Methodological Framework for Digital Health@School

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Domain

SPECIAL ACKNOWLEDGEMENTS AND NEEDS OF TEACHERS AND STUDENTS

Competence Area

1. Managing health information
2. Communication and collaboration
3. Teaching and learning
4. Safety
5. Digital resources

Single Competences

1.1 Browsing and searching data, information and digital content on health topics
1.2 Filtering and structuring health information
1.3 Understand digital health information
1.4 Evaluating health data, health information and digital health content

2.1 Creating and sharing health information and digital health content
2.2 Engaging in citizenship through digital health technologies
2.3 Collaborating through digital health technologies
2.4 Health-Netiquette
2.5 Managing digital identity

3.1 Digital teaching interventions on health topics
3.2 Targeted guidance and assistance through digital health technologies
3.3 Collaborative learning
3.4 Self-regulated learning

4.1 Privacy and protecting data in consideration of health information and health services
4.2 Protecting health and well-being
4.3 Responsible use

5.1 Selecting digital health resources
5.2 Creating & modifying
5.3 Managing, protecting and sharing

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Competence Domain	Special acknowledgements and needs of teachers and students
Competence Area	1. Managing health information
Competence Title	**1.1 Browsing and searching data, information and digital content on health topics**
Competence Description	- To articulate health related information needs, to search for health information and health content, to access and navigate between health information in digital environments - To apply search strategies for health information

Application level	User	Guide/Mentor
Knowledge examples	- Understand how health information is generated, managed, and made available - Understand which search engines or databases best answer to students' health information needs - Understand how health information can be found in different devices/media	- Knowing official, national and international health information sites - Direct research towards reliable sources (scientific studies and research centers), weighing the information according to individual needs
Skills examples	- Indicate a methodology for researching clear health information - Help students to express health needs - Help students adjust searches according to results - Inspire students' confidence in using search filters - Inspire students to use search words that limit the number of hits	- Mediate the user skills - Support users in acquiring user competencies - Support user in adopting skills - Encourage users in improving their skills in using digital tools
Attitudes examples	- Develop proactive student's attitude towards looking for health information - Motivate students to seek information for different health aspects	- Encourage users curiosity and willingness to look for health information

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Competence Domain	Special acknowledgements and needs of teachers and students
Competence Area	1. Managing health information
Competence Title	**1.2 Filtering and structuring health information**
Competence Description	- To structure, filter, convert and edit relevant health information - To select media resources of health information effectively

Application level	User	Guide/Mentor
Knowledge examples	- Evaluate students' needs for health information - Explain to students how health information is available online - Know media resources of health information - Help students understand how the web organizes research data	- Evaluate health information needs of target group - Define specific information needs - Know media resources of health information
Skills examples	- Guide students in researching according to their specific needs and identify relevant media resources - Indicate how to follow information flows across different sources, devices or media	- Mediate teachers' skills - Fostering teachers' skills - Teach how to express health needs in a search request
Attitudes examples	- Realize that health information can help to solve problems related to health - Be reflective about student health information needs - Encourage student awareness regarding their personal wellbeing	- Be reflective about student's health information needs and how to put it into words for an appropriate search request

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Competence Domain	Special acknowledgements and needs of teachers and students
Competence Area	1. Managing health information
Competence Title	**1.3 Understand digital health information**
Competence Description	- To comprehend health information found via digital sources and within the digital information ecosystem, including the internet, social media, and communication apps - To understand the meaning behind health information and health communication with friends, family, and professionals - To understand how health information and knowledge can inform your decisions and behaviours

Application level	User	Guide/Mentor
Knowledge examples	- Know about student`s digital information ecosystem - Transmit to the students the importance of taking advantage of quality content on health and lifestyle - Know the potential effects of digital health information for health decisions and behavior	- Know about students digital information ecosystem - Showcase ways to better understand retrieved health information
Skills examples	- Access student's digital ecosystem - Comprehend students received health information - Transform information into knowledge	- Mediate the user skills - Support users in acquiring user competencies - Support users in adopting skills - Encourage users to improve their skills in understanding health information
Attitudes examples	- Demonstrate willingness to comprehend health information - Be proactive in understanding student's digital information ecosystem	- Help low-skilled users to find ways to understand health information

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Competence Domain	Special acknowledgements and needs of teachers and students
Competence Area	1. Managing health information
Competence Title	**1.4 Evaluating health data, health information and digital health content**
Competence Description	- To understand how health information is prioritized in the web - To analyse the health information in relation to the question and health needs - To analyse , compare and critically evaluate the credibility and reliability of sources of data, information and digital content about health - To identify unreliable websites and fake news about health issues

Application level	User	Guide/Mentor
Knowledge examples	- Understand that health sources need to be cross-checked - Showcase ways to analyze retrieved health information - Know reliable sources for health information or to check health information	- Teach users how to recognize reliable sources - Describe how uncritical adoption of health information found online can put users at risk - Give examples of reliable sources of information
Skills examples	- Judge the validity of the researched content - Compare, contrast and integrate health information from different sources - Analyze the usefulness, actuality, accuracy and integrity of health information - Teach proper evaluation and prioritization of health content	- Encourage users to improve their skills in understanding health information - Help low-skilled users to understand perils related to unreliable or biased information
Attitudes examples	- Aid students to compare health information from different resources - Be critical about information found - Be proactive in spread awareness that search engine mechanisms and algorithms are not necessarily neutral in displaying information	- Help low-skilled users to understand perils related to unreliable or biased information Encourage user to evaluate health information

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Competence Domain	Special acknowledgements and needs of teachers and students
Competence Area	2. Communication and collaboration
Competence Title	**2.1 Creating and Sharing health information and digital health content**
Competence Description	- To understand how to use technical devices/apps to create, edit and share health related digital content - To be aware of legal copyrights and licences on health information in digital context - Know how to use sources correctly to create and share health information

Application level	User	Guide/Mentor
Knowledge examples	- Decide which content/knowledge/resources related to health issues can be shared - Judge the value of resources shared, considering the types of audiences to share resources with	- Propose content/knowledge/resources related to health issues can be shared - Inform on characteristics related to the resources available and the audiences they should be shared with.
Skills examples	- Teach how to create health content and share health content in online environments (e.g. share video on social networking site) - Check property rights of health content shared	- Create health content (e.g. videos, presentations, other resources) - Use online environments to promote results of own activity - Check property rights of content created / shared - Mediate the user skills - Support users in acquiring user competencies - Support user in adopting skills
Attitudes examples	- Be proactive in sharing health content/knowledge/resources - Observe benefits, risks and limits of sharing health information - Observe copyright issues - ensure that students keep overview of their sharing activities	- Be proactive in sharing health content/knowledge/resources - Raise awareness regarding the benefits, risks and limits of sharing - Raise awareness about copyright issues

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Competence Domain	Special acknowledgements and needs of teachers and students
Competence Area	2. Communication and collaboration
Competence Title	**2.2 Engaging in citizenship through digital health technologies**
Competence Description	- To participate in society through online engagement in health topics - Seeking opportunities for self development and empowerment in using technologies and digital environments - Being aware of the potential of technologies for citizen participation - To mind ethical, cultural and social norms regarding to health

Application level	User	Guide/Mentor
Knowledge examples	- Understand the participatory and engagement possibilities brought by digital technology - Understand that health technology can be used for engagement in society - Give examples to the students of public participation through digital health technologies	- Evaluate user's level of engagement in/knowledge about various networks, local communities, civic life and interest circles - Explain how they can benefit from engagement and participation - Give examples of social media and online participation opportunities for health related topics
Skills examples	- Find online networks, communities and social media for health matters corresponding to students interests and needs	- Mediate the user skills - Support users in acquiring user competencies - Support user in adopting skills
Attitudes examples	- Show students the benefits of online participation and networking - Teach watchful attitude towards different social media functionalities	- Encourage user to become active and participate - Promote diversity of interests and opportunities to engage in communities with others

Competence Domain	Special acknowledgements and needs of teachers and students
Competence Area	2. Communication and collaboration
Competence Title	**2.3 Collaborating through digital health technologies**
Competence Description	- To assess digital tools and technologies for collaboration, co-construction and co-creation of data, resources and knowledge - To know the rules about digital communication and cooperation

Application level	User	Guide/Mentor
Knowledge examples	- Understand how collaborative processes facilitate content creation - Understand how students profit from digital collaboration - Know the rules of digital communication and cooperation	- Describe how users benefit from digital collaboration with each other - Show what advantages digital collaboration among users can bring students - Give concrete examples - Know the rules of digital communication and cooperation
Skills examples	- Use of collaborative features of digital health tools and technologies - Give and provide feedback for students - Educate students on how to act according to the rules of digital collaboration and communication	- Mediate the user skills - Support users in acquiring user competencies - Support user in adopting skills
Attitudes examples	- Demonstrate willingness to collaborate - Be able to show how to function as a part of a team - Show new forms of collaboration	- Recognize the potential of working collaboratively

Competence Domain	Special acknowledgements and needs of teachers and students
Competence Area	2. Communication and collaboration
Competence Title	**2.4 Health-Netiquette**
Competence Description	- To know behavioral norms while using digital technologies for and interacting in digital environments about health - To act responsibly towards the shared health content for your own safety and that of others - To understand appropriate behavior in digital communications in terms of health - To know about ethical matters related to digital media such as unacceptable websites, networks, cyberbullying - To be aware of strategies for handling inappropriate behaviour

Application level	User	Guide/Mentor
Knowledge examples	- Understand appropriate behavior in digital communications in terms of health - Understand the consequences of personal behavior in the digital sphere - Understand ethical issues related to digital media	- Identify ethical issues and threats concerning health data in digital interactions (e.g. online fraud, misconduct, hoax, misuse of personal data) - Describe examples of correct and wrong conduct in digital interactions
Skills examples	- Protect students against online threats - Report abuse and threats - develop strategies for handling cybermobbing and inappropriate conduct	- Mediate the User skills - Provide the users with the strategies and tools to report abuses and threats - Provide the users with the strategies to handle inappropriate conduct
Attitudes examples	- Consider ethical principles of use and publication of health information - Demonstrate flexibility and sensitiveness for different communication cultures - Encourage students to identify and report online threats and abuse	- Prioritizing safety over the functional requirements of technologies, applications, and online environments - Promote and demonstrate flexibility and sensitiveness for different communication cultures - Encourage users to identify and report online threats and abuse

Competence Domain	Special acknowledgements and needs of teachers and students
Competence Area	2. Communication and collaboration
Competence Title	**2.5 Managing digital identity**
Competence Description	- To know behavioral norms and behavior in digital communication in terms of health - To act responsibly towards the shared health content for your own safety and that of others - To understand appropriate behavior in digital communications in terms of health - To know about ethical matters related to digital media such as unacceptable websites, networks, cyberbullying - To be able to protect ones own reputation - Creating, adapting and managing one or multiple digital identities for using health information

Application level	User	Guide/Mentor
Knowledge examples	- Define the benefits of having a digital identity - Know the links between the online and offline world to the students - Understand that several actors can positively or negatively contribute to constructing students digital identity - Know which personal information to put out on the internet	- Explain to the users the concept of digital identity - Familiarize users with elementary principles for creating and managing digital identities - Describe specifics of students dealing with digital identities, footprint, disclosure of information
Skills examples	- Educate the students on the concept of digital identity - Construct profiles that benefit student's needs - Protect students from online threats and show how they can protect themselves	- Mediate the user skills - Support users in acquiring user competencies - Support user in adopting skills
Attitudes examples	- Realize the benefits and risks related to online identity exposure - Be willing to disclosure certain type of information about self - Show different ways of expressing own personality through digital means to the students	- Protect user from risk related to their online exposure - Encourage users´ active and safe building of their digital identities

Competence Domain	Special acknowledgements and needs of teachers and students
Competence Area	3. Teaching and learning
Competence Title	**3.1 Digital teaching interventions on health topics**
Competence Description	- To plan and implement digital devices and resources for health in the teaching process - Appropriately manage and orchestrate digital teaching strategies about content on health literacy - Experiment with and develop new formats and pedagogical methods for instruction on health literacy education

Application level	User	Guide/Mentor
Knowledge examples	- Understand the importance of (health) literacy in the school context - Know appropriate digital devices for teaching health (literacy)	- Provide appropriate material to help users implement health (literacy) in class
Skills examples	- Be able to conduct digital interventions regarding health and health literacy to support learning - Integrate teaching on health and health literacy in the existing curriculum	- Mediate the user skills - Support users in acquiring user competencies - Support user in adopting skills
Attitudes examples	- To be motivated to experiment with new formats to teach health and health literacy	- Encourage the use of digital tools for health (literacy) education

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Competence Domain	Special acknowledgements and needs of teachers and students	
Competence Area	3. Teaching and learning	
Competence Title	**3.2 Targeted guidance and assistance through digital health technologies**	
Competence Description	- To use digital technologies and services to enhance the interaction with learners about health - To experiment with and develop new forms and formats for offering guidance and support for health literacy education	
Application level	User	Guide/Mentor
Knowledge examples	- Have basic knowledge of digital tools created for health literacy	- Describe the usefulness of digital tools in order to promote health literacy
Skills examples	- Being able to interact and collaborate with other learners	- Provide guidance and support
Attitudes examples	- Realize that basic use of digital technologies help to remotely monitor student progress and intervene when needed, while allowing for self-regulation	- Encourage the users during the learning process and protect the low skilled users providing new competencies

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Competence Domain	Special acknowledgements and needs of teachers and students
Competence Area	3. Teaching and learning
Competence Title	**3.3 Collaborative learning**
Competence Description	- To use digital technologies to foster and enhance learner's collaboration for education on health literacy - To enable learners to use digital technologies as part of collaborative assignments, as a means of enhancing communication, collaboration and collaborative knowledge creation about health literacy

Application level	User	Guide/Mentor
Knowledge examples	- Recognize the benefits of using digital technologies in collaborative learning	- Show examples for digital technologies as a means of enhancing collaborative knowledge about health literacy
Skills examples	- Install and use digital technologies for educating in health literacy	- Support the user skills and provide constructive feedback
Attitudes examples	- Demonstrate willingness to use digital technologies for collaboration	- Encouraging attitude towards low skilled users in dealing with basic digital technologies for collaborative knowledge exchange among learners

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Competence Domain	Special acknowledgements and needs of teachers and students
Competence Area	3. Teaching and learning
Competence Title	**3.4 Self-regulated learning**
Competence Description	- To use digital technologies (e.g. blogs, diaries, planning tools) to allow learners to self-regulated learning - To use digital technologies to allow learners to collect evidence and record learning progress, e.g. audio or video recordings, photoss - To use digital technologies (e.g. ePortfolios, learners' blogs) to allow learners to record and showcase their work - To use digital technologies to support learners' self-regulated learning about health literacy - Enable learners to plan, monitor and reflect on their own learning about health literacy

Application level	User	Guide/Mentor
Knowledge examples	- Knowledge of how to conduct self regulated learning through digital technologies	- Provide understanding and examples of different digital tools regarding self regulated learning
Skills examples	- Being able to collect evidence and record learning progress	- Appropriate handling of different issues due to different needs and competencies of users
Attitudes examples	- Open minded for different strategies in the use of self-regulated learning	- Consider the digital needs of users and provide appropriate methods for learning and applied use of digital tools

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Competence Domain	Special acknowledgements and needs of teachers and students
Competence Area	4. Safety
Competence Title	**4.1 Privacy and protecting data in consideration of health information and health services**
Competence Description	- To understand how to protect own (health) data; self from online fraud, threats and cyberbullyings - Respecting other people's privacy - Protecting own devices and understanding related risks and threats - To understand how to use and share personally identifiable information ("privacy policy")

Application level	User	Guide/Mentor
Knowledge examples	- Understand the terms of use of online services (e.g. collection of personal data) - Give examples of up-to-date strategies to protect own systems and data - Understand and explain the implications of the personal digital footprint - Comprehend the risks of theft of personal health data	- Explain possible consequences of online misconduct, fraud and other threats; - Share examples of up-to-date strategies to protect own systems and data (anti-virus/anti - malware software) - Understand and explain the implications of the personal digital footprint - Comprehend the risks of theft of personal health data
Skills examples	- Install, use and provide support with various anti-virus systems and protective apps - Take steps to mitigate risks of fraud by using strong passwords for e-health services - Monitor own and others' digital footprints - Alter or delete personal health information	- Mediate the user skills - Supporting users in acquiring user competencies - Support user in adopting skills
Attitudes examples	- Follow the principles of online privacy and safety - Promote / act critically when disclosing information about him/herself or others online	- Promote the principles of online privacy and safety - Promote a critical approach to information disclosure in the online environment

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Competence Domain	Special acknowledgements and needs of teachers and students
Competence Area	4. Safety
Competence Title	**4.2 Protecting health and well-being**
Competence Description	- Avoiding health risks related to the use of technology in terms of threats to physical and psychological well being - Be able to protect oneself and others from possible dangers in digital environments and be aware of digital technologies for social well being and social inclusion

Application level	User	Guide/Mentor
Knowledge examples	- Understand various effects of using technology on students health - Distinguish real risks from common myths as regards health threats caused by technology - Adjust the type and extent of digital engagement for students - Be aware of basic principles for the protection of physical and mental health related to the use of digital technologies	- Understand general and specific health risks imposed on students using ICTs - Know the appropriate ype and extent of digital engagement for students - Identify potential threats to students physical and mental health related to using ICTs
Skills examples	- Protect students physical and mental health when using ICTs by taking appropriate preventive measures	- Mediate the user skills - Support user in adopting skills - Supporting users in acquiring user competencies
Attitudes examples	- Demonstrate balanced and healthy attitude towards using technology to the students	- Challenge users unsubstianted preconceptions about health risks posed by technology - Support preventing health risks

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Competence Domain	Special acknowledgements and needs of teachers and students
Competence Area	4. Safety
Competence Title	**4.3 Responsible use**
Competence Description	- To take measures to ensure learners' physical, psychological and social wellbeing while using digital technologies (empower learners) - To empower learners to manage risks and use of digital technologies safely and responsibly for health information

Application level	User	Guide/Mentor
Knowledge examples	- Understand physical, psychological and social risks and benefits of using digital technologies - Know about the existence of different data collection methods through websites/apps	- Being up-to-date on the popular digital technologies the students use - Know about laws and guidelines about data collection/privacy - Know about the risks of sharing private information and how to protect data and navigate safely
Skills examples	- Be able to protect personal health information while using safe websites and anti-virus software - Be able to navigate safely while using digital technologies	- Be able to guide safe digital technologies use - Be able to communicate laws and guidelines about data collection/privacy
Attitudes examples	- Be aware of the benefits of sharing health data digitally and the associated risks (violation of privacy) - Be willing to support each other	- Be willing to create a ''safe space'' for communicating about well-being with students - Facilitate a supportive classroom climate regarding cyberbullying

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Competence Domain	Special acknowledgements and needs of teachers and students
Competence Area	5. Digital resources
Competence Title	**5.1 Selecting digital health resources**
Competence Description	- To identify, assess and select digital resources for teaching and learning health literacy - To consider the specific learning objective, context, pedagogical approach, and learner group, when selecting digital resources and planning their use

Application level	User	Guide/Mentor
Knowledge examples	- Know about different ICT, potential recipients and ways of participation	- Know about different communication channels/means - Know about different didactical principles for learning activities, assignments and assessments
Skills examples	- Be able to use digital technologies for communication	- Be able to use digital technologies for communication - Facilitate co-creation through digital technologies
Attitudes examples	- Willingness to update about digital resources for teaching and learning health literacy through digital technologies	MISSING

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Competence Domain	Special acknowledgements and needs of teachers and students
Competence Area	5. Digital resources
Competence Title	**5.2 Creating & Modifying**
Competence Description	- To modify and build on existing openly licensed resources/resources where this is permitted - To create or co-create new digital educational resources - To consider the specific learning objective, context, pedagogical approach, and learner group, when designing digital resources and planning their use

Application level	User	Guide/Mentor
Knowledge examples	- Know about the nature of a specific health topic - Understand how to collect and create content about health topics - Know where to find relevant and reliable information on health topics	- Understand guidelines and laws on copyright - Know about different digital means to be used in the education context - Understand health topics
Skills examples	- Be able to use PP, word and other creative programs - Be able to search for, find and organize information - Be able to extract the relevant information	- Be able to communicate laws and guidelines on copyright to students - Be able to communicate health topics in an interesting and interest-raising way - Be able to teach the application of different digital means
Attitudes examples	- Being aware of the importance of proper citation - Being aware of possible consequences from creating new content - Motivation to create useful and appealing content	- Be aware of consequences of plagiarism and being motivated to follow good scientific practices - Encouragement of creative and responsible use of digital means

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Competence Domain	Special acknowledgements and needs of teachers and students
Competence Area	5. Digital resources
Competence Title	**5.3 Managing, protecting and sharing**
Competence Description	- To organize digital health content and make it available to learners, parents and other educators - To effectively protect sensitive digital content about health - To understand the use and creation of open licenses and open educational resources about health

Application level	User	Guide/Mentor
Knowledge examples	- Decide which content/knowledge/resources can be shared - Judge the value of resources shared - Distinguish types of audiences to share resources with	- Know positive effects of exchange of content/knowledge/resources by users - Give examples of types of contents users can use/share - Distinguish copyright and license matters particularly relevant to user
Skills examples	- Show students how to share content found online - Knowing how to check property rights of content sharing - Find information on copyright and license rules - License own original production	- Mediate the user skills - Supporting users in acquiring user competencies
Attitudes examples	- Be proactive in sharing content/knowledge/resources - Observe copyright issues	- Observe users privacy and safety when assisting in sharing their information/content