol, 2017). Therefore, it is particularly positive to document, on the one hand,

that in the general sense (use and consumption, attitudes and skills) gender differences

in relation to ICTs are neutralised (which implies an improvement in the perception of

the relationship between ICTs and women); and, on the other hand, in the specific case

of transmedia, it is not only a neutralised difference, but one that favours women in

some important points, insofar as it is they who have advantages in terms of information

management or transmedia navigation. It is true that the prejudice remains (insofar as

they are stronger in the more technical aspects, such as device security) and have less

25

1 negative attitudes (in line, for example, with Aranda et al., 2019); but opportunities are

2 opening up.

3   These opportunities, to a certain extent, can take the form of transmedia

4 learning, which, due to its flexibility and low technological demands, can allow, in the

5 school context, to open a path that offers all students (but especially female students) to

6 find their own ways of expression and representation in the key of universal design

7 (Pastor, 2016), in such a way that the potential of what students are strongest in is

8 harnessed to empower them as creators of content at the service of their own learning

9 (Antoninis, 2020). Therefore, to a certain extent, the data we have collected confirms

10 that students in the *licei classici* can face the challenge of transmedia learning with

11 optimism, and perhaps we can even think of it as a gender opportunity, especially in

12 terms of the digital humanities.

13 **Conclusions**

14   What is the knowledge that we have been able to generate with this research

15 despite the limitations of its context? First, we confirmed, also among the youngest, that

16 the digital gender gaps are complex and must do not only with the different availability

17 or use of technological resources, but perhaps with what women expect to be able to do

18 with them (the socially expected meanings and uses) (Bian et al., 2017; UNICEF,

19 2020). The differences between young people in terms of the skills linked to the

20 transmedia field are not marked, nor are they positively biased only towards men.

21 Rather, girls have more positive perceptions than boys in digital skills linked to social

22 and informational skills. This allows us to move beyond the traditional technical vision

23 of educational resources and opens a new concrete path towards overcoming the digital

24 gender divide. What is this path? The literature indicates that one way to go against

26

gender digital divide may be to offer girls the opportunity to use digital resources in a meaningful way (that makes sense to them) (Mariscal et al., 2019); and that is what we seem to find in transmedia learning because its intrinsic characteristics (related to universal design for learning, in fact). On the one hand, a didactic proposal (to be explored and investigated through practice) that makes special use of those skills in which girls are stronger; and, on the other hand, from there, a learning experience in which they can feel more comfortable and can also be empowered as technology users precisely because their uses of ICT are meaningful to them (Acilar and Sæbø 2021). Therefore, transmedia learning can be a didactic experience that can fight against this gender divides, just in a context such as the Italian *liceo classico* where the gender digital divide is more than evident.

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frontiers

Transmedia challenge: conversations with adolescents about the opportunities of learning by transmediating

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Conflict of interest statement

Author contribution statement

JG and CR conceptualised the research; JG designed the methodology and reviewed the first draft of the paper; CR conducted the fieldwork, primarily analysed the data and wrote the first draft; JG and FF expanded the first paper and reviewed the final version. RC and FF were in charge of funding.

Keywords

Abstract

Word count: 112

This paper presents the results of interviews with students at a classical high school in Cagliari, carried out to find what adolescents do with the media, how they use them and what they learn outside school through transmedia practices. This work aims to identify, from adolescents' perspective, the advantages and opportunities that can be achieved in the world of schooling from a transmedia learning approach. The seventeen participants were asked open-ended questions to obtain information about their learning habits and opinions on media use in and out of school. The findings show that students use their devices to enhance their learning and would like to have a modern and more up-to-date school.

Contribution to the field

This paper presents the results of interviews with students at a classical high school in Cagliari, carried out to find what adolescents do with the media, how they use them and what they learn outside school through transmedia practices. This work aims to identify, from adolescents' perspective, the advantages and opportunities that can be achieved in the world of schooling from a transmedia learning approach. Born within the context of participatory culture and media convergence, transmedia learning is growing as a didactic proposal linked to storytelling that aims to mobilize and develop digital skills in interactive contexts. Transmedia learning is flexible, customizable and personalizable from the didactical and technological points of view, and it can be a brigde between formal and informal ways of learning for adolescents. But we know little about how teenagers view the design of transmedia learning experiences in the school context. This article skips the usual analysis of digital literacy and sets out interviews with teenagers to see how they feel about these challenges and how they value these learning possibilities. This is the main novelty of the article and its major contribution. The seventeen participants were asked open-ended questions to obtain information about their learning habits and opinions on media use in and out of school. The findings show that students use their devices to enhance their learning and would like to have a modern and more up-to-date school.

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Transmedia challenge: conversations with adolescents about the opportunities of learning by transmediating

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9   **This paper presents the results of interviews with students at a classical high school in Cagliari,**
10   **carried out to find what adolescents do with the media, how they use them and what they learn**
11   **outside school through transmedia practices. This work aims to identify, from adolescents'**
12   **perspective, the advantages and opportunities that can be achieved in the world of schooling**
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14   **questions to obtain information about their learning habits and opinions on media use in and**
15   **out of school. The findings show that students use their devices to enhance their learning and**
16   **would like to have a modern and more up-to-date school.**

17   **1   Introduction**

18   Among the educational changes of the new millennium we find the so-called transmedia learning
19   (hereinafter, TL), the pedagogical concretion of a movement born at the crossroads of three emerging
20   concepts theorized by Jenkins (Jenkins, 2006) to describe the new technological and cultural reality:
21   participatory culture and collective intelligence, on the one hand, and media convergence, on the
22   other. A new way of learning, which we mobilize all citizens of the Knowledge Society, which
23   squeezes the most out of all available analog and digital media, and which requires a new and
24   different literacy (González-Martínez et al., 2018), as it merges two knowledges that have become
25   inseparable, following the subtitle of the classic work by Jenkins (2006): "where all and new media
26   collide".

27   Undoubtedly, this has its echo in formal learning within the education system; and thus, the orthodox
28   and formal within the school and the informal, outside the school (Alper, 2013; Fraiberg, 2017) and
29   leads us to consider the many possibilities that it can have from the perspective of teachers; thus, for
30   example, in the words of Fleming (2013, p. 371): "the application of storytelling techniques
31   combined with the use of multiple platforms to create an immersive learning landscape which
32   enables multivarious entry and exit points for learning and teaching. It is the unifying concept of the
33   learning environment that is important since that can become a landscape for learning that has few, if
34   any, boundaries". Because there is no doubt that we learn by transmediating on the web; but it is not
35   only that, we can also design learning experiences, in the formal environment, that channel all that
36   transmedia potential according to specific learning objectives.

The first research approaches to TL already highlight that young people attending school today clearly show is new way of learning, the result of a process that is no longer only individual, and focus on the social and collective elements of that participatory culture and collective intelligence (Amador, 2013; Bernal Acevedo, 2017; Scolari, 2018), in which students are continuously connected to the flow of information, work and learn in groups and face the real context that digital technology potentially extends to the global dimension. Reality also shows that a new form of learning begins to exist within the school, social and collective, in which children act and consolidate their skills in an active and creative way (Alvarez et al., 2013; Fleming, 2013; B. McCarthy et al., 2013; Wiklund-Engblom et al., 2013).

The term transmedia was first used by Marsha Kinder in the early 1990s (Kinder, 1993), but it was Jenkins (2006) who defined the changing role of the user in the convergent, participatory and collaborative media culture. Thus, he himself defines transmedia as the "story [that] unfolds across multiple media platforms, with each new text making a distinctive and valuable contribution to the whole. In the ideal form of transmedia storytelling, each medium does what it does best -so that a story might be introduced in a film, expanded through television, novels, and comics; its world might be explored through game play or experienced as an amusement park attraction"; and, as we said, he triangulates this media and cultural phenomenon between media convergence ("the flow of content across multiple media platforms, the cooperation between multiple media industries, and the migratory behavior of media audiences who will go almost anywhere in search of the kinds of entertainment experiences they want. Convergence is a word that manages to describe technological, industrial, cultural, and social changes depending on who's speaking and what they think they are talking about" (Jenkins, 2006, p. 3)), participatory culture (which "contrasts with older notions of pas- sive media spectatorship. Rather than talking about media producers and consumers as occupying separate roles, we might now see them as participants who interact with each other according to a new set of rules that none of us fully understands. Not all participants are created equal" (Jenkins, 2006, p. 3); and collective intelligence ("an alternative source of media power. We are learning how to use that power through our day-to-day interactions within convergence culture. Right now, we are mostly using this collective power through our recreational life, but soon we will be deploying those skills for more 'serious' purposes'" (Jenkins, 2006, p. 4)). And all of this was subsequently analyzed in adolescents, from a communicative and ethnographic perspective in the TransLiteracy Project (Scolari, 2015, 2016, 2018), where they analyzed the transmedia practices of young people to understand how students use new digital media and how they interact with each other in different genres, languages and contexts.

Today two characteristic aspects emerge (González-Martínez et al., 2019), a more common one called transmedia storytelling, linked to narrative and communication, which is developed through different media platforms; another takes the form of transmedia navigation, thanks to the transmedia skills and competences of the user who consumes and produces media content in the context of a transmedia literature. And transliteracy plays an important role in all of this, insofar as participating in this cultural phenomenon requires many skills that go far beyond simple digital skills (González-Martínez et al., 2018; Jenkins et al., 2009); and often, starting from the observation that today's youth are in possession of advanced transmedia creative skills derived from the massive consumption of digital media, the presence of divergent skills that intervene in the use of sophisticated metacognitive devices, and new forms of digital literacy in social writing and social reading platforms, and that undermine the top-down hierarchical school model and produce a shift from traditional literacy to transliteracy (Taddeo & Tirocchi, 2021).

82 The school and school operators, to cope with these major changes in the form and space of learning
83 of the new generations of students, must know how to expand beyond the space of the classroom,
84 open to the outside (Dickinson-Delaporte et al., 2020; Fleming, 2013; E. McCarthy et al., 2018), they
85 must know how to integrate new knowledge in a transversal way, and for this they must know the
86 learning habits of children, their new way of learning that is the result of school knowledge
87 integrated with extracurricular ones, in environments that are no longer only physical, And teachers
88 must be able to design and implement a kind of transmedia pedagogy, in which transmedia learning
89 is combined with pedagogy causing a change in the place of control of learning itself, which passes
90 from the teacher to the student, from inside the classroom outside (Fleming, 2013).

91 In any case, we can define TL as a literature that takes place in an informal and personal way through
92 the navigation in the media of different knowledge, favored by the participation in the digital
93 narrative of the participants who create participatory and collaborative learning with an act of co-
94 construction, influencing the transformations of technology and modifying the way of being, acting
95 and thinking. This approach would be particularly attractive for young people, also in terms of
96 increased motivation to participate in study, creation of meaningful learning experiences and variety
97 of educational offerings (Barreneche et al., 2018; E. McCarthy et al., 2018; Raybourn, 2014); in this
98 sense, for example, good results have been observed with students involved in projects involving the
99 use of transmedia Apps and particularly inclusive interactive games (Chung, 2014; Fleming, 2013).

100 Today, therefore, the reality of new youth learning makes us understand the need to analyze the
101 dynamics of this social and collective process in which children act and interact with each other,
102 consolidating their skills in a creative and proactive way. The new way of learning brings with it a
103 new way of educating which cannot always be the same in time because it is linked to the concept of
104 available information, not technological, but connected to the change desired by the media on the
105 capacity to transmit and construct knowledge and experience. But what do adolescents themselves
106 think about these changes, to what extent do we know their vision of the changing reality, do they
107 really want to take up the challenge of a different learning in school, or should formal and informal
108 learning practices remain separate?

109

110 **2   2. Concepts and approaches**

111 It is not easy to technically define TL, as there are different approaches to it. And so, for example,
112 beyond the recognition of Jenkins' conceptual framework, the diversity of ways of understanding
113 transmedia in its educational application is a constant (Dickinson-Delaporte et al., 2020); therefore,
114 we can speak of many transmedia educational forms (transmedia storytelling, branding, performance,
115 ritual, activism or spectacle), as a result of the cultural and media elements that are considered
116 fundamental. In this sense, one of the first attempts at definition, by Fleming (2013) is the one we
117 have already included in the introduction; but it is not a definition that has been adopted extensively.
118 However, we find in it many of the elements that are recognized in subsequent literature:
119 socioconstructivist approach, the importance of transmedia navigation, the leap from the traditional
120 boundaries of formal learning or the fundamental role of narrative that, when developed, allows
121 learning. It is also something that, extended, we find in the following approach:

122   uma forma relevante de articulação entre os conteúdos pedagógicos e atividades que impliquem
123   trabalho colaborativo, partilha de informações e interação. A abordagem transmedia pode ser
124   definida como uma narrativa contada através de múltiplos meios de comunicação, utilizando
125   diferentes tecnologias digitais. Esta perspetiva permite que o conteúdo principal envolvente seja

126   distribuído por vários meios, utilizando o melhor de cada um deles para gerar interesse nos alunos
127   e manter a sua atenção. As narrativas transmedia podem auxiliar o processo de ensino e
128   aprendizagem ao permitir o desenvolvimento de estratégias que estimulem os alunos a produzir
129   conteúdo, sendo participantes ativos no contexto educativo1 (Pereira & Pedro, 2020, p. 3).

130 Regarding the learning paradigm, the elements that are pointed out, beyond the socioconstructivist
131 positioning, place the student as the center (Amador, 2013; Davis, 2017; Dickinson-Delaporte et al.,
132 2020; Wiklund-Engblom et al., 2013), and call for the use of elements of everyday life that not only
133 make learning more meaningful (because of their greater transfer potential), but that link more
134 directly with elements of everyday life (Amador, 2013; Rodrigues & Bidarra, 2014), which should
135 have a direct impact in terms of engagement (one of the opportunities commonly suggested when
136 approaching TA) (Chung, 2014; Raybourn, 2014).

137 In this socio-constructivist approach, we highlight three elements: the technological, the collective
138 dimension (interaction and communication, which leads us to connectivism) and the central role of
139 narrative as a didactic strategy. The TL appears as a direct concretion of the infinite possibilities
140 derived from both the spectacular technological development and the environment of participatory
141 culture and media convergence. Therefore, the discourse is closely linked to the literature on digital
142 literacy (Barreneche et al., 2018; Pereira & Pedro, 2020), but it usually goes beyond the usual digital
143 skills. It also goes beyond the discourse on multimedia, as the alternation between analogue and
144 digital and the overlap between media are natural; and, with that, it becomes natural also to go
145 beyond the walls of the school institution in the strict sense (Davis, 2017; Ellis et al., 2018; Fleming,
146 2013; Gutu, 2019). This alternation is free, without limits of time, space, order and channels.

147 Another important issue is the collaborative and social dimension in which TL occurs (McCarthy et
148 al., 2018; Valdés Sánchez et al., 2016). Transmedia learning is essentially communal. It develops
149 around the construction of learning communities, virtual or face-to-face (Campalans, 2015;
150 Rodrigues & Bidarra, 2015). Collective intelligence becomes the main stimulus for learning and
151 helps to dynamize learning processes (Barreneche et al., 2018; Fleming, 2013; Raybourn, 2017).
152 Therefore, the socioconstructivist root links with connectivism (Bernal Acevedo, 2017; Raybourn,
153 2014; Rodrigues & Bidarra, 2019).

154 Finally, we come to narrative. Narrative always accompanies transmedia learning (Dickinson-
155 Delaporte et al., 2020; González-Martínez et al., 2019). Although we cannot always say that it is a
156 storytelling process, it is a storydriven learning (Raybourn, 2017), since learning occurs by
157 developing narrative (fictional or not). The opportunities and possibilities offered by storytelling as a
158 didactic axis are many and generally acknowledged (Ellis et al., 2018; Gutu, 2019; Wiklund-
159 Engblom et al., 2013) (Ellis et al., 2018; Fleming, 2013; Gutu, 2019; Raybourn, 2017), largely
160 because of its flexibility and malleability (Paulsen & Andrews, 2014), engagement (Chung, 2014) or
161 because of the possibility of that story having no end (never-ending narratives) (Rodrigues &
162 Bidarra, 2015).

163 Another question has to do with the context in which this takes place, the school. Alongside the
164 educational system represented by school institutions, there is a new system, not necessarily

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[1] A relevant form of articulation between the pedagogical contents and activities that involve collaborative work, information sharing and interaction. The transmedia approach can be defined as a narrative told through multiple media, using different digital technologies. This approach allows the main surrounding content to be distributed through several media, using the best of each of them to generate interest in students and keep their attention. Transmedia narratives can help the teaching and learning process by allowing the development of strategies that stimulate students to produce content, being active participants in the educational context (translated by authors)

165 divergent, but convergent and inclusive, which is based on new knowledge, new interests, new
166 modalities that provide a focus for the student, who not only learns in diversified contexts, but who,
167 while learning, develops and creates other knowledge: in the educational field, in fact, it is precisely
168 children and adolescents who favor the dissemination of new knowledge, precisely because it is they
169 who, in this interactive cultural convergence, influence technological transformations and, as co-
170 constructors of knowledge, substantially modify their way of learning, being and thinking (Amador,
171 2013; Ugolini, 2016). New places and new techniques stand out in this reality of TL: the platform is
172 the ideal place for this educational transformation, where ideas and reflections are shared by students
173 and teachers who want to support the educational needs of their children through narratives and
174 stories disseminated on the platform itself (Dickinson-Delaporte et al., 2020).

175 Among the various techniques, storytelling techniques combined on different platforms arouse
176 interest, to create continuous learning in a kind of total immersion that includes many incoming and
177 outgoing points of view and actively involves the learner (Fleming, 2013). Storytelling, through
178 immersive and interconnected narratives, is able to produce multiple literacies, textual and visual, the
179 so-called media literacies (Bernal Acevedo, 2017; Rodrigues & Bidarra, 2014, 2019). The hub of this
180 learning platform is the ideal place where the virtual community dialogues, where new knowledge
181 and new digital literacies transit. The platform is in fact a dynamic and creative space related to the
182 real needs of the students, capable of expanding the spaces of the classroom to the outside, in
183 continuous movement, through stories, narrative paths and events, real or imaginary, that can be
184 represented with words, images and audiovisuals (Dickinson-Delaporte et al., 2020; Raybourn,
185 2014).

186 In this process of new transmedia literacy, students play the role of critical thinkers when they extract
187 information from different media channels, because they also feel a decisive part in the educational
188 process of building their knowledge and because they can transfer their skills in an interconnected
189 and dynamic way. narratives: In other words, students create information without being subjected to
190 it, stimulated in their interests and different learning style, thanks to the development of new skills,
191 which they recognize in learning through various activities, such as visual, listening, sharing,
192 collaboration, change (Wiklund-Engblom et al., 2013).

193 In this way, multiple literacies are created, the so-called media, visual and textual literacies (Scolari,
194 2018; Taddeo & Tirocchi, 2021). Multimedia and interconnectivity are ubiquitous, and offer great
195 diversity and variety of learning, to create new literacies in education. In many cases, this knowledge
196 is developed autonomously and creatively, but it can be accompanied, driven and triggered by the
197 teacher. A teacher who takes advantage of the fact that the student is no longer just a consumer, but a
198 producer of content with obvious educational implications that range from learning alone to learning
199 together.

200 The new educational structure also involves teachers who want to encourage the use of technology in
201 the classroom and who believe in the positive contribution of transmedia learning that has a good
202 impact on the educational growth of their students. For example, Bernal (2017) with the model of the
203 Madeja Collective for students and teachers at the Sergio Arboleda University in Bogotá, concludes
204 that the use of technologies associated with communication favors learning and "materialize an
205 individual and collective virtual body" with many possibilities previously not expected. In short, it is
206 a matter of wanting and knowing how to take advantage of the multiple new opportunities of
207 transmedia practices that produce digital literacies. These become an integral part of the curriculum,
208 as a new discipline, not as a simple optional tool, but as an effective component, capable of

209 integrating technology in a flexible way in educational practice, in full exchange and connection
210 between teachers, no longer isolated from each other, but open and collaborative.

211 Finally, from a more organizational perspective, the TL also offers many opportunities especially for
212 sharing, collaboration; and can serve to improve the efficiency of educational work, personalized
213 learning and knowledge of students' interests (Bernal Acevedo, 2017; Davis, 2017; Raybourn, 2014).
214 Or also to integrate families (B. McCarthy et al., 2013; Paulsen & Andrews, 2014); or to improve
215 students' autonomy (Pereira & Pedro, 2020).

216 Therefore, if there are many advantages of TL in different parts of the world, the challenges remain
217 open in the context of the Italian school (in school throughout the Western world, in fact), where
218 ideological resistance persists on the part of some teachers little open to change, technologies that are
219 often outdated, few dedicated refresher courses (Cappello, 2019; Fabiano, 2020; Ranieri, 2019). We
220 must focus on the productive integration of technology in the curriculum, also to limit the discomfort
221 of unmotivated students, on the logistical issues of implementation of resources and various devices.
222 But, for the challenge to have a chance of success, we must have the perspective of the protagonists
223 (if we want students to be really at the center). Therefore, from the picture described above arises the
224 question that drives this research carried out to investigate how students attending an Italian high
225 school are placed in front of this scenario, in which they, in first person, live, create, do and learn.

226 **3   Methods**

227 To address this research challenge, a series of interviews was organized in a liceo classico
228 (Humanities high school) in Sardinia (Italy). Participants were exposed to an interactive and dynamic
229 talk about the challenges of education and the possibilities of transmedia learning; and, from there,
230 they were interviewed. The responses to these interviews constitute the main source of the data
231 collected for this research, so we are dealing with a purely qualitative research (Bisquerra Alzina,
232 2004), which aims to analyze the vision of Italian teenagers about the educational possibilities of
233 transmedia in the context of Italian licei. To carry out the interviews, semi-structured qualitative
234 interviews were used, which included questions related to the objective of the research, as well as to
235 the selected variables of analysis (see table 1).

236 [Table 1. Research variables, questions and objectives.]

237

238 **3.1   3.1. Participants**

239 The exhibition is represented by 17 students from different sections of the two-year and three-year
240 periods of the Liceo Classico "G. M. Dettori "of Cagliari, men and women between 13 and 18 years
241 old, all volunteers, whose anonymity is guaranteed. There are 17 interviews because, as they
242 progressed, it has reached saturation due to the uniformity of many answers.

243 **3.2   3.2. Procedure and data analysis**

244 The interviews were conducted at the end of the 2020/2021 school year during curricular time in the
245 school's reading room at the disposal of the high school principal, with an average duration of 15/25
246 minutes. The interviews were audio-recorded with the prior permission of the students.

247 The recordings of these discussion interviews were conveniently transcribed into textual format and
248 imported into NVIVO 11, a program for qualitative data analysis. The data that emerged were
249 transcribed, read, reread, coded for common relevant themes and recurrent elements in the responses
250 were coded in relation to the codebook provided for this purpose. For rigour, the response data were
251 compared with each other to arrive at an accurate reading and reviewed collaboratively within the
252 research team.

253 **4   4. Results**

254 The data, collected at different time occasions, are first examined here in a summary arising from the
255 answers given to each question, and then a detailed analysis resulting from the opinions emerging
256 from the students' responses is provided. In order to make the students' views as clear as possible,
257 some excerpts considered relevant are inserted below.

258 **4.1   4.1. How does the learner deal with technology in learning contexts?**

259 In general, teenagers (14 out of 17) believe that technology is useful, sometimes indispensable, to
260 solve many problems of everyday life; the whole sample searches for information about school and
261 their interests, although they do not have much experience in producing content, and few (only 3 out
262 of 17) know how to do it. Finally, almost all (16 out of 17) share and transmit their knowledge with
263 different tools. Their practices are social in many cases; and, although the didactics of the liceo
264 classico are traditional, on numerous occasions technology is an aid in the development of formal
265 learning activities, also in a collaborative way among peers.

266 In this regard, for example, one of the students interviewed states, showing the desire to make
267 themselves known in their own diversity and emphasizing this idea of collaboration

268   I share them, yes, even if a person doesn't have the same opinion, so that person can understand
269   my point of view; I usually share them on WhatsApp, but it happened that a friend of mine and I
270   started discussing a topic on Teams (Informant A).[2]

271 All the participants interviewed are able to distinguish the different functions of the media, some list
272 precisely their characteristics (also in relation to the possibility of creating in shared contexts).
273 According to one student:

274   "So, yes, for example, I know TikTok mainly shares a video that you share with music, or
275   Instagram, Twitter, in particular, is used to re-post something that you've posted and it creates a
276   chain of re-actions on an initial post, it's also used for joking, or taking an image and writing
277   inscriptions underneath, whereas on Instagram I use it to share almost everything, generally to
278   post what you do (Informant B).

279 In general, a good part of the interviewees is concerned with evaluating the reliability and veracity of
280 the information sought on the Internet, either because they look for reliable and safe sites, or because
281 they are concerned with asking others for information, which links with important elements of the
282 transliteracy of which we have spoken. In turn, this helps us to draw a student profile that, although

[2] Note from authors: the original quotations were in Italian; we finally decided to translate them for facilitating
understanding, but they can be replaced by original ones (and we can offer the English versions as notes if editors or
reviewers consider it a better choice).

283 classic in its management of technologies in front of the school, is close to informal digital learning
284 practices. It is interesting the opinion of one subject, who spontaneously deepens the question by
285 affirming:

286   So, it's difficult, because what I read on the Internet is not always true, it's like if we take, let's
287   say... A right-wing newspaper, it will give us right-wing news; instead of a left-wing one, it will
288   give us left-wing opinions. So I don't trust much, maybe I ask my parents, maybe they also have
289   another point of view, maybe they have heard the same information in another way; but even
290   what I find on Wikipedia I don't know how true it is, that's why I usually go to look for Treccani,
291   which I know is more reliable (Informant C).

292 **4.2   4.2. How do they think they learn regarding technologies?**

293 In relation to the transmedia learning that they themselves engage in on their own initiative, the
294 responses reveal a great homogeneity of opinions on the part of the young people interviewed: the
295 totality of the sample interviewed think that they learn differently on the web when they learn on
296 their own. And this is especially intense because they are exposed to the media whether they want to
297 or not. They also learn outside of school in a broad way, they learn in a different way than in the past.
298 And, as a result, they believe that school needs updating.

299 In this sense, transmedia learning is often already an aid to formal learning. For example, says one
300 learner, demonstrating that multimedia resources facilitate their learning, in terms of greater
301 simplicity and usability:

302   So it happens many times, for example, when I don't understand a math lesson, I go to Youtube, I
303   look up the topic and most of the time it satisfies me and helps me a lot, but also for my personal
304   growth, because I see examples of people different from me, but I always try to understand if
305   what I see is reality (Informant D).

306 In short, adolescents share the positive functionality of the media in their learning, they recognize
307 that they learn in this way in their most personal dimension and at the same time they confirm the
308 need for a modern school in accordance with the times.

309 **4.3   What are your transmedia learning practices?**

310 Finally, we develop this last idea about what teenagers already do that has to do with TL. Our
311 informants use all the tools at their disposal to learn, including textbooks, notes and Internet
312 resources; only one of them does not use the Internet. And, although they clearly distinguish in
313 practical terms the formal (school) from the informal (personal), for them it is all part of a continuum
314 that they manage in a natural way, without opposition or tension. Evidently, in terms of context, the
315 answer given by one student, who links the use of study tools with the integration of some subjects
316 and some teachers:

317   It depends on the subjects, it depends on the teacher; for example, in history the teacher makes us
318   use mostly ... the book, that is, it depends on the question, for example, this year we were a bit
319   behind and so she made us study from the notes and continued, so she skipped many parts of the
320   book; now we are using the book more, but in general I take a lot of notes and compare them and
321   what is not in the book I add it myself (Informant E).

322 Another interviewee follows some missed lessons on social media and uses all the study tools:

323   A mixture, I use them all, but mostly books, because there is safe information, because many sites
324   say many different things, while in books you are sure that they are right, but I can also increase
325   my knowledge using social networks and the Internet. So if maybe ..., for example, recently I
326   took a maths exam, with the distance didactic I had problems to follow, then I followed some
327   lessons on social networks that helped me a lot (Informant F).

328 From the responses collected, it can be seen that the children believe that there is a close link between
329 the use of devices and their own actions; and there are few (3 out of 17) who state that the link does
330 not exist. Moreover, almost everyone uses Internet resources for normal study activities (or linked to
331 them), because they feel safer, because they find useful information, because they quickly find the
332 answers to what they need. Children argue that even the school should use technological resources,
333 such as digital books, much more. For example, one student says:

334   Um, I think it can help the system a lot and also in some schools now they use digital books and
335   this could also help a lot because, for example, I get to school on foot and I have a very heavy
336   load to carry, so it would be very useful. If it is used well, I think that an increase in technology in
337   school can help students a lot, even those who can't afford to buy so many books (Informant G).

338

339 The adolescents interviewed also have very clear ideas about the convenience and usefulness of the
340 devices in the classroom, because they believe that they are useful for facilitating note-taking, the
341 preparation of plans, in economic terms and collaboration with classmates. And they are, as can be
342 seen, in favour of this generalisation.

343

344 **5   General synthesis and discussion**

345 The general picture that emerges from the analysis of the interviews draws a generally homogeneous
346 student profile regarding the judgement they express about yesterday-today and in/out of school
347 learning: the majority confirms the complete diversity of learning today and the presence of
348 transmedia learning strategies linked to school or not.

349 The image emerges of a student who relies almost entirely on technology to solve doubts, questions,
350 problems, who seeks and obtains information both for his personal interests and his school needs
351 (Gutu, 2019; Rodrigues & Bidarra, 2014). It is shown above all as a consumer of digital content, who
352 willingly transmits and shares with others and generally knows well the different functions of the
353 media, paying attention on average to the credibility and validity of the information obtained
354 (Amador, 2013; Bernal Acevedo, 2017).

355 This type of student clearly manifests the diversity of current out-of-school and in-school learning
356 compared to the past and compared to their parents, who had fewer resources at their disposal, mostly
357 books and notes; it expresses the need for schools to be modern and up-to-date to prepare younger
358 generations for the future and for careers and to insert themselves in today's world (Scolari, 2018;
359 Taddeo & Tirocchi, 2021; Ugolini, 2016).

360 This student, while using the Internet to study different subjects, also uses more traditional tools,
361 such as books and notes, constantly uses the Internet for normal study-related activities, as he
362 believes that its resources are very useful, if not indispensable, to the point of believing that

363 technology should be more present in school and that there should be more resources and equipment.
364 This is a very concrete and school-adapted version of what Jenkins (2006) indicated as a subtitle to
365 his foundational work: "where old and new media collide".

366 The high use of devices by the student model that emerges from the interviews creates an influence
367 on performance in school and during testing, in terms of increased confidence and accurate
368 preparation due to the abundance of information acquired (Cappello, 2019; Ranieri, 2019). So much
369 so that devices are used outside of school not only for personal interest, but also to perform tasks
370 (Fleming, 2013; E. McCarthy et al., 2018).

371 In conclusion, the lives of these young people are permeated by the use of the media to the point of
372 creating new and different ways of knowing, a great change in the transmission of knowledge
373 through new and diversified channels, collaboration between students who learn everywhere,
374 continuously and delocalized. And, therefore, the possibility of getting more out of this technological
375 omnipresence is not only not a problem, but is welcomed.

376 **6   Conclusions**

377 The results of this work show that the sample of students interviewed use technology and various
378 media on a daily basis both for normal school needs and to support these needs outside of school, to
379 feel more confident and prepared for various performances, and for their own personal interests.

380 These results are consistent with previous studies related to the positive use of technology in schools
381 and outside schools, such as the use of platform, transmedia Apps media (Chung, 2014; Raybourn,
382 2014); these tools play a fundamental role, not only because they are particularly attractive, but also
383 because they strengthen the security of the children who use them and bring new knowledge that take
384 into account the new transformations, as well highlighted by Amador (2013) or Bernal (2017). In
385 fact, many students interviewed claim to use the devices also to obtain clearer and, moreover,
386 reproducible explanations several times, on various didactic contents, to learn through media in a
387 broad and deep way, considering the devices useful and convenient; this is very much in line with the
388 positive results reported in different incipient research on TL in practice.

389 The use of devices is well received by teenagers. They believe that using them makes them more
390 prepared and confident thanks to the amount of useful information on the net that can increase their
391 knowledge in the different subjects of study; and that goes shows evident similarities with what is
392 stated, among the others, by Fleming (2013) on the development of a kind of "transmedia pedagogy",
393 which expands the learning space outside the school walls; and also, more recently, by Dickinson-
394 Delaporte et al. (2020) and Rodriguez and Bidarra (2019), for that matter, on students' creation and
395 use of multiple media literacies useful for enhancing the ability to understand content across
396 disciplines in a wide variety of learning, and also for strengthening creativity and autonomy in study.

397 The young people interviewed feel part of a broader social and collective context than the situation
398 created by a solitary and individual study, and this determines a kind of collective intelligence
399 (González-Martínez et al., 2018; Jenkins et al., 2009). That develops in fieri with other peers, which
400 grows and increases the potential formative appeal of transmedia practice.

401 As regards the possibility of deploying TL at school, the interviews clearly show the need for schools
402 to be in tune with the times, modern, equipped with appropriate technologies and with more
403 conspicuous dedicated resources: adolescents think that a school that is in tune with the times should
404 be aware of the new literacies. And this also involves the media, including them in the curriculum,

believing that the school can no longer ignore or reject the new educational reality of the new millennium. In this sense, the data obtained from this work indicate some future directions of study to deepen in the Italian school in general and, in particular, in secondary schools. This first approach, in the context of TL, helps us to understand to what extent the Italian educational system must react and must be prepared to welcome new practices (less orthodox compared to those in vogue for a long time). Faced with this challenge, adolescents are receptive (and, depending on their personal learning practices, also prepared). We should see if the same can be said of the teaching staff: although they are not the protagonists of the school, their role always ends up being transcendental. Adolescents want to and can: will the school respond accordingly?

Disclosure statement

The authors report there are no competing interests to declare.

Author Contributions

JG and CR conceptualised the research; JG designed the methodology and reviewed the first draft of the paper; CR conducted the fieldwork, primarily analysed the data and wrote the first draft; JG and FF expanded the first paper and reviewed the final version. RC and FF were in charge of funding.

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Variable	Research Questions	Objectives
Views on technology-mediated learning	How does the learner deal with technology in learning contexts?	To explore the opinion of adolescents in relation to technology-mediated learning from a transmedia perspective.
Learning practices	How do they think they learn regarding technologies?	To know how they reflect on their own learning practices and what they think about that.
Educational opportunities of transmedia	What are transmedia learning practices?	To learn about technology-mediated learning practices linked to transmedia learning.

551 Table 1. Research variables, questions and objectives.

552

behavioral
sciences

MDPI

Article

Adolescents Facing Transmedia Learning: Reflections on What They Can Do, What They Think and What They Feel

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Abstract: The integration of new media literacies and, consequently, strategies such as transmedia learning in the 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, thoughts and expectations that Italian students in classical high schools have in order to face these new formative changes. For this purpose, a mixed methods approach (qualitative and quantitative) was designed and applied in the context of a classical high school in Cagliari (Italy): a questionnaire on digital skills (N = 128), a set of semi-structured interviews (N = 17) and two focus groups (N = 14). The results obtained allow us to verify that, from the point of view of skills, adolescents are prepared to take on the challenges of transmedia learning (navigation, information management), although their collaboration skills need to be strengthened. On the other hand, from the cognitive and affective points of view, they are positive and enthusiastic about these new possibilities: greater interaction, flexibility, engagement and variety of resources and learning strategies.

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

1. Introduction

In 2015 the Italian education system launched the Piano Nazionale Scuola Digitale (hereinafter PNSD), in step with many other initiatives throughout the Western world, with the aim of ensuring "the development of digital skills of students, with particular attention to computational thinking, the critical and conscientious use of social networks and media as well as production and links with the world of work", as stated in Law 107/2015. With this, the PNSD aimed to concretize the conceptual frameworks of digital competences and literacies that the educational system must assume [1], and thus, the Italian school marked a forceful change from previous times and formulated a marked shift toward the integration of Information and Communication Technologies (ICT) in the educational practice [2] in a comprehensive and transversal way, so that it impacts on all learning processes and at all educational levels. The change is harmonious with what is happening throughout Europe and seeks to concretize the European Recommendation of 23 May 2018 on lifelong learning and the DigComp reference framework. Through them, it advocates educational policies that enable citizens to develop the digital competencies needed in the Knowledge Society [3].

This change, moreover, attempts to combat the traditional separation of the school and personal realities of adolescents, always straddling informal ways of learning that penetrate little into the school and vice versa [4] and that constantly prevent what is learned formally from becoming meaningful learning experiences and impacting on greater educational opportunities beyond school. In addition, we must consider the cultural and media context in which we live, characterized by participatory culture, media convergence and collective intelligence [5], in which we not only consume culture but also produce it collaboratively. A

context, therefore, is needed where the informal and the formal should be communicating vessels [6] that allow us to effectively manage the challenges of learning.

With all this, transmedia learning (TL) offers suggestive opportunities, as it allows circumventing the boundaries between the formal and the formal. It allows adolescents a gradual step to participation (and citizenship) in a society that is digital and in which they should produce and not only consume, and do so in a critical, ethical and responsible way [7]. TL is a socioconstructivist and connectivist learning method that moves to the production of content structured by a story, in which the analog and the digital are mixed and alternated [8,9]. Moreover, transmedia (transmedia learning, in fact) is undoubtedly an opportunity from an inclusive and gender perspective [10,11].

However, both transmedia learning itself and participation in the new cultural and civic scenario we occupy (within formal or non-formal learning contexts) imply particular skills and abilities that go far beyond the concept of classical digital competence and lead us to ask ourselves whether Italian teenagers have the necessary new media literacies [12]. They allow media convergence and the leap from media consumption to creation (here, to learn), and one step further, we need to know what expectations and what implications such an educational change would have for the protagonists, adolescents.

2. Theoretical Framework

In this section dedicated to the theoretical framework, we will reflect on the concepts of transmedia, transmedia learning and transliteracy relevant to practical research. In the words of Pasteur, "Chance favors the prepared mind".

2.1. Transmedia and Transmedia Learning

The first uses of the term *transmedia*, as we understand it here, were found in the reflections of Marsha Kinder from the 1990s [13], and they experienced a universal diffusion with the work of Henry Jenkins, within the fan culture and the emergence of media cultural phenomena in which consumers change to active participants in processes highly mediated by technology. All this flow gives rise to the concepts of media convergence and participatory culture [5]; the first one points to a context of overlapping and alternation of digital media, not linear or pre-established, but multiply branched and varied, and the second one to the possibility of users intervening 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 an individual, way (although with personal, not predefined, paths); 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).

From that reference, in the educational field there are different approaches to transmedia, in which a story or a narrative is the axis, and where it is developed across different (digital) media and with different participants. Thus, the term transmedia sometimes refers to a product [9,14], but it can also be a set of digital skills (knowledge and skills already acquired or to be developed) that the subject needs to participate in the creative process [7,15,16]. Finally, it can be a learning strategy (within a didactic approach related to storytelling in most cases), where students develop a story with different educational goals and where they must mobilize competences already acquired or develop new ones [8,15,17].

Regarding the definition of transmedia learning, no commonly accepted definition can yet be found. Transmedia learning rests on two main ideas: Jenkins' concepts of participatory culture, collective intelligence and media convergence (the cultural framework) and the key roots of Vygotskian socioconstructivism [18,19] and Siemens' connectivism [20] (the pedagogical framework). From that, we can design learning experiences guided by

the need for the person to develop a narrative (fictional or not), with digital and non-digital resources of their choice and in a collective context or task (where the performance must be ongoing and learning is the result of collaborating with peers). Apart from these ideas, the theory highlights additional elements: connections with enactivism [21], ludic elements [22], and foreign language learning [17,23]. Because of this, transmedia learning is permeable and flexible, and very customizable: within the school and outside it, with different agents involved (families, teachers, educators), at every educational level (from childhood to higher education or non-formal education). In the end, we are talking broadly about processes of media convergence that encourage the active participation of users, who are considered prosumers (consumers and producers) of cultural/educational content, and these users are moved by their particular interests or passions across different media platforms to contribute to that narrative [17,24,25].

In particular, the opportunities of transmedia learning come precisely from its capacity for pedagogical principles that are not always easy to articulate (constructivism, connectivism) in motivating experiences (engagement) and that are customizable (the narrative allows layers, diversification, recurring points of connection) and coherent with the digital context we inhabit (but at the same time free of pressure from specific technologies and compatible with the analogical, from which we must not flee). Finally, this includes proposals that make it possible to offer new options to bridge, if desired, the limits of formal learning (in the broad sense) and of educational institutions (in particular).

2.2. Transmedia Literacy and Its Important Elements for Transmedia Learning

At this point, one of the key aspects we must consider is the nature of the learner (in any context) regarding the literacy they need to face and the learning opportunities they take advantage of. For the sake of economy of space, we will forego a broad reflection on the nature of the new citizens in the coordinates of the Knowledge Society, as interesting as it may be. In this sense, the literature already abounds in studies of the difference between the relationships that young subjects have with technology in their personal and academic spheres [26,27]. Some literature is also appearing on the differences that arise when learning is formal or informal [2,28]. However, it is necessary to define minimally what we mean by digital competence and what is different about this transliteracy. In this sense, if we start with the concept of media literacy we will understand in the Italian context the ability to use digital media and languages [6], to which is added, in a preferential way, the need to increase the skills of analysis, evaluation and critical reflection [29]. In the background is a myriad of reference frameworks and concepts of digital skills from which we will try to extract some transcendent and synthesizing notes [30–32].

Nevertheless, participating in the Knowledge Society requires different digital literacies (van Dijk 2017), and without them we face the risks posed by the different forms that the digital divide can take, which undoubtedly threaten adolescents' empowerment as citizens (physical gaps in access, competence and use, according to van Dijk [33]), especially in a society characterized by media convergence and participatory culture [5], in which participation means not only consuming, but also actively producing. In fact, digital divides continue to exist, partly because of their diversity, heterogeneity and the multiplicity of forms they take [33]. Among them, we must pay special attention to the digital gender divide [34–36].

Regardless of the details of concepts and approaches, if this new media ecology (and TL) generates new ways of learning, we must also consider that there is a new and different literacy or set of skills necessary to successfully navigate across these media platforms and, at the same time, follow the thread of the development of the narrative. This can be called transmedia literacy (or transliteracy) [37–40], the components of which are yet to be developed. Within the new media literacies approach [12], some skills have been identified as necessary to live in the new digital cultural spectrum: transmedia navigation, game, performance, simulation, appropriation, multitasking, distributed cognition, collective intelligence, judgment, transmedia navigation, networking and negotiation. However, no

prioritization is offered among them, nor is their special incidence from an educational perspective explored in depth [38]. These authors identify particularly important elements, such as transmedia navigation, prosumption (media consumption and production at the same time), collaboration and interaction (among peers), and, finally, the content curation.

2.3. Transmedia Learning

In recent years, some educational literature on educational technologies has focused on highlighting and exposing the gap between the literacy and informal learning practices of adolescents (e.g., video games, social networks, fan groups) and the formal learning processes within schools [4,12,41]. This gap undoubtedly points out the break between how adolescents learn (often via digital devices) in situations where they decide what to learn and why to learn it [4,42,43] and those where teachers design the instructional proposal in a completely institutionalized way [6], which does not necessarily succeed in translating adolescents' learning efforts into meaningful learning [4,31,44].

However, schools should prepare them for life and, therefore, for being competent citizens, also digitally [3], in line with the European recommendations; therefore, we should focus on the digital (and transmedia) skills of Italian students, especially if we consider that TL can be an opportunity to effectively respond to the challenges ahead. Because of that, what we know of Italian adolescents' digital profile is not enough, since it is too general: they are part of the most constantly connected population, and they show a complex and uniform pattern of digital consumption [45]. Of course, this is not always translated into a higher capacity or advantage when socially participating. Moreover, an entrenchment between the personal, family, and school worlds (and flows) can be always found: family and school worlds (regarding the digital issue) are vertical (from parents and teachers to adolescents) and unidirectional, and, in a different way in their personal and technological worlds, where interaction is always developed among peers [28].

Finally, from an inclusive education perspective, transmedia learning can be an opportunity from the point of view of universal design for learning (UD-L). The UD-L suggests that teachers, when planning learning activities, in general terms, respect three basic principles by offering multiple forms of representation, engagement, and action [46–48]. The alliance of TL and the UD-L philosophy can lead us to a more inclusive education [49–51] in terms of wider access to the curriculum [52], and digital and cultural accessibility [11,53,54]. This path will result in "the design and implementation of real educational proposals that respect the UD-L (*one size fits all*) principle and that, at the same time, allow not only the acquisition of digital skills necessary for the 21st century, but that can also contribute, at the same time, to dissolve or reduce the digital divide (including the gender gap) in inclusive education, remains an outstanding challenge. All of this, a priori, is at odds with the possibilities of transmedia learning" [32].

Transmedia learning, as we have seen, can be part of a wider change that disrupts this order, in line with the PNSD and the increasing social demands for changing the school. For this reason, it can be an opportunity to open the (psychological) barriers of the school and to involve in a more cohesive way all the elements of the adolescent's ecosystem. Because of that, as a preliminary study anticipating a TL project implementation, the objectives of this study are, on the one hand, to identify the competences and transmedia profile of Italian students in the classical high schools, based on different instruments (digital literacy, transmedia profile, attitudes toward ICT), and, on the other hand, to determine the expectations and motivations of adolescents toward transmedia learning.

3. Materials and Methods

For this research, a mixed methods approach was considered, aimed at gathering quantitative (questionnaire) and qualitative (interviews and focus groups) information. This set of instruments (qualitative and quantitative) allowed us to extend (and in a complementary way) our knowledge of the object of study: how adolescents in the Italian classical high school face the challenge of transmedia learning, from the competence, emotional and rational points of view (what are their abilities, and what do they feel and think about it).

3.1. Participants and Context

Considering the universe of the classical high schools, it was decided to work with an accessible and incidental sample formed by students of all groups from any course in the classical high school G. M. Dettori in Cagliari (Italy), who agreed to voluntarily answer the questionnaire and participate in the interviews and the focus group. The fieldwork was carried out between December 2020 and November 2021. In relation to our sample, we consider this as one of the limitations of the research we present in terms of generalization. Since the sample in this analysis was not selected considering issues as equiprobability and representation (otherwise, our informants would have come from a real context), we cannot consider it is representative in its number or in its nature, taking adolescents' general population as a reference. Therefore, the value of this research lies the novelty of the knowledge we can generate with these data and in the applicability of this knowledge (considering its usefulness as a diagnosis of the service of transmedia experiences in the concrete context of Italian classical high schools).

For those unfamiliar with the Italian educational context, the classical high school (*liceo classico* in Italian) is part of the Italian national system of public education based on the transmission of educational values aimed at forming citizens in the classical–humanistic tradition, which is its strong point. The cultural experience that the classical high school proposes is also aimed at enhancing logical–mathematical and scientific skills, skills in the field of foreign languages, art, and laboratory methodologies. The classical high school is not a vocational school (VET), so it is aimed at accessing universities and all the faculties available in universities. It has a two-year formative course and a three-year specialized 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 classical high school, established by the Casati Law in 1859, there are other types of high school: scientific, human sciences, artistic, linguistic, musical and dance.

Regarding the questionnaire, we distributed the online version of the complete questionnaire (hosted in the university Google suite as a Google Form) to 138 students, 72 at face-to-face meetings and 66 in the online environment, by using the school learning environment platform (Italy was then in dual teaching, which means that every group was divided into two parts; one of them in person on some days at the school and the other following the classes by streaming, and vice versa; so those face-to-face and virtual meetings were held synchronously). As a result, we received 130 responses, representing different face-to-face/virtual sessions (using the scheduled group tutoring session for each of the school's groups) and through an online form hosted on the university server, and 128 complete responses were consolidated (N = 128). As can be seen in Table 1, by gender, 68.7% were female (consistent with the larger female population usually found in Italian classical high schools), 21.7% were male and 1.6% chose not to be classified. By age, the sample was between 14 and 19 years old, with a regular distribution throughout the five courses students take during their experience in the classical high school, called *media superiore* in Italy.

Table 1. Characteristics of the participants (* official student age for each school year). Source: Authors' creation.

Variable	Frequency	%
Gender		
Woman	88	68.7
Man	38	21.7
Non-binary gender	2	1.6
Course and age		
1st (14–15 years *)	22	17.2
2nd (15–16 years *)	27	21.1
3rd (16–17 years *)	37	28.9
4th (17–18 years *)	22	17.2
5th (18–19 years *)	20	15.6

Regarding the interviews, the population was represented by 17 students from different sections of the two-year and three-year periods of the same classical high school G. M. Dettori of Cagliari: men and women between 13 and 18 years old, all volunteers whose anonymity was guaranteed. Although a set of 20–25 interviews were initially planned, there were finally only 17 interviews because, as they progressed and a primary analysis was performed while transcribing them during the field work days, it reached saturation owing to the uniformity of many answers, and the research team decided to stop in an effort to interfere as little as possible with the rest of the school activities.

Finally, two focus groups were held to refine the conclusions drawn from the questionnaire and interview analyses. Fourteen students (6 in 2nd grade, 8 in 4th grade; 10 girls and 4 boys) participated in these groups, which were recorded and transcribed for analysis. The discussion was organized around a few thematic axes (displayed in the following section, with the rest of the information related to the instruments and techniques) in order to complete the general objective of the research, and it was moderated by a member of the research team, a high school teacher.

All students who participated in the three research techniques (questionnaire, interview, focus group) gave the corresponding informed consent, and at all times the authorization of those legally responsible for the school was obtained, as is legally required.

3.2. Instruments

For the quantitative part of this research, we first decided to use two existing instruments, both belonging to the conceptual sphere of media education and new media literacies. The New Media Scale was administered; this instrument develops Jenkins et al.'s (2009) categories, from which we chose 4 items (collective intelligence, judgment, transmedia navigation and visualization) [55]. We also applied the Media and Technology Usage and Attitude Scale [56], in order to characterize adolescents' attitudes toward the use of technology in educational contexts. Finally, as to their level of digital literacy in a broad and non-specific sense, we also used the Digital Literacy Scale [57], created especially for European adolescents. All three scales are instruments that have been specifically validated and tested specifically for adolescent subjects in the reference studies. We summarize here some of their reliability characteristics and validation processes according to what has been already said for this set of instruments [32,58]. Regarding the Media and Technology Usage and Attitude Scale, its authors [56] conducted an initial literature review, a first pilot (N = 397) and the consequent re-vision and transformation of the items when needed, and a factor analysis that proved the final scale was internally reliable and externally valid. Regarding the Digital Literacy Scale [57], 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 she arrived at solid standardized regression weights for every subscale. Finally, the New Media Scale authors reviewed the literature, produced an initial version of the differ-

ent items, piloted them (N = 397), performed a factor analysis in two steps, and reached a Kaiser–Meyer–Olkin test result of 0.824. This set of scales was administered in a unique way and by an online channel, at the request of the research team and under the auspices of the school's management.

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

Regarding the qualitative part, interviews and a focus group were conducted to expand the general diagnosis offered by the quantitative data collected with the questionnaire and to deepen the dialogue with the adolescents about their conceptions and feelings about educational innovations with a high digital component such as the one we intended to implement. As to the interviews, participants were exposed to an interactive and dynamic talk about the challenges of education and the possibilities of transmedia learning, and from there they were interviewed. Semi-structured qualitative interviews were used, which included questions related to the objective of the research as well as to the selected variables of analysis (see Table 2).

Table 2. Interviews. Research topics, questions, and objectives. Source: Authors' creation.

Topic	Questions	Objectives
Views on technology-mediated learning	How does the learner deal with technology in learning contexts?	To explore the opinion of adolescents in relation to technology-mediated learning from a transmedia perspective.
Learning practices	How do they think they learn regarding technologies?	To know how they reflect on their own learning practices and what they think about that.
Educational opportunities of transmedia	What are transmedia learning practices?	To learn about technology-mediated learning practices linked to transmedia learning.

The interviews were conducted in the school's reading room at the disposal of the high school principal, with an average duration of 15/25 min. The interviews were audio-recorded with the prior permission of the students.

Finally, regarding the focus group procedure, the focus groups were conducted to complete the data that were collected following the administration of the questionnaire and the conducting of the interviews. They made it possible to identify the most relevant and recurring issues that emerged from the two meetings with the children. It should be noted that the children were sensitive to the subject in terms of digital literacy, and the enhancement of digital content, expressing a training need for themselves and for the school in general; children also want to confront each other and adults and to share information on a platform where information can be passed on. To achieve its goals, these topics and the research questions were presented to lead the sessions, as can be read in Table 3.

Table 3. Focus groups. Research topics, questions, and objectives. Source: Authors' creation.

Topics	Questions	Objectives
General evaluation of transmedia learning	What were the most interesting aspects of the project?	To know the students' perspectives on transmedia learning.
Involvement	How do they feel challenged in relation to transmedia learning?	To know the implication that a transmedia approach to learning processes can generate in students.

The recordings of these discussion interviews and focus groups were conveniently transcribed into textual format and imported into NVIVO 11, a program for qualitative data analysis. The data that emerged were transcribed, read, reread, coded for common relevant themes, and recurrent elements in the responses were coded in relation to the codebook provided for this purpose.

4. Results

For clarity of discourse, we will present the results sequentially, focusing on each of the techniques used: survey, interviews and focus groups.

4.1. Transmedia and Digital Profile

In terms of digital literacy, we found the values reflected in Table 4, in which we also incorporated the reference values [57]. As can be seen, in the following tables we decided to incorporate on the right-hand side the values of these same instruments in the research we took as a reference; thus, our data can be evaluated based on them (considering that the samples are not equivalent; despite the limitations of these comparisons, therefore, we considered that it may be useful to offer these values as well). 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. From a transmedia perspective, this was positive in relation to the elements of transliteracy we saw that the literature highlighted as most important, since they emphasized the content elements over the technical elements.

Table 4. Digital Literacy Scale. Source: Authors' creation.

			Reference Values [57]	
	Mean	*SD*	*Mean*	*SD*
Technological skills	3.39	0.44	3.80	0.73
Personal Security skills	4.22	0.59	4.09	0.83
Critical skills	3.79	0.55	3.43	0.74
Devices Security skills	3.27	0.88	3.25	0.93
Information skills	2.56	0.67	3.37	0.70
Communication skills	3.61	0.55	3.69	0.58

Regarding the four dimensions of transmedia analyzed here (Table 5), the informants were especially inclined to transmedia navigation and to everything that had to do with the evaluation of the information found on the network, which can seem to be a contradiction of their documented values in the previous indicators. On the other hand, they presented more contained values both in the community dimension (collective intelligence) and in the assumption of other identities (visualization). Again from a transmedia perspective, this was positive indeed in relation to the highlighted elements of transliteracy (judgment and

transmedia navigation). As can be seen, in this case we took as reference value empirical research [31] and not the text where the instrument was presented [55], since no general exploitation data were found in that text but the pilot.

Table 5. Transmedia profile. Source: Authors' creation.

	Mean	SD	Reference Values [31]	
	Mean	*SD*	*Mean*	*SD*
Collective Intelligence	3.81	0.66	4.12	0.56
Judgment	3.96	0.50	3.88	0.59
Transmedia Navigation	3.97	0.67	3.75	0.70
Visualization	3.71	0.54	3.82	0.56

Regarding attitudes, we found interesting elements when we compared our results with the reference values (Table 6): the dimension of positive attitudes was slightly higher than the reference values, and, in turn, the values of the dimensions of anxiety and dependence or negative attitudes were significantly lower. All of this made up an attitudinal profile favorable to ICT in a general way.

Table 6. Attitudinal profile toward ICT. Source: Authors' creation.

	Mean	SD	Rosen et al. (2013)	
	Mean	*SD*	*Mean*	*SD*
Positive Attitude	3.71	0.51	3.66	0.84
Anxiety and depression	2.95	1.01	3.15	1.09
Negative Attitude	2.82	0.79	3.35	0.92

At the end of the quantitative part, we proposed an analysis of bivariate correlations between adolescents' digital competence and the transmedia and attitudinal dimensions, which is shown in our last table (Table 7). All the transmedia dimensions analyzed were very significant and positive (more digital literacy also implies more propensity to transmedia), but, as we can see, no relation could be found between their digital literacy, on the one hand, and their attitudes toward technology, on the other, which is something to consider.

Table 7. Correlations with digital literacy (** sig > 0.01). Source: Authors' creation.

	C. of Pearson	**Sig.**
Positive Attitude	0.084	0.343
Anxiety and depression	0.059	0.507
Negative Attitude	−0.121	0.172
Collective Intelligence	0.251	0.004 **
Judgment	0.470	0.000 **
Transmedia Navigation	0.407	0.000 **
Visualization	0.463	0.000 **

4.2. Regarding the Interviews

In this section, we will analyze the results of the interviews according to the three main thematic axes.

4.2.1. Views on Technology-Mediated Learning

In general terms, we can say that adolescents are clear that learning processes should be mediated by technology: if technologies are omnipresent in life in general, they should also be omnipresent in education. They understand that technology brings value and, therefore, the school should be open to ICTs as resources and tools that can expand learning opportunities:

Technology is a feature of the modern world and, therefore, must be used in the school in the right way, but one must know how to use it. [Int. 11]

For me the devices are very useful, even economically, cheaper than the textbooks we use in school or the vocabularies. [Int. 6]

Hand in hand with these reflections always comes a certain censure for the lack of updating the school in general, and also specifically in relation to technological issues:

In school we use technology too little and we should use it more because we are modern and we have to be up to date. [Int. 8]

The school, I think, should be more modern, more current, because today it is not like that. [Int. 3]

I think schools should have more technological resources, more computers, more computer labs. That is, here we have the interactive whiteboard in all the classrooms, but it is hardly used, but it is a computer, we use it, that is, we used it before when there was no COVID, at recess or in the time slots. [Int. 5]

Yes, school should be more modern, it should prepare us for tomorrow, [. . .], instead it seems old to me. [Int. 2]

However, there were also those who were carried away by tradition in their evaluation of the school and considered that a balance must be found between innovation and the maintenance of classical structures that do not allow the educational institution to lose its meaning. Implicitly, the two poles of two independent binomials (modernity–tradition, vanity–solidity) were set against each other and a sort of relationship was established between them:

Yes, yes, of course it depends on the aspects because the school has to continue being an institution as before, but some things have to be improved, there are some retrograde aspects, but it has to continue being a serious place and some things can never change, in my opinion, because it would no longer be a school. [Int. 14]

It is important to emphasize, in any case, that no negative considerations were made about the presence of technology in the learning processes in general, nor about its incursion into the school as they know it.

4.2.2. Learning Practices

As for how they learned when they used technology, both inside and outside school, we found that in the informal context (unrelated to formal learning) it was common to integrate ICTs in the learning process, and it was difficult to comprehend that, when they were the ones who decided what they learned following their own interests, they did not place that learning in a technological context and did not use digital resources.

Bah, I look for all kinds of information, about sports, especially, about the pandemic, about music, about technology, about school. [Int. 8]

For my own interest, different subjects, movies, music, small trivia. Now that we have started civics I need it a lot, for mathematics then it is clearer for me as I can watch and review videos. [Int. 13]

I am looking for a lot of information, about politics, about the municipality where I live, about Covid. [Int. 5]

Well, I do it for my personal interests, because if I'm curious to know something, I look it up immediately, it's almost automatic. [Int. 16]

They were aware that they learned in a different way than before (here there were constant references to how older people, for example, their parents, have learned and learn). They gave an important weight to the network as a virtual space in which learning takes place today, as opposed to spaces that they did not frequent (sphysical spaces), such as the library, and as opposed to analogical resources such as the encyclopedia or the book, which for them were not the first option (not even one of the most likely ones):

Well, certainly, compared to my parents I will have learned things in a different way, especially with more influence from the internet and social media, because obviously, now, if I don't know something I go to the internet, whereas before you would pick up an encyclopedia, open it and read. So learning is definitely different. [Int. 16]

The assessment of these two ways of learning (the analogical way that they attributed to their adults of reference and the digital or hybrid one that they assigned as their own), evidently, was not neutral. They considered that the current way of learning (theirs) is much richer and more profitable:

We learn in a better way because you have more tools anyway, more possibilities to take information, even before we used books, but now there is internet it is really complete and you take a quarter of the time than in the past. [Int. 15]

Although we stated that adolescents focused on this "new way of learning" in the informal sphere, giving channel to their own interests, there were also communicating vessels for the learning that takes place in school (or related to school activities). In these cases, the relationship was ambivalent: on the one hand, it was difficult to resist the usefulness of the digital in formal learning, but it was also recognized that the digital was only part of what was necessary for studying:

Yes, I think it is very useful, even when it comes to school, because, for example, when it turns out that I don't know the meaning of a word, you just type it in Google and you find it immediately, but also in any subject you can find a lot of information. [Int. 26]

Eh, it is not essential, but the book is essential, then, if necessary, there is the internet, but only from the internet I could not study. [Int. 14]

As for the problems they encountered in meeting their learning needs on the Web, it was common to identify the challenge of information evaluation: how to curate content, how to verify the quality of information, how to select relevant information (first excerpt). However, it seemed to be more linked to learning situations in school because, as seen in the second intervention, in the non-school environment these problems were much more easily solved:

I practically never do it, that is, I take the information that interests me and that's it. [Int. 3]

I have quite a few problems, because in several sites you find totally different information, so I compare myself with others, but it is difficult. [Int. 14]

Finally, when asked to what extent in these technology-mediated learning processes they jumped from consumption to production, the answer was unanimous: they only consumed, and did not produce content (or at least they were not aware of it). They participated in the network, they commented and interacted, but they did not create.

Consumption only. [Int. 8]

4.2.3. Educational Opportunities of Transmedia

Finally, as for the educational opportunities of transmedia, there was general and overwhelming enthusiasm. The TL briefings they received seemed suggestive and promising, and the perception was universal that it can open up an exciting range of possibilities for

them. Among them, access to a seemingly infinite and immediate amount of information, presented in many different forms (complementary to each other):

> *I think they would allow everyone to have immediate information, immediately visible, then there are the diagrams, the images, which are more fixed in the mind. [Int. 3]*

There were resources that complemented what happens at school, what is offered at school:

> *Yes, I would say yes, I think the internet is unlimited, yes, it is useful to go deeper and it offers me, it suggests me ideas for what I study, I don't limit myself only to what I hear in school. [Int. 3]*

On many occasions, however, these possibilities ended up materializing in ideas of a much lower profile than the vast range of transmedia (the use of digital resources that replaced analogical ones):

> *I would say it would be great if they would let us use them, like the Latin and Greek dictionary, which is very heavy, mine is difficult to read because it was my mother's, but that's just a small example, there would be many. [Int. 11]*

In tune with the community essence of transmedia, they focused very strongly on the collaborative dimension of the opportunities offered in terms of interaction.

> *Well, I could still ensure more collaboration between colleagues, maybe we all look for information together and then each one gives the information he/she found, so there could be more efficiency. [Int. 16]*

Only on rare occasions, and almost as a precautionary measure, were negative elements or reticence mentioned:

> *I think so, but only in part, not all problems can be solved with technology, but in general I would say they are useful for some things. [Int. 7]*

4.3. Regarding the Focus Groups

In this section, we will analyze the results of the focus groups according to the two main thematic axes.

4.3.1. General Evaluation of Transmedia Learning Opportunities

Finally, we come to the final part of the results, which has to do with the discussion carried out in the focus groups. From the conversations in relation to the appreciation of transmedia initiatives and their participation in them, a total homogeneity in the positive sense emerged, as stated by A (after each excerpt of the focus groups we indicate the coding of each informant with capital letters):

> *Yes, I would say yes, because it was important to participate in order to understand how things are and also to be able to introduce technology in the school. (FG. A)*

In general, the possibilities of TL opened them up to a different way of learning, almost unknown until then.

> *I was immediately interested in the initiative, also because it presents us with a way of learning in which I did not imagine that we students could participate. (FG. F)*

The students were explicit in pointing out the most innovative and interesting aspects that emerged from the interviews and questionnaire conducted in the previous phases of the project. The expectations, undoubtedly, could not be more positive, insofar as they allowed them to link what they do in school with their way of living and satisfied their knowledge needs outside school:

> *Everything was new, it's hard to say what was the most interesting.... well, maybe, I would say that the fact that we were presented with a very different way of experiencing school than usual, I would say that I never thought that the Internet in general had so much importance for our preparation. (FG. H)*

This linkage, in general, was very tempting to them because of its potential:

> *But, basically everything got me involved, especially when I think about the fact that I wrote things about what I do with media outside of school, what I use, what I can be practically what I learn, that is, that I can learn also outside of school, with the different media out there, for so many topics, I mean, I had never thought about that. (FG. B)*

They also found the community dimension of transmedia learning suggestive, as was also apparent in the interviews:

> *The interesting thing for me was to discover and understand that technology can be used at school to share with others, so also to socialize, to meet more people that maybe we can help and be helped. (FG. D)*

4.3.2. Students' Expected Involvement in a Transmedia Learning Project

Finally, we tried to expand through the information collected in the focus groups on the more subjective elements of their possible involvement in transmedia learning (motivation, expectations). In this sense, the students as a whole expressed different expectations of the implementation of the project and in terms of its usefulness for students with learning difficulties (in the key of inclusive education):

> *It seems to me that this project can help some students who have difficulties in some subjects, because if you use different tools than the usual remedial ones in the afternoon, which are then only done if there is money, you can get results to help these students, with new things like that kind of learning. (FG. H)*

Students believed that there were new ways of learning that could be better adapted to their interests, to their ways of learning, and to the new resources that were now available to them and that were not as present in traditional schools as they would like. In this sense, they were clear that they would like to see them in practice, because they were suggestive:

> *This project made me know unknown things, in fact I liked it and I would like to make it known in schools. (FG. E)*

> *For me it was useful to understand that there are other ways of learning, which I practically did not know and which I would like to be present in the school. (FG. B)*

More importantly, they felt involved in this new way of approaching learning processes at school: to be taken into account in a much more digital, open and flexible school. They wanted what they used on a daily basis to penetrate the learning processes so that they could benefit from the opportunities it offered them.

> *I like the idea of being part of the fact of learning, that technology helps in this sense, I would like this to be accepted in school, not hindered. (FG. B)*

They also found the community dimension of transmedia learning suggestive, as was also apparent in the interviews:

> *The interesting thing for me was to discover and understand that technology can be used at school to share with others, so also to socialize, to meet more people that maybe we can help and be helped. (FG. D)*

5. Conclusions

The question we, as teachers, asked ourselves at the beginning of this reflection was whether the classical high schools could hopefully welcome the implementation of transmedia learning experiences, from the students' perspective. This had to do both with their competencies and opinions (in relation to what the TL demands of them), and with the very nature of the classical high schools within the traditional Italian school system (indeed, they are classics not only because of the disciplinary field on which they focus, but also because of the weight of the Italian scholastic tradition, especially regarding the methodological issues). According to what we found in our mixed approach (not only with

quantitative data from a survey, but also with qualitative data from interviews and focus groups), it seems that the conditions are favorable, insofar as students have the key skills to develop educational projects in transmedia and, moreover, as they seem motivated to do so.

In relation to the first issue, what we found is that the level of digital competencies in general is positive (dimensions such as critical skills or personal safety stood out, and informational or technological skills should be reinforced, although they allow us to be quite positive as well regarding the basis level), and, as for specific skills related to educational transmedia [39], we found particularly high values in transmedia navigation itself and in judgment (it was interesting to see how, although their levels of information literacy were not particularly high, those of this dimension were more oriented to the awareness of the need to evaluate information than to the evaluation technique itself); this is a very promising starting point for implementing transmedia learning activities with these students. However, of course, the landscape was quite heterogeneous regarding students' digital profiles (in a general way) [31], and it will be necessary to accompany each of the students in the parallel development of the weaker dimensions (security skills, for instance, for every one of them, and in the development of weaker skills in every student). In any case, it will be necessary to always reinforce those aspects that are generally less strong in the context of the Italian school (the community dimension, collective intelligence; and visualization, linked to less traditional didactic strategies and less present in the school [42,44]).

As for how they felt about a transmedia learning proposal (and this is perhaps the most novel aspect of this research, although a priori obvious), adolescents were enthusiastic, and we saw this both in the quantitative data (high positive and low negative attitudes) and in the qualitative data (interviews and focus groups). Let us recapitulate the most important elements of what they think: their relationship with technology, despite all the reflections that have been made about it [27,31], is natural. They use technology in all dimensions of their lives and, therefore, also in learning situations outside school (when they learn by their own decision and by following their own interests); therefore, they understand that it is natural to learn also with technology. On the other hand, they feel that the school is, in methodological terms, an outdated institution that needs to be updated. They have a clear awareness of learning in a different way from their adults of reference—a much more efficient way of learning, thanks to the many resources now available to them (including technological ones). From here, it is logical for them to cook it all in one dish, in which the digital elements (and also the new learning strategies linked to the digital in the informal environment) enter the school to modernize it [42,59].

All this leads us to a final consideration. We started this paper with the concrete expectations of adolescents about a hypothetical implementation of TL experiences, and we see that the itinerary of research and knowledge construction (through the questionnaires, interviews and focus groups) generated motivating expectations for them: the school update [8], the variety of learning resources (in a UD-L approach) [11,46,48], greater interaction with their peers [9,25], engagement [14,23,38], etc.

After this general reflection on the data and their interpretation, we must conclude with two more important questions. The first has to do with the limitations of the study itself, directly related to the type of research carried out and the context. Although the results were clear and allowed for a solid interpretation, the qualitative part of the methodology applied in this context allowed for very cautious generalizations, and we must consider the context in the same regard (from a national or international perspective, considering the type of classical school, etc.), since this may have a very direct relationship with the findings of this research. On the other hand, these conclusions are aprioristic and allow us to think that transmedia learning experiences will be well received, but the practical implementation should also be monitored to determine what the students' performance is in real cases and what their real satisfaction is a posteriori.

Secondly, in terms of implications, the results of this research precisely encouraged putting this step into practice, since the theoretical expectations about TL were in harmony with what students perceived and with the competencies they need: on the one hand we have skills and motivation, and on the other hand we have opportunities and potential. All this, undoubtedly, is the best scenario for jumping into practice (and further research).

It seems that here, therefore, we have the full circle, responding to what we were considering at the beginning of these conclusions (after responding, as we have seen, to the research objectives): the opportunities of TL a priori are innumerable and, moreover, not only do we have a concrete context in which to apply them (the classical high school), but its protagonists, the adolescents, would receive it with enthusiasm, convinced of the advantages that it can bring them in many ways.

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