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# Capability of Monitoring Media Related Competences of the Public in Estonia

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## ABSTRACT

The study provides a systematic summary of the available knowledge concerning media related competences in Estonia. The goal was to focus on four information-related research questions: (i) What information about media competences is collected? (ii) How is this information analysed? (iii) What knowledge is created and published? (iv) Where are the main information and knowledge gaps? For this study, a four-dimensional model was created, which enabled us to get an overview of those aspects of media-related competences that gain either more or less attention (and money) in Estonia. Four types of information sources were used: academic articles, reports, the bibliographical database produced by the Mediadelcom project, and web pages (for EU and national policy documents). The results show that, in Estonia, political as well as academic attention is focused on digital competences, both theoretically and empirically. Estonia's research interest and knowledge production is biased towards children and young people; but parents, and parenting, the influence of home is also put in focus of the empirical research. EU-financed projects influence the research agenda. The EU has initiated reports on media literacy initiatives in Estonia and therefore descriptive knowledge on various activities and projects as well as the agents behind these projects is accessible.

## KEY WORDS

Capability. Estonia. MEDIALDELCOM. Media Literacy. Media Related Competences. Monitoring.

# 1 Introduction

An official website of the European Union *Shaping Europe's Digital Future* declares: “Media literacy has never been as important as it is today. It enables citizens of all ages to navigate the modern news environment and take informed decisions. Media literacy concerns different media and distribution methods. It is a crucial skill for all citizens regardless of age, as it empowers them and raises their awareness. It also helps to counter the effects of disinformation campaigns and fake news spreading through digital media. The recently revised Audio Visual Media Services Directive (AVMSD) strengthens the role of media literacy. It requires Member States to promote measures that develop media literacy skills.”<sup>1</sup>

In the introductory chapter of the *Media Literacy Reports* in the EU, the definition of media literacy “includes all technical, cognitive, social, civic and creative capacities that allow a citizen to access, have a critical understanding of the media and interact with it”.<sup>2</sup>

Meeting such a political demand requires that a country has knowledge of the competences that should be developed for a particular group of the population, and whether and to what extent people are motivated to develop their digital, media, information and communication competences. These questions presuppose that the state has sufficient knowledge of which areas and groups already have the necessary competences and where the lack of competence is most critical from the standpoint of coping. However, assessing media skills of the population is a challenge for research methodology. In other words, researchers need to seek the best way to study media usage practices of all social groups and to measure the range of competences.

If there is sufficient (or minimum) knowledge about media related competences of various social groups, supporting media literacy requires knowing the kinds of intervention and training tools that are available, and the accessibility and efficiency of these tools. This set of questions also includes knowledge about the main agents and how different activities are financed.

All these questions can be summed up by asking – what is the state-of-art “capability of monitoring” concerning the media related competences in a certain country? The aim of this study is to answer this question in the context of Estonia.

We distinguish between “knowledge” and “information”, which is based on the “knowledge hierarchy”, also known as the DIKW model.<sup>3</sup> We define “information” as current news on media related skills and brief reports on media-literacy promotion activities, etc., where information is fragmented, current, not systematic and little contextualized. Information is also data collected by various surveys, tests and other assessment methods, as opposed to “knowledge”, which is synthesized, compared, discussed, and conceptualized information. As knowledge demands synthesis of multiple sources over time, the sources usually comprise of systematic reports and academic research.<sup>4</sup> A good monitoring capacity requires knowledge that is collected as systematically and consistently as possible.

In order to systematically investigate this issue, we designed a 4-dimensional monitoring model with the aim of distinguishing normative and conceptual knowledge, research and practical media literacy promotion and interventions.

<sup>1</sup> *Media Literacy*. [online]. [2023-11-09]. Available at: <<https://digital-strategy.ec.europa.eu/en/policies/media-literacy>>.

<sup>2</sup> CAPPELLO, M.: Foreword. In CABRERA BLÁZQUEZ, F. J., VALAIS, S. (eds.): *Mapping of Media Literacy Practices and Actions in EU-28*. Strasbourg : European Audiovisual Observatory, 2016, p. 1. [online]. [2023-11-09]. Available at: <<https://rm.coe.int/1680783500>>.

<sup>3</sup> See: ROWLEY, J.: The Wisdom Hierarchy: Representations of the DIKW Hierarchy. In *Journal of Information Science*, 2007, Vol. 33, No. 2, p. 163-180.

<sup>4</sup> *Ibidem*, p. 173.

## 2 Theoretical Background: The Family of “Media Literacies”

In order to find the answer to the question “What competences should be developed?”, it is important to point out that while “media literacy” is defined in various policy documents, in academic discourse, the “concept of media literacy” is extremely sprawling – both in essence and disciplinary terms. It has also changed since its early stage in the 1970s. Today, one can find variety of concepts that belong to the media literacy “family”, e.g. “critical media literacy”, “information literacy”, “communication literacy”, “visual literacy”, and more specifically, “news literacy”<sup>5</sup>, “infocommunicative literacy”<sup>6</sup>, “transmedia literacy”<sup>7</sup>, “advertising literacy”<sup>8</sup> and “social media literacy”. In recent years, the *European Commission* has taken aim at more specific development of the concept of digital literacy, expected from all citizens (DigComp, 2017<sup>9</sup>; DigCompEdu, 2017<sup>10</sup>). Digital Competence was included as one of the eight essential skills in the *Recommendation on Key Competences for Lifelong Learning*.

“Digital literacy” is the skills required to achieve digital competence, the “*confident, critical and responsible use of, and engagement with, digital technologies for learning, at work, and for participation in society.*”<sup>11</sup> It is defined as a combination of knowledge, skills and attitudes.

There are a number of authors who use the assembled terms “digital media literacy” or “digital information literacy”.<sup>12</sup>

Academic scholarship lacks any consensual definitions concerning these concepts, which can be explained in part by the diversity of disciplinary and theoretical backgrounds of the researchers who have developed them.<sup>13</sup> Since 1974, “information literacy” has been an area of increasing interest to librarians and information professionals,<sup>14</sup> and library science scholars also use the concept of “media and information literacy”. In 2007, UNESCO introduced an umbrella concept – media and information literacy – a composite of literacy fields. “Media literacy” originated from media studies and communications and draws from other humanities and social science disciplines. “Information literacy”, as Kozłowska-Barrios explains, emerged

<sup>5</sup> See: LEE, L. et al.: Understanding New Media Literacy: The Development of a Measuring Instrument. In *Computers & Education*, 2015, Vol. 85, p. 84-93.

<sup>6</sup> See: BORGES, J.: Infocommunicative Literacy: Conceptual Structure and Applications. In *Journal of Librarianship and Information Science*, 2023, Vol. 55, No. 3, p. 609-616.

<sup>7</sup> See: SCOLARI, C. A. et al.: Transmedia Literacy in the New Media Ecology: Teens’ Transmedia Skills and Informal Learning Strategies. In *El Profesional de la Información*, 2018, Vol. 27, No. 4, p. 801-812. [online]. [2023-11-09]. Available at: <<https://doi.org/10.3145/epi.2018.jul.09>>.

<sup>8</sup> See: KUNKEL, D. et al.: Psychological Issues in the Increasing Commercialization of Childhood. In WILCOX, B. L. et al. (eds.): *Report of the APA Task Force on Advertising and Children*. Washington, DC : American Psychological Association, 2004, p. 20-54. [online]. [2023-11-09]. Available at: <<https://doi.org/10.1037/e539692009-001>>. See also: CASTONGUAY, J., MESSINA, N.: Age Differences in Moral Reasoning: An Investigation of Sponsored YouTube Videos. In *Journal of Media Ethics*, 2022, Vol. 37, No. 4, p. 227-237.

<sup>9</sup> See: *DigComp Framework*. [online]. [2023-11-09]. Available at: <[https://joint-research-centre.ec.europa.eu/digcomp/digcomp-framework\\_en](https://joint-research-centre.ec.europa.eu/digcomp/digcomp-framework_en)>.

<sup>10</sup> See: *Digital Competence Framework for Educators (DigCompEdu)*. [online]. [2023-11-09]. Available at: <[https://joint-research-centre.ec.europa.eu/digcompedu\\_en](https://joint-research-centre.ec.europa.eu/digcompedu_en)>.

<sup>11</sup> *Key Competences for Lifelong Learning*. Luxembourg : Publications Office of the European Union, 2019, p. 10. [online]. [2023-11-09]. Available at: <<https://data.europa.eu/doi/10.2766/569540>>.

<sup>12</sup> See: MOORE, R. C., HANCOCK, J. T.: A Digital Media Literacy Intervention for Older Adults Improves Resilience to Fake News. In *Scientific Reports*, 2022, Vol. 12, No. 1. [online]. [2023-11-09]. Available at: <<https://doi.org/10.1038/s41598-022-08437-0>>.

<sup>13</sup> See: WUYCKENS, G. et al.: Untangling Media Literacy, Information Literacy, and Digital Literacy: A Systematic Meta-Review of Core Concepts in Media Education. In *Journal of Media Literacy Education*, 2022, Vol. 14, No. 1, p. 168-182.

<sup>14</sup> See: VIRKUS, S.: Information Literacy in Europe: A Literature Review. In *Information Research*, 2003, Vol. 8, No. 4. [online]. [2023-11-09]. Available at: <<http://informationr.net/ir/8-4/paper159.html>>.

mainly from librarianship and computer sciences and points out that, according to some authors, “information literacy is more concerned with access, while media literacy is with understanding.”<sup>15</sup>

In the early 21<sup>st</sup> century, a new term – news literacy – was introduced.<sup>16</sup> “News literacy” has long been understood as a sub-category of media literacy. Several authors propose a new version of news literacy based on journalism and mass communication theories, which would “combine knowledge of news production, distribution and consumption with skills that help audiences assert control over their relationship with news.”<sup>17</sup>

These examples briefly illustrate some overlapping concepts (e.g., the common aim is to empower citizens to cope with propaganda and fake news, cope with information overload and stop the decline of trust, etc.) and enable us to imagine that media, information, communication and digital literacies are like a tree with several distinct branches. As Apuke et. al point out, “[a] closer look at the literacy concepts used in past research suggests that there are four dimensions of literacy; news, media, digital and information.”<sup>18</sup>

All these concepts include the term “literacy” and refer to competences (knowledge, skills and attitudes) that are related to mediatized communication. Therefore, in this article, we prefer to use the term “media related competences”.

The key question remains: Which competences are most useful for empowering citizens? Each concept emphasizes its own set of competences:<sup>19</sup> “Information literacy” focuses on mastering information search and processing (the skills that identify, find, evaluate, apply, and acknowledge assorted sources of information). “Communication literacy” focuses on the skills of listening to the other, understanding their point of view, providing reasoned arguments, the ability to negotiate – in person and via electronic devices. “General media literacy” often points out the need to develop critical thinking and an ability to evaluate the credibility of information online. “News media literacy” points out the critical ability to distinguish high-quality news and information from low-quality content and misinformation and to navigate news environment.<sup>20</sup>

In conclusion, while policy documents prioritise the development of media-related skills for all groups of the population and link it to various problems of contemporary societies, academic research has created a very broad spectrum of assorted competences that the media-educated population should achieve. The packages of competences offered by each concept have varying degrees of generalization. For example, separating high-quality news from other news-like texts is a specific skill achieved through certain training, while knowledge of cybersecurity is complicated, has multiple degrees of difficulty and requires constant updating. A functional reading ability, which is one of the prerequisites for assessing media

<sup>15</sup> KOZLOWSKA-BARRIOS, A.: Media and Information Literacy (MIL) in Library Classrooms: Content Analysis of News Evaluative Criteria in Instructional Worksheets and Checklists. In *The Journal of Academic Librarianship*, 2023, Vol. 49, No. 3. [online]. [2023-11-09]. Available at: <<https://doi.org/10.1016/j.acalib.2023.102680>>.

<sup>16</sup> See: MIHAILIDIS, P.: News Literacy in the Dawn of a Hypermedia Age. In MIHAILIDIS, P. (ed): *News Literacy: Global Perspectives for the Newsroom and the Classroom*. New York, NY : Peter Lang Publishing, 2012, p. 1-15. See also: MALIK, M. et al.: *The Challenges of Defining 'News Literacy'*. Berkman Center Research Publication No. 2013-20. [online]. [2023-11-09]. Available at: <<https://doi.org/10.2139/ssrn.2342313>>; MORRIS, K., YEOMAN, F.: Teaching Future Journalists the News: The Role of Journalism Educators in the News Literacy Movement. In *Journalism Practice*, 2023, Vol. 17, No. 7, p. 1573-1590.

<sup>17</sup> See: TULLY, M. et al.: Defining and Conceptualizing News Literacy. In *Journalism*, 2022, Vol. 23, No. 8, p. 1589-1606.

<sup>18</sup> APUKE, O. D. et al.: Literacy Concepts as an Intervention Strategy for Improving Fake News Knowledge, Detection Skills, and Curtailing the Tendency to Share Fake News in Nigeria. In *Child & Youth Services*, 2023, Vol. 44, No. 1, p. 90.

<sup>19</sup> See: TULLY, M. et al.: Defining and Conceptualizing News Literacy. In *Journalism*, 2022, Vol. 23, No. 8, p. 1589-1606.

<sup>20</sup> *Ibidem*, p. 1591, 1601.



content critically, is simultaneously a general skill. The competence concerning privacy includes subskills about understanding, valuing and negotiating own personal data.<sup>21</sup>

However, systematisation is of little use if it does not provide the necessary criteria and methodology for the assessment of those competences. For example, the skill to assess the reliability of information sources could be measured by using the checklist approach – people whose skills are being assessed must identify balanced, factual texts or parts of texts with verifiable sources.<sup>22</sup> Haider and Sundin propose that awareness of the workings of algorithms can be considered equally important as the ability to assess individual information sources.<sup>23</sup> The examples illustrate the complexity of assessment of all sub-competences.

In addition, well-focused promotion of media literacy also requires knowledge of media usage habits and motives to identify the competences of various social groups. For example, the UK institution *Ofcom* publishes annual reports on media use of children and their parents as well as media use of children since 2006 and adults since 2011. *Ofcom* labels the reports as “media literacy research”. It should be noted that the research interest has been biased towards children and young people for over a decade in Europe. The research lead by Sonia Livingstone plays a significant role in the field, as she and the related research community have published many papers on the digital skills of young people and children.<sup>24</sup> Pedagogical discourse deals with learning and teaching media related competences. In addition, there is great interest across disciplines (including education, sociology, information and technology studies and psychology) for data-driven education, which is linked to digital skills.

Since the policy documents support media literacy promotion (as indicated by the quote at the beginning of this article), a wide range of programmes and training opportunities have been created, which require participating individuals to be aware of their existing competences and abilities to select the learning methods that are best suited to their needs. A focus on learning opportunities is ideal for a personal standpoint but not a societal perspective. Indeed, concentrating on learning opportunities to the detriment of measuring the competences of societal groups might raise the risk that some segments of the population will remain vulnerable – and that society will not have any knowledge of this structural weakness.

Therefore, we propose a four-domain monitoring concept that will help to detect instances of knowledge in the contexts – of sufficiency, inconsistency, absence or not being updated – for particular situations. For example, in Estonia, during the COVID pandemic, the government had to invite people for vaccinations and used the news media as the main channel. Only later, after the crisis had passed, did the government learn that some groups of the population did not trust or understand the messages from the media but did believe their doctors and neighbours.

### 3 Methodology: Four Domains of Monitoring

The four domains of media related competences monitoring concept (see Fig.1) could be useful for policy makers and society. In this study, the four domains enabled us to get an overview of which aspects of media related competencies attract either more or less attention (and thus money) in the context of Estonia.

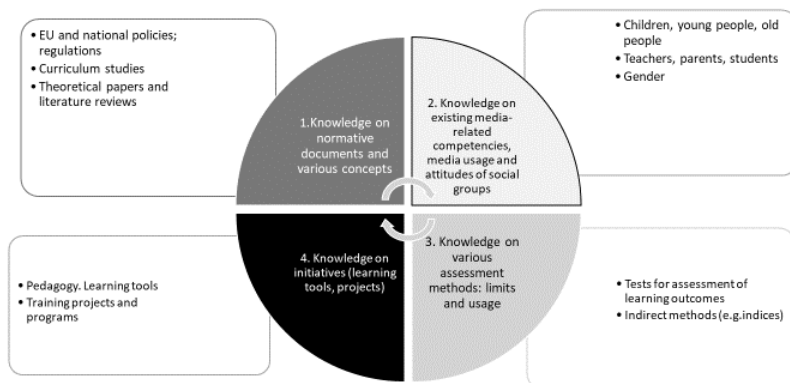
<sup>21</sup> See: STOILOVA, M.: Children’s Understanding of Personal Data and Privacy Online – A Systematic Evidence Mapping. In *Information, Communication & Society*, 2021, Vol. 24, No. 4, p. 557-575. See also: RÖMER, L.: We Have to Teach Children about Data Protection Earlier. An Interview with Sonia Livingstone. In *Media Studies/Mediální Studia*, 2019, No. 2, p. 172-177.

<sup>22</sup> See: MEOLA, M.: Chucking the Checklist: A Contextual Approach to Teaching Undergraduates Website Evaluation. In *Portal: Libraries and the Academy*, 2004, Vol. 4, No. 3, p. 331-344.

<sup>23</sup> See: HAIDER, J., SUNDIN, O.: Information Literacy Challenges in Digital Culture: Conflicting Engagements of Trust and Doubt. In *Information, Communication & Society*, 2022, Vol. 25, No. 8, p. 1176-1191.

<sup>24</sup> See: LIVINGSTONE, S. et al.: The Outcomes of Gaining Digital Skills for Young People’s Lives and Wellbeing: A Systematic Evidence Review. In *New Media & Society*, 2023, Vol. 25, No. 5, p. 1176-1202.

## Four domains of knowledge concerning media-related competencies



**FIGURE 1:** Four Domains of Knowledge Concerning Media-Related Competencies

Source: own processing, 2023

The first and fourth sectors (marked with white lettering) are related as the promotion demands various initiatives. The second and third sectors (marked with black lettering) are also related, because they both rely on academic research. Assessment methods are proposed as a separate domain to point out the methodological differences from the second domain. The latter often uses the sociological approach.

Various publications include all four domains, either wholly or partially. The first domain (sector) includes the normative basis concerning the media related competences: the EU and national policy papers, directives and laws providing general definitions. However, the lack of conceptual synthesis between academic approaches as well as the proliferation of sub-concepts causes “difficulties in translating concepts into indicators as well as developing assessment methods tailored to contexts in which observations are made”.<sup>25</sup> Therefore, good knowledge in this domain does not guarantee effective monitoring. However, the policy documents and regulations (the national curriculum included) provide directions and set the agenda of attention on certain topics. Therefore, the important aspect is to ask whether and how the financing system supports the agenda (e.g., Does the financing system support research or interventions?).

The second domain is the most complicated one. On the one hand, it covers research concerning age groups, roles and gender. On the other hand, the media related competences are tightly linked to media usage habits and motivations. The research methodology is demanding, as it is not easy to measure how people select and process media related information. The information gaps in this domain might be related to the sample (a bias towards some social groups), methodology and diachronic continuity of information collection and analysis. The grant-based research funding does not support longitudinal studies. The knowledge production in this domain provides input for further evidence-based policy.

The third domain (knowledge of various assessment methods) includes both tests that are created and used for formal education as well as indirect assessment methods that aim to evaluate the aspects of media related competences among citizens (e.g. parts of the PISA test could be used to assess reading abilities). Assessment is related to the concept that has got most attention in certain countries – if the concept is not clear (either in policy documents or in the national curriculum), creating indicators might complicate the issue. In addition, some literacy concepts include so many indicators that actual assessment is impossible.

<sup>25</sup> See: WUYCKENS, G. et al.: Untangling Media Literacy, Information Literacy, and Digital Literacy: A Systematic Meta-Review of Core Concepts in Media Education. In *Journal of Media Literacy Education*, 2022, Vol. 14, No. 1, p. 168-182.

The fourth domain (knowledge on intervention) is focused on promotion and is mainly represented by various learning or training projects, websites, educational tools and games. There is available a range of overviews of such actions as well as small-scale studies on efficiency or perception of such tools.

Effective monitoring needs sufficient and related knowledge concerning all four domains. The research as well as the initiatives are developed by different agents: European Commission; national policy makers; academic researchers, librarians, formal education institutions and teachers; NGOs, different organizations, independent educators, media users, etc.

In this research, the empirical analysis was based on four types of sources:

1. Academic publications. In order to get an overview on Estonian knowledge concerning the four domains we used the Estonian research database *ETIS*. The database includes all publications of Estonian research. In Estonia's small population of 1.3 million people, there are just 30 academics who carry out media related research. Consequently, we analysed the publication lists of those academics we knew their research interest include media. The *ETIS* database also provides information about the grants, with which the researchers have been or are involved. The list of publications was transferred into the bibliographical database created by *MEDIADEL.COM*.
2. In order to compose the model of four domains, we searched databases of academic publications (such as *Google*, *Academic Search Complete*, *Communication and Mass Media Complete*, *e-Journals*, *ERIC*), which used the combinations of following keywords: media, digital, information and news literacy, skills, competence, tests, assessment, media usage, children, parents, teenagers, young people, adults, teachers, usage, report. As each search produced thousands of publications, we decided to select review papers and the latest publications and (as the aim was not to produce a literature review, but indicate the research approaches and conceptual differences) this selection was justified.
3. EU policy papers, national reports (webpages).
4. Database *DSpace* for the search of BA, MA and doctoral theses that have focused on media related competence (we used combinations of the same keywords as listed above).

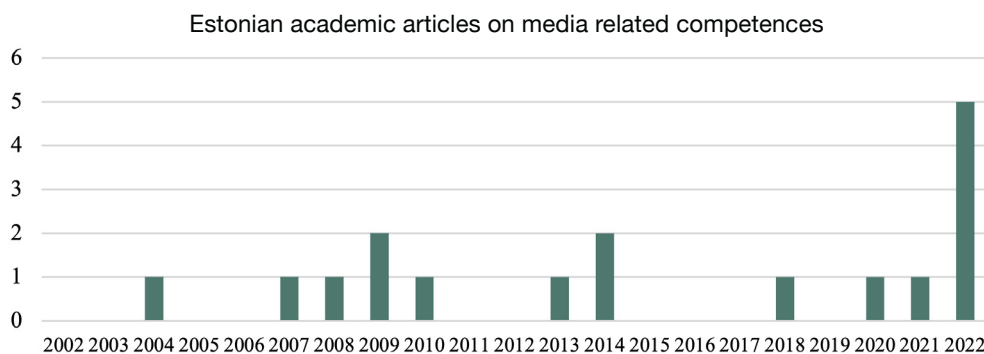
## 4 Results: Estonian Case Study

The Estonian case study follows the above-mentioned four-dimensional analysis model. The basis of the first and second sub-chapters (and the term "knowledge") take into consideration the academic publications. The third sub-chapter focuses on the question of which assessment tools have been created and covered for measuring media competence in Estonia. The purpose of the fourth sub-chapter is to analyse whether and to what extent there is an overview of the different stakeholders who develop media-related competences, the relevant projects and learning tools in Estonia.

### 4.1 Available Knowledge on the State-of-the-Art Concerning Media Related Competences

The list of publications in 2000-2022 is available at the bibliographical database produced by *Mediadelcom* consortium. We found 23 articles focused on media related competencies. Topical differences and the time of publishing are presented in Figure 2.<sup>26</sup>

<sup>26</sup> Authors' note: Overview of academic publications concerning media related competences in 2002-2022. The figure does not include 2023 – with 6 relevant publications. No publications were found in 2000 and 2001.



**FIGURE 2:** Estonian Academic Articles on Media Related Competences by Years

Source: own processing, 2023

Searches of this database enable us to indicate the number of publications, main researchers, language, how it is indexed, year of publication, and the period of data collection (if relevant). In this study, we do not focus on the aspects related to the quality of publications. In addition, we added the years 2021 – 2023. It should be noted that in some cases the line between the topic “media related competences concerning media usage” and other topics is hazy.

The first goals and concepts concerning media literacy were broadly set out in the *Concept of Estonian Information Policy* under the term info-politics published in 1998. On a normative level, there has been a strong conceptual bias towards digital competencies. Digital competences and education have received specific attention and special financial support from the state since 2014/2015. Various strategy and policy documents also reflect that digital competences are strongly related to security issues.

The *Education Strategy 2021-2035* declares the need for awareness of the possibilities and risks of the information society. The *Digital Agenda 2020* and Estonia’s *Digital Agenda 2030* focus on digital skills. But in 2013, approaching safety issues (empowerment to withstand misinformation, cybercrime, cyberbullying and other digital threats) were essential. The *Estonian Lifelong Learning Strategy 2020* also focuses on improving the digital skills and literacy of the public, but this strategy was mostly focused on supporting access and creativity.

There are a few researchers who have carried out analyses on normative documents. Most of the knowledge is available via various national reports: *Mapping of Media Literacy Practices and Actions in EU-28*<sup>27</sup>, *National Reports on the Application of the Audiovisual Media Services Directive 2020-2022: Media Literacy Report Estonia 2023*<sup>28</sup> and finally the report produced by the *Baltic Centre for Media Excellence*<sup>29</sup>. While Andra Siibak conducted the first report, which is analytical and reveals not only the agents who are involved, but also the financing and the topics, Marge Varma, an expert at the Ministry of Education and Research, did the second. This report is a rather descriptive overview of various initiatives, but also provides a short overview of the development of media literacy topic in the national curricula.

In 2022, the *Baltic Centre for Media Excellence* (BCME) in cooperation with the *International Centre for Defence and Security* (Estonia) and individual experts from Latvia and Lithuania carried out a research project entitled *Media Literacy Sector Mapping in Estonia*

<sup>27</sup> See: CABRERA BLÁZQUEZ, F. J., VALAIS, S. (eds.): *Mapping of Media Literacy Practices and Actions in EU-28*. Strasbourg : European Audiovisual Observatory, 2016. [online]. [2023-11-09]. Available at: <<https://rm.coe.int/1680783500>>.

<sup>28</sup> See: VARMA, M.: *Report of Promoting Media Literacy in Estonia 2019-2023*. [online]. [2023-11-09]. Available at: <<https://digital-strategy.ec.europa.eu/en/library/national-reports-application-audiovisual-media-services-directive-2020-2022>>.

<sup>29</sup> DENISA-LIEPNIECE, S., KULLAMAA, K.: *Media Literacy Sector Mapping: Estonia Country Report*. Riga : Baltic Centre for Media Excellence, 2022. [online]. [2023-11-09]. Available at: <[https://icds.ee/wp-content/uploads/dlm\\_uploads/2023/08/ML\\_Mapping\\_Estonia\\_2022.pdf](https://icds.ee/wp-content/uploads/dlm_uploads/2023/08/ML_Mapping_Estonia_2022.pdf)>.



and Lithuania. The approach of the report focuses on actors, audiences and activities and uses combined data collection methods (desk research, semi-structured in-depth expert interviews and an online survey). This report is the best example of monitoring activity that is not an academic paper and provides a broad-scale and critical analysis of existing knowledge on normative documents as well as media-literacy related initiatives and funding. The report also provides Estonia's position in two of three indices (the *World Press Freedom Index*, the *Global Innovative Index* and *Global Peace Index*), but fails to include the third, the index produced by Open Society Institute in Sofia.

The *Estonian DigiEfekt* and the *Horizon 2020 CO:RE* projects are both conceptually influential. These two projects reconceptualise digital competence in 10 dimensions and focus on the issue of how multiple approaches to applying digital devices, environments and content in learning will have an effect on digital competence and several other cognitive and non-cognitive learning outcomes.<sup>30</sup>

Media related competences (in normative documents – media literacy) have been incorporated into the national curricula via a cross-curricula approach in 2002. The applicability of this approach was analysed by Kadri Ugur.<sup>31</sup> There has not been any curricula analysis since 2011. Nevertheless, in 2011 a mandatory course “Media and Manipulation” was integrated into the high school curriculum of the Estonian language. A brief analysis of learning outcomes enables researchers to draw the conclusion that the course resembles the concept we today label as “news media literacy”. From 2019, schools can also offer an optional course called “Human in a contemporary information environment”. In 2023, the updated national curriculum describe the media related competences as a cross-cutting theme under the label “Information Environment and Media Usage”.

## 4.2 Knowledge on Existing Media Related Competences, Media Usage and Attitudes of Different Social Groups

Research and development of media related competences in Estonia has been biased towards the younger generation from the outset, but there has been also strong research interest concerning parents and their awareness of children's media usage. The influence of individual researchers has been significant. Veronika Kalmus has led research focusing on media usage habits among the generations, while Andra Siibak's research focuses on Internet usage. Estonian knowledge concerning media related competences and media usage of certain social groups has been influenced by the grant money.

Knowledge on actual media related competencies has been mostly related to the EU Kids Online research project, CO:RE and Youth Skills (Veronika Kalmus leads the Estonian team). The most important projects about the media competences among the younger generation provide information about risks and opportunities with a perspective to the future.

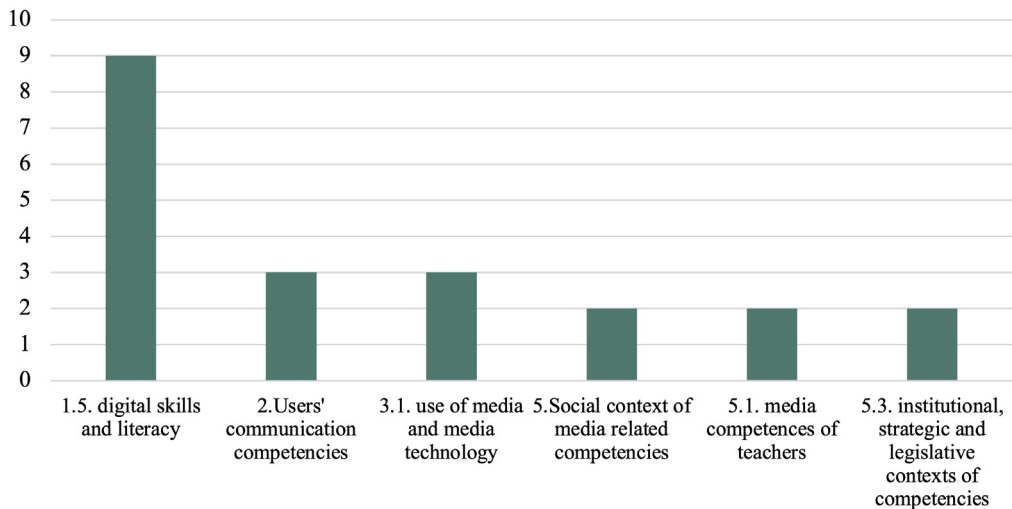
- 2012-2015 – Teachers' digital competences and the influence on students' abilities were studied via the research grant led by Pille Pruulmann-Vengerfeldt.

<sup>30</sup> PEDASTE, M. et al.: *How to Increase the Potential of Digital Learning in Achieving both Cognitive and Non-Cognitive Learning Outcomes? CO:RE Short Report Series on Key Topics*. Hamburg : Leibniz-Institut für Medienforschung, Hans-Bredow-Institut (HBI); CO:RE – Children Online: Research and Evidence, 2022. [online]. [2023-11-09]. Available at: <<https://doi.org/10.21241/ssaoar.79415>>.

<sup>31</sup> See: UGUR, K., HARRO-LOIT, H.: Media Literacy in the Estonian National Curriculum. In ARNOLDS-GRANLUND S.-B., KOTILAINEN, S. (eds.): *Media Literacy Education Nordic Perspectives*. Copenhagen : Nordicom, 2010, p. 133-144. See also: UGUR, K.: *Implementation of the Concept of Media Education in the Estonian Formal Education System*. [Dissertation Thesis]. Tartu : Tartu University Press, 2010. 37 p. [online]. [2023-11-09]. Available at: <<https://dspace.ut.ee/handle/10062/15899>>; UGUR, K.: Media Education as Cross-Curricular Theme in Estonian Schools: Reasons of a Failure. In *Postmodernism Problems*, 2011, Vol. 1, No. 3, p. 308-319.

- 2020-2023 – H2020: Youth Skills (PI Veronika Kalmus) (University of Tartu).
- 2020-2022 – H2020: CO:RE – Children Online: Research and Evidence. A knowledge base on children and youth in the digital world (principal investigator (PI) Veronika Kalmus) (University of Tartu).
- 2019-2022 – H2020: The impact of technological transformations on the digital generation (PI Merike Sisask) (University of Tallinn).
- 2019-2021 – What is news? News perceptions and practices among young adults in times of transition (PI Signe Opermann).
- 2014-2018 – The Digital Literacy and Multimodal Practices of Young Children (PI Sirje Virkus) (University of Tallinn).
- 2013-2018 – Conceptualisations and experiences with public and private in technologically saturated society (PI Andra Siibak) (University of Tartu).
- 2011-2015 – Generations and inter-generational relationships in the emerging information society (PI Veronika Kalmus) (University of Tartu).

The list of academic publications reflects strongly the aims of the grants (Figure 3).<sup>32</sup>



**FIGURE 3:** Number of Estonian Academic Articles on Media Related Competencies by Topics Defined by MEDIADELCOM. The Topics Partly Reflect the Aims of the Received Grants

Source: own processing, 2023

The articles were sorted according to the main focus and some articles cover several topics. However, the research interest is strongly biased towards digital competences.

### 4.3 Knowledge on Various Assessment Methods: Limits and Usage

In 2004, Epp Lauk published the first assessment study about media competences of Estonian schoolchildren. In 2019, Estonia's Digital Competence Test was conducted amongst the 9<sup>th</sup> grade pupils, which distinguished eight digital competence factors: (1) operational knowledge and skills, (2) content creation factor 1, (3) content creation factor 2, (4) attitudes towards technology, (5) self-assessment of digital skills factor 1, (6) self-assessment of digital

<sup>32</sup> Authors' note: The research focuses according to the MEDIADELCOM bibliographical database 2002-2022. Majority of the articles use a sociological approach.

skills factor 2, (7) safety-related behaviour in the digital world, and (8) problem-solving related behaviour in the digital world.<sup>33</sup> From this list, it is clear that media and information literacy and digital competencies partly overlap. Moral awareness concerning media and communication is missing from both concepts, therefore there is no focus on assessing these competences. Research on teachers' media related competencies have been carried out via students' theses.<sup>34</sup>

For Estonian state-of-the-art knowledge on the situation concerning media related competences, several indices are relevant, as they are annual and show some dynamics and provide a comparative insight for the Estonian situation. However, the aim, methodology and input data should be taken into consideration.

*The Media Literacy Index*, compiled by the *Open Society Institute* in Sofia, calculates the media literacy score for Estonia as well. Whereas Estonia has been ranked among the top five for several years (2017, 2019, 2021, 2022), the index is rather an estimation about the resilience to disinformation. It is an aggregate indicator characterizing the media environment and is less about the actual skills of citizens.

The *Digital Economy and Society Index* (DESI) compares digital skills of citizens in the EU, distinguishing the skills as low, basic and above basic. The index is composed of the data from PIAAC studies, and thus mainly interpret internet usage skills. Currently, there is no knowledge about the actual "levels" of media-related competences of either middle-aged or elderly populations.

#### 4.4 Knowledge on Initiatives: Pedagogy, Training Tools, Training Projects and Other Initiatives

During the first decade of the 21<sup>st</sup> century, Kadri Ugur was the leading (and only) researcher who developed critical analysis on didactics of general media literacy. Her didactical material for teachers was based on her MA thesis and was also published as a separate book. Later, some small-scale studies on learning/teaching methodologies on the practical implementation of curricula concerning media-related competences have also been carried out by BA and MA students (e.g., Hindrikson,<sup>35</sup> Vinter,<sup>36</sup> Nõmm,<sup>37</sup>). However, the low degree of research interest is understandable as there are many international studies available.

Since the 2010s, research has focused on various training programmes and learning materials – promotion of media literacy. In our model, we label such actions as "initiatives". All these initiatives and actions could be rather difficult to find, so the role of an EU initiated report is important.

In 2017, the European Commission initiated the mapping of the most significant actions carried out since 2010. The Estonian submission was provided by Andra Siibak, Professor of Media Studies, University of Tartu. By 2017, she listed 20 projects that were related to media

<sup>33</sup> See: PEDASTE, M. et al.: Dimensions of Digital Competence and Its Assessment in Basic School. In *Eesti Haridusteaduste Ajakiri/Journal of Education Sciences of Estonia*, 2021, Vol. 9, No. 2, p. 212-243.

<sup>34</sup> See: KURM, T.: *Eesti üldhariduskoolide õpetajate valmidus meedia õpetamiseks läbiva teemana*. [Master's Thesis]. Tartu : University of Tartu, 2004. 176 p. [online]. [2023-11-09]. Available at: <<https://dspace.ut.ee/handle/10062/1234>>. See also: RAUDVASSAR, L.: *Õpetajate võimalused õpilaste meediapädevuse arendamiseks läbiva teema kaudu*. [Master's Thesis]. Tartu : University of Tartu, 2013. 112 p. [online]. [2023-11-09]. Available at: <<https://dspace.ut.ee/handle/10062/31071>>.

<sup>35</sup> See: HINDRIKSON, A.: *35-tunnine gümnaasiumi meediaõpetuse kursus ja selle tagasiside analüüs Lähte Ühisgümnaasiumi näitel*. [Master's Thesis]. Tartu : University of Tartu, 2007. 155 p. [online]. [2023-11-09]. Available at: <<https://dspace.ut.ee/handle/10062/15688>>.

<sup>36</sup> See: VINTER, K.: *Esimesed sammud väikeste laste meediakasvatuses Eestis: Uurimistulemusi ja soovitusi õpetajakoolituse arendamiseks*. Tartu : Atlex, 2011.

<sup>37</sup> See: NÕMM, T.: *Riiklikku õppekava täiendavad õpitegevused meediaõpetuse arendamiseks Tartu maakonna koolide näitel*. [Bachelor's Thesis]. Tartu : University of Tartu, 2018. 63 p. [online]. [2023-11-09]. Available at: <<https://dspace.ut.ee/handle/10062/60933>>.

literacy, of which 13 were labelled as “End-user engagement” type of actions. The report also provided an overview of the main agents, of which 10 were labelled as “cross-sector collaborators”.

In 2023, the European Commission published national reports on the application of the *AudioVisual Media Service Directive 2019-2023*. The Estonian report was produced by Marge Varma and it points out: “As of March 2023, there is no comprehensive overview of how much money has been allocated from different institutions’ budgets to promote media literacy in the country. The funding has been project-based. [...] In the future, a plan for promoting media literacy will be developed, including showing the sources of funding.”<sup>38</sup>

The report provides an overview on two learning objects, and various training programmes offered by three Estonian universities and a list of projects provided by NGOs, Estonian National Library and media companies (mostly related to fact-checking). In 2022, Baltic Engagement Centre for Combating Information Disorders (BECID) started operating at the University of Tartu.

The Estonian Country report for 2022 initiated by the *Baltic Centre for Media Excellence* points out that: “Looking at funding, the results indicate that the main funders in promoting media literacy are state institutions, EU projects/funds, or various foreign countries through embassies or focused institutions or fund”.<sup>39</sup> The report also points out that there is a lack of coordination and systematic approaches.

In summary, there are a lot of initiatives and a great many different actors who are engaged in media literacy promotion. The three reports provided an overview on the existing initiatives, but they are only partially linked to media-related research. Still, researchers in three national universities are active in media literacy promotion projects.

## 4 Discussion

Media-related competencies became a noteworthy issue in Estonia during the 2000s. Since the 2010s, the focus on digital competencies has been growing. Now, since the start of the 2020s, concern has been increasing about manipulation and cybersecurity threats, therefore digital competences have become politically even more important (in the context of security).

The existing knowledge in the four domains enables us to draw five conclusions on the monitoring situation in Estonia:

1. The number of projects targeted at research is lower in comparison to various interventions (promotion projects). Hence the Estonian knowledge production is biased towards initiatives (promotion) – according to the EU policy. There are also more agents representing the fourth domain than the second. The agenda of the second domain is mainly set by EU research projects.
2. Estonian media-related competence concept is biased towards digital skills. Although digital competences include information and communication skills, normative documents can and do define some knowledge gaps, for example, there is not a problem concerning communication competences (e.g., public communication ethics). The curriculum partly focuses on news literacy, but there is no information on how teachers interpret the curriculum.

<sup>38</sup> See: VARMA, M.: *Report of Promoting Media Literacy in Estonia 2019-2023*. [online]. [2023-11-09]. Available at: <<https://digital-strategy.ec.europa.eu/en/library/national-reports-application-audiovisual-media-services-directive-2020-2022>>.

<sup>39</sup> DENISA-LIEPNIECE, S., KULLAMAA, K.: *Media Literacy Sector Mapping: Estonia Country Report*. Riga : Baltic Centre for Media Excellence, 2022, p. 12. [online]. [2023-11-09]. Available at: <[https://icds.ee/wp-content/uploads/dlm\\_uploads/2023/08/ML\\_Mapping\\_Estonia\\_2022.pdf](https://icds.ee/wp-content/uploads/dlm_uploads/2023/08/ML_Mapping_Estonia_2022.pdf)>.

3. While most research is focused on media usage and competencies of children, young people and their parents, the knowledge on other age groups is under-represented. In the second domain, the data collected primarily in the context of the needs of individual research projects might pose a problem. There is no knowledge of diachronic changes, and there is no funding system for follow-up studies. The related knowledge on media usage provide little background information for research on media related competences: e.g., the state-initiated data collection about the media usage provided by the Estonian Statistical Office is sporadic. The media usage data is currently the interest of assorted media planning and advertising agencies which can afford to buy the data. Estonia does not participate in the *Reuters' Digital News Reports* that is currently the most comprehensive and up to date comparative research about the media usage trends in Europe.
4. In the third domain, the important input is the Digital Competence Test created and tested by Estonian researchers. While the authors suggested that the test can be also used for the systematic description, development and monitoring of digital competence in schools, there is no information about that kind of wide-spread usage of this test. Although this test is focused on digital competences, we can conclude that methodological knowledge is available, still, this test is not used for widespread information collection.
5. The three reports mentioned in this article provide overviews of various activities concerning media literacy promotion and relevant policy documents. The dissemination of research results is mostly directed from the aim of the pertinent research grants and policy makers do not collect and analyse information on this subject. Hence, access to the information concerning the first and the fourth domains is easier than access to the knowledge that belongs to the second and third domains.

Although the knowledge production on media related competencies is sufficient - in the context that politically the focus is mainly on digital competencies - the capability of monitoring is less developed and mostly is initiated by EU.

## 5 Conclusions

The main claim of this article was to point out the need to distinguish empirical findings concerning media-related competences and normative principles, the latter often expressed in different policy papers. We believe that on the societal level this distinction enables the actual achievement of various more effective competences. As the media and their usage are in constant change, so the basic focus of shaping people's media wisdom is constantly changing (e.g., once the essential digital competences were important, now the threat of propaganda and fake news is on the agenda). In this context, it is important to understand where exactly the resources should be directed in order to achieve politically declared aims – to raise the media related competences of all citizens regardless of age. Supporting the media related competences of the entire population is a complex and resource-intensive process, a blind promotion campaign could be inefficient. The Estonian case study did not provide any documented evidence that planning of media literacy initiatives and training activities are based on the specific and evidence-based needs of the target groups. In the case of this study, it is also important to note that although Figure 3 shows that studies have been carried out in Estonia on a variety of topics, there are no longitudinal studies on media-related competences and the sample is usually limited.

It is also important for policy makers to use existing knowledge on media competences. As in the case of Estonia, the media literacy research agenda is mostly created by the European Union, which has financed most media-literacy related projects; it is unlikely that the Estonian policy makers would start to show their initiative on media-related competence improvement strategies.



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