

ScholarOne - The governance of digital content in distance education in Finland: An overview of the e-learning criteria and its implication for active and collaborative learning.

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Abstract

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Abstract

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Keywords: COVID-19, distance learning, digitalization, e-quality criteria, digital content governance, Finnish education.

Distance learning is increasingly becoming the new normal, especially after the global pandemic (Lavonen & Salmela-Aro, 2022). Distance learning, distance education, remote teaching and learning are used synonymously or interchangeably (Guri-Rosenblit, 2005; Kupiainen, 2022, p.289). Distance learning refers to “studying remotely via the Internet” (Kupiainen, 2022, p. 289). The enablers of distance learning include “digital technology, digipedagogical competence of the teachers and the ability of teachers to act as adaptive innovators” (Korhonen et al., 2021, p. 165). The various forms of distance learning have been identified (Erno, 2022) to be reshaping the knowledge-building environments (KBE) (Lonka & Ketonen, 2012, p. 64) from onsite to distance learning (Bonk & Graham, 2006). For instance, virtual learning is organized outside the traditional classroom (Schlosser &

Simonson, 2006), while blended learning combines physical and virtual learning (Allen & Seaman, 2003). Distance learning provides similar benefits obtainable in physical lectures, such as the opportunities for repeated interactions and memorable experiences (Charlton, 2006), enhanced students' motivation (Pekrun et al., 2002), and increased learning flexibility that removes geographical barriers to learning, thus ensuring mass participation across space, and cost-effectiveness from less utilization of physical space and energy infrastructure on campus (cf. Lonka & Ketonen, 2012; Murtonen, 2023).

Distance learning was not prioritized before the pandemic (cf. Lonka & Ketonen, 2012). The COVID-19 outbreak thus resulted in a sudden and challenging switch to remote learning amidst less preparedness and variation in teachers' digital competencies (Lavonen & Salmela-Aro 2022). Digital content governance is one way to improve teachers' competence in distance learning. It provides a common framework that guides teachers in developing their content structure, digital platforms and learning activities. Achieving these is vital mainly because distance education is still evolving and “requires a good and balanced structure suitable for learners and the content of learning” (Kupiainen, 2022, p. 289). In this regard, the Finnish Educational Steering Committee recently published the e-learning criteria, a new strategic policy document to govern the planning and design of digital content. The e-criteria as shown in Figure 1 will ensure compatibility, uniformity, and standardization in digital content design and enhance the quality of teaching and learning in distance education across Finnish institutions (Digivisio, 2023).

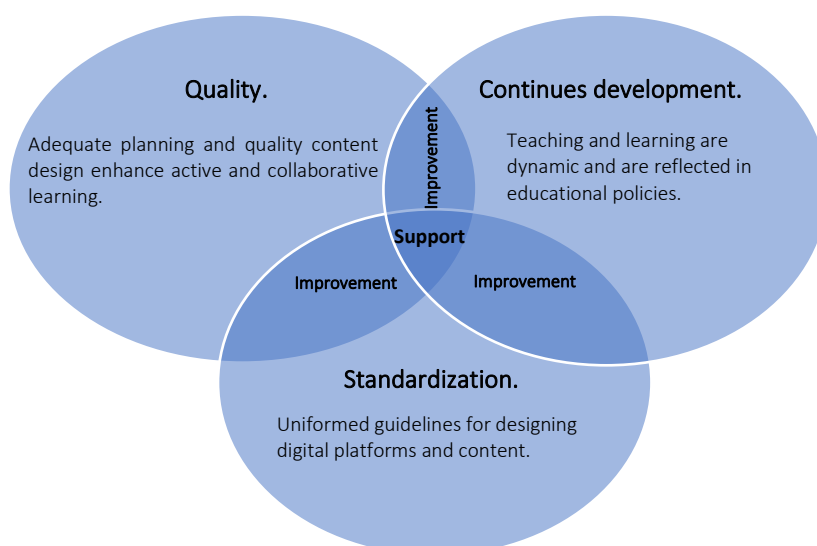


Figure 1. The main objectives of the e-learning criteria (own source)

Indeed, the governance of digitalization for distance education is well-established (Saari & Sääntti, 2018, p. 1; Lavonen & Salmela-Aro, 2022, p. 106; Kupiainen, 2022, p. 288) and by digitalization, Saari and Sääntti (2018, p. 1) suggest it to be "an intensified use of ICT infrastructure in teaching and the communication". However, the governance of digital content is an aspect that is still underexplored in pedagogy research in the Finnish context. This paper thus provides an overview of the e-criteria to increase the understanding of the features (research-based education, diversity, accessibility, and modularity) from the pedagogical lens. Also, it explores how the criteria advance active and collaborative learning, which is vital in higher education (Vermunt, 2007).

Active and collaborative learning is increasingly adopted globally (Burke, 2011, p. 87), and it involves increased student self-regulation of the learning activities and the teacher acting as the facilitator Cantillon (2010, p. 20). Finnish education is also increasingly adopting active and collaborative learning (Lonka & Ahola, 1995; Muukkonen, Lakkala, & Hakkarainen, 2005; Tynjala, 1999) because of the many benefits that surpass passive (linear model) learning, where the teachers transmit the information to students. Active learning optimizes learning experiences (Davis, 1993), leads to better academic performance (Wasley, 2006), and improves collaborative skills for future careers (Blowers, 2000). The following questions thus guide the study: *How can the e-criteria be understood from the pedagogical lens? What are the practical implications of the e-criteria in advancing active and collaborative distance learning in Finnish education institutions?* The paper is presented chronologically: the review of literature on governance, the theoretical framework, case description, materials and methods, results and analysis, discussion, limitation, conclusions, and contributions.

The governance of digital education in the Finnish Education system

From a broader perspective, the different aspects of governance in Finnish education have been investigated. Lavonen (2017) provides a comprehensive inspection of the governance of decentralization of education and the roles of different actors. For example, the Ministry of Education and Culture is responsible for the policy and planning of education at the national level (Ranki et al. 2021, p. 23); the governance of the implementation of decisions at the local level is decentralized, giving schools and teachers the autonomy to make decision (Lavonen & Salmela-Aro 2022, p. 106; Lavonen, 2017; OECD 2020:18; Simola, 2005). In a related study, Alava et al. (2023, p. 19) provide insights on how the changes to the education policy in 1983/1985 marked the inception of autonomy at the local level within the decentralized governance of the education system. Lavonen and Salmela-Aro (2022, p.107) argue that the decentralized system is built around the high trust level that teachers will make good use of their prerogative in decision-making. At the same time, Lavonen (2017) suggests that the three preconditions for an effective decentralized system include a common governance framework, the continuous development of the learning environment, and increased collaboration among teachers.

The governance of lifelong learning advanced by technological development has also received attention (Ranki et al., 2021). The study presents a comparative analysis of the governance of lifelong learning within the Nordic countries and the roles of various actors. They note that life-long learning is informal learning that is "multi-dimensional, with complicated operating environment" (p.7). While their research presents exciting insights, the focus of this paper is limited to the governance of learning in formal educational institutions. Lastly, a potential emergence of network governance, which perhaps could threaten the democratic principles of equal access to education, has been inspected (Kiesi, 2023). Their study claims that private sector involvement in the education sector in the different

aspects of providing educational services is increasing, which could weaken the education system's public governance, which guarantees equality of education.

From a narrow context of digitalization governance, studies reveal that such governance is not a new phenomenon in the Finnish education system. Lavonen and Salmela-Aro (2022, p. 108) claim, "There have been six official national-level digital education or Information and Communication Technology (ICT) strategies and hundreds of development projects during the last 35 years in Finland". A recent example is the Digital Leap, which is a governance measure enacted by the Finnish education policy in 2015 (Kupiainen, 2022, p. 288) to "facilitate the design of collaborative learning environment" (Saari & Sääntti, 2018, p.2) and to provide governance to address low utilization of ICT in schools (Kupiainen, 2022, p. 288). Another governance measure is the tutor-teacher model adopted in 2017 to train teachers to use digital tools and platforms (Lavonen & Salmela-Aro 2022, p.111). These governance measures are, therefore, expected to modernize the pedagogy and increase digitalization in learning (Saari & Sääntti, 2018, p.1). The increased adoption of digitalization for active and collaborative teaching and learning is thus a vital area of interest in government policies, as shown in the national framework for compulsory education (Lavonen & Salmela-Aro 2022, p.108; Finnish National Board for Education, 2014) and in the recent report where the government plans to "create a digital learning environment that promotes cooperation and knowledge-based development" (Ministry of Education and Culture, 2023a, p.1).

As stated, the decentralized system means that teachers are actively involved in designing the digital learning environments and courses and while such arrangements provide a flexible system that increases the teacher regulation of learning, it has also made it "challenging to formulate state-wide decisions and to provide uniform instructions during the pandemic" (Lavonen & Salmela-Aro 2022, p.107). Their studies also allude that having an "appropriate digi-pedagogy has helped teachers with instructional design and the use of digital tools and platforms in supporting students' learning,

engagement, and wellbeing" (p.106). By Digi-pedagogy, they mean "the knowledge and skills needed for using digital tools, platforms or digital environments for teaching and learning, and the skills needed to support students' engagement, learning and wellbeing in digital environments" (Lavonen & Salmela-Aro 2022, p.105; Greenhow et al., 2021). Furthermore, it has been established that teachers' skills in using digital tools in teaching have generally improved, with some still lacking digital competence (Tanhua-Piironen et al., 2019). The gap in digital competence is reported to vary between municipalities and based on demography, i.e., younger teachers and male teachers have higher digital skills (Lavonen & Salmela-Aro 2022, p.110). The discrepancy in teachers' digital competence suggests that distance learning is still evolving, thus providing the opportunity for new forms of governance to guide teachers and enhance their planning and use of digital tools, platforms, and digital content design. In other words, digital content governance is underexplored in the existing studies. Therefore, this paper focuses on explicating the e-learning quality criteria referred to herein as the e-criteria, the latest governance measure designed to ensure compatibility and standardization of digital content in distance learning. The e-criteria is particularly important within the decentralized education system in Finland as it provides a common framework for creating digital content. By providing an overview of the e-criteria, this study enhances the understanding of the governance of digital content from a pedagogical standpoint and the practical implication of the e-criteria in fostering active and collaborative learning. It also contributes to the literature on distance learning in the Finnish education context, which, as stated, has underexplored digital content governance so far.

Theoretical insight into distance learning in the Finnish education context

The principles

The egalitarian nature of Finnish society is reflected in the fundamental idea of equal access to learning demonstrated through the preponderance of public schools to provide a shared learning environment

that bridges the socio-economic gaps among students (Lavonen & Salmela-Aro 2022, p.107). The equality principle entails that students must have equal opportunity to access and utilize technology (Finnish National Agency for Education 2023), while equity means that "all teachers should continuously learn digi-pedagogy skills; likewise, all students should learn digital skills and digital platforms, and Digi-environments should also be used in classroom teaching" (Lavonen & Salmela-Aro 2022, p.117). *Trust* is another principle that guides digitalization due to the belief that teachers will use technology well to enhance distance learning. At the same time, *learner centricity* suggests that distance learning design considers students' needs and strengths (Finnish National Agency for Education, 2023).

The preconditions

Digitalizing education to support distance learning is not a new phenomenon within the Finnish education system as it has long been planned before the global pandemic through different strategies (Saari & Sääntti, 2018, p.1; Lavonen & Salmela-Aro 2022, p.106; Kupiainen, 2022, p. 288). Several factors serve as the preconditions that support distance education. The first enabling factor is the strong government support through financial investments for improving teacher's digital literacy and the provision of digital tools to support the use of digital content in teaching (Lavonen & Salmela-Aro 2022, p.107; Saari & Sääntti, 2018, p.2; European Commission/EACEA/Eurydice, 2019). The financial investments over time have led to a well-established digital infrastructure that supports widespread digital literacy and high access to basic digital infrastructure such as the Internet and emails (Fraillon et al., 2019). Indeed, the use of digital infrastructure in supporting teaching and learning is argued to be one of the outstanding cases within the EU (European Commission, 2019) even though comparatively, digitalization in Finnish education is on a smaller scale than in other Nordic countries (Kupiainen, 2022, p. 287).

The catalyst

Prior to the outbreak of COVID-19, distance learning was modestly and seldomly adopted (MEC, 2018b); this situation changed rapidly during and in the aftermath of the pandemic (MEC, 2020a; Kupiainen, 2022, p. 289). The pandemic thus provided the opportunity for improvement in digital pedagogy (cf. Lavonen & Salmela-Aro 2022, p.105; Greenhow et al., 2021) and increased the collaboration between teachers (Iivari et al. 2020). The increased adoption of distance learning (Helsingin Times 2021) is an indication that teachers are not lock-in to old ideas of teaching, which is a commonly identified challenge where many struggle to let go of their old ideas (cf. Lonka, Joram, & Bryson, 1996). The integration of distance learning into the Finnish educational system was facilitated due to the already existing ICT infrastructures (Fraillon et al., 2019), and this was particularly useful during the forced switch to distance learning due to the pandemic. The ease of transition to digital learning via platforms that facilitate collaborative teaching and learning e.g., Moodle, Google Classrooms, Teams, O365, Skype, and Zoom (Lavonen & Salmela-Aro 2022, p.110) is due to the long-standing strategies that support digitalization in Finnish education (Lavonen & Salmela-Aro 2022, p.106), but this does not negate the fact that there were many challenges in the sudden mass transition to remote learning.

The unpreparedness

Despite the favourable preconditions for distance education, its implementation, especially with the sudden emergence of COVID-19, resulting in the quick transition of schools to distance learning, was characterized by challenging experiences. Many teachers were caught unprepared as digital-based learning was a new experience in some schools (Kupiainen, 2022, p. 289), and this consequently led to pedagogical difficulties in planning and executing distance learning (Lavonen & Salmela-Aro 2022, p.112). Digital competence among teachers varies based on demographic factors such as age, as younger teachers are reported to have high competence (Tanhua-Piironen et al., 2019). The

competence challenge is thus an aspect that needs further improvement (European Commission 2020). While the digital infrastructure on a broader level is well developed, as already stated, on the personal level, there was inadequate student ownership of computers that can be accessed from home due to the lockdown orchestrated by COVID-19. The internet connectivity quality also affects the learning experience (Finnish National Agency for Education 2020, p.3; Lavonen & Salmela-Aro 2022, p.111-112). Access to personal computers was mitigated via self-help through donations and government support (Lavonen & Salmela-Aro, 2022). Altogether, the variation in teachers' digital competence and the availability of digital devices and learning supports means that some schools were more prepared than others (Vainikainen et al., 2020, p.26). The quality of distance learning was therefore experienced differently by teachers and students (Ministry of Education and Culture 2023b), e.g., some students reported that distance learning enhanced their collaborative skills in the learning process, and this was not the case for others who reported reduced efficiency in learning (Lavonen & Salmela-Aro 2022, p.112).

Case description, Materials, and method

The e-learning quality criteria in a nutshell

The e-criteria came into effect on 7 March 2023 and was officially published on 29 September 2023 to provide a common framework that "supports higher education institutions in producing high-quality educational content by ensuring compatibility of digital services between higher educational institutions" (Division 2023). The idea for the e-criteria originated from the knowledge co-creation workshop in the Digivisio 2030 joint programme involving the collaboration of different Finnish educational institutions (Nordlund & Piironen, 2022). The e-criteria provides governance to guide teachers in creating digital content for distance learning by providing the template to advance teacher development and the ease of combining distance learning in teaching. Such a governance approach is based on the idea that improving teacher's competence is essential for learning (cf. Apeltgren & Griertz

2010). As shown in Figure 2, the main features of the e-criteria, which will be elaborated on in a subsequent section of the paper, include research-based learning, modularity, diversity, accessibility of digitally supportive learning, and availability (Digivisio 2023).

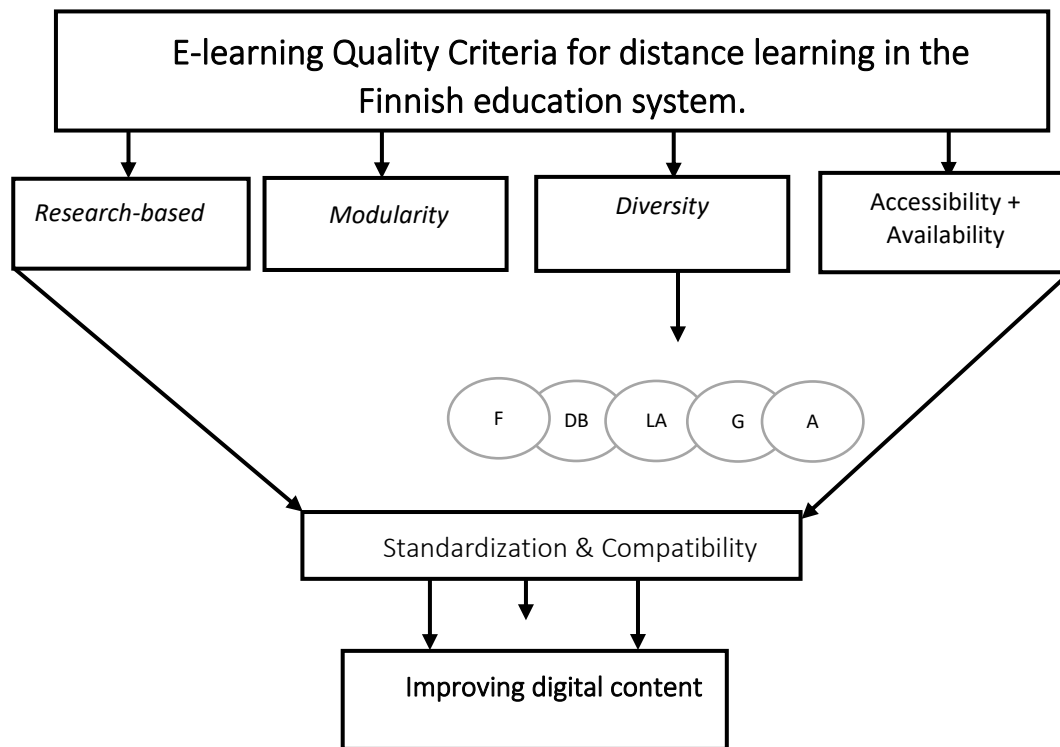


Figure 2. Features of the e-learning criteria in supporting distance learning (own source)

- F- Flexibility.
- DB - Diverse background.
- LA- Learner's activities.
- G- Guidance.
- A- Assessment.

Materials and methods

Content analysis of the English version of the e-criteria was utilized in this study. The method was used for two reasons; firstly, it enables the extraction of meaning from the document (Assarroudi et al., 2018, p. 43). Secondly, it supports the use of existing theory (Hsieh & Shannon 2005, p. 1281-1283; Humble, 2009, p. 37), e.g., the theory of distance learning in the Finnish content was used for increasing the understanding of the policy document. Pedagogy articles, official government reports, articles in the news media and material from the University Pedagogical Support (UNIPS) website were

utilized to support the arguments, analysis, and discussions towards an improved understanding of the importance and practical implication of the e-learning criteria. The author is not proficient in the Finnish language; thus, only the published English version of the Digivisio document was included in this study, which may limit the study's nuances.

Results and Analysis

Research-based education

The e-criteria stipulates that digital content planning must be research-based (Digivisio, 2023, p.3) as this aligns with the current research emphasized in Finnish education (Lavonen & Salmela-Aro, 2022, p.107; Tirri, 2014). Furthermore, to optimize the benefits of research-based education, teaching should be delivered in a captivating manner, as this leads to the active engagement of students in learning. Effective teaching requires teachers to possess adequate competence, which helps reduce the digital challenges that may arise in the learning process, thereby increasing learning efficiency (cf. Lavonen & Salmela-Aro 2022, p.114). Another stipulation in the criteria suggests that digital content should reflect multidisciplinary by "considering the special features of each education and scientific discipline" (Digivisio, 2023, p.3). Drawing ideas from different disciplines while preparing digital content will likely provide a more nuanced perspective. In doing so, the teacher also needs to ensure the alignment of the content in teaching. The teacher, for instance, can rely on Frazer & Bosanquet's (2006, p.272) four qualitative categories when designing the digital course to ensure alignment of the teaching approach to improve the overall outcome. Alignments can be in the "structure and content of the course, the structure and content of the programme of study; students' experience in learning; and an interactive process of teaching and learning" (Frazer & Bosanquet, 2006, p.272).

Modularity

The modularity criteria stipulate that digital content is designed so that the student can "compile studies suitable for them across higher education institutions" (Digivisio, 2023, p.4) and be recognized as part of their studies. The emphasis is on flexibility¹ of distance learning in which the digital content is designed to support students as active learners. To do so requires the liberty of students to use their initiative in making choices regarding their learning process. Such freedom supports student self-regulation, which is their ability to control their learning process, such as goal setting and working assiduously to actualize their learning objectives (Schunk & Zimmermann, 2003). Self-regulation enhances students' metacognition when they can control, direct, and regulate their actions (Vermunt & Verloop, 1999). Students can thus have the leeway to pursue their learning "self-directedly and actively" (Eekelen, Boshuizen & Vermunt, 2005, p.448), leveraging on the modularity criteria. It is worth mentioning that modularity in learning is an essential component of distance learning because of the role and influence of the belief system in learning (Buehl & Alexander, 2005; Hofer, 1999; Muis & Foy, 2010; Paulsen & Feldman, 1999). For example, for students who believe that they could gain nuanced insight into a subject by participating in similar courses that support their learning at different universities, modularity will likely influence their learning positively. By adhering to the modularity criteria in distance learning design, students' choices are neither restricted by their educational institution nor confined within the geographical location of their home universities. Indeed, students' freedom to choose their learning process and the teacher's shared regulation, e.g., allowing modularity

¹ Two types of flexibility outlined in the criteria must be differentiated as they appear similar but somewhat different. The flexibility in modularity suggests that students should have the privilege of deciding to undertake part of their learning at other universities. In contrast, flexibility in diversity features means that alternative learning methods should be available for students.

in learning, likely result in congruence between the teacher and the student (cf. Vermunt & Verloop, 1999, p.266).

Diversity

The criteria propose that "learning should be flexible by providing alternative ways to complete studies" (Digivisio, 2023, p.5). Research suggests knowledge can be acquired differently (Krista 2007, p.176). For instance, the teacher may design content that supports collaborative learning via group tasks (cf. Burke, 2011, p. 89) or adopt recorded lecture videos for self-directed learning, live lectures on digital platforms, and hybrid learning (Erno, 2022). The nationally organized postgraduate 'Research Ethics course' available on findocnet.fi is an excellent example of distance learning that combines live lectures, recorded self-directed videos, quizzes and assignments.

The criteria also raised a vital point when planning the digital content, i.e., taking cognizance of learners' diverse backgrounds to ensure the content is easily understood. Against the backdrop that the class composition is often heterogeneous due to students' different socio-cultural and economic backgrounds, meaning there will also be marked differences in their level of prior knowledge on a subject (Murtonen et al., 2020). Sinatra and Mason (2013) observe that a disequilibrium between a student's existing knowledge and the new knowledge in the subject leads to a learning paradox. The teacher, therefore, needs to ascertain the level of students' prior knowledge through activating learning activities, which serves as a diagnostic test and as an essential first step in a teaching session, especially because some of the student's prior knowledge on a subject could be subjective or non-scientific (cf. Södervik, 2016). Flinga, Padlet, Kahoot, discussion in smaller groups on Zoom breakout rooms and other digital tools could be utilized in the activating activities. These tasks are aimed at the meta-conceptual awareness of students (cf. Yilmaz, Tekkaya, & Sungur, 2011; Vosniadou & Ioannides, 1998) towards achieving conceptual change (cf. Vosniadou, 1994).

Another stipulation of the criteria is that digital content should be designed to support collaborative learning activities with the active involvement of the teacher and the students in regulating their learning (Digivisio, 2023, p.5). The teaching and learning process involves different agents and tasks, e.g., the teacher (Saberton, 1985), peer-controlled activities (Collier, 1985; Johnson & Johnson, 1990; Tang, 1993), and self-controlled activities (Brown, Bransford, Ferrara & Campione, 1983; Biggs, 1996, p.354). For example, the teacher and students are expected to participate in learning assessment by receiving and providing feedback actively. Indeed, assessment is a sensitive part of the learning activities because students' perception of the assessment methods influences how they engage in learning (Struyven, Dochy & Janssens, 2005), and this may also shape their study process (Seger & Dochy, 2006; Asikainen et al., 2013).

The criteria also suggest that digital content viz-a-viz assessment should be openly available so that students can access and understudy the rubrics, as this is one way of supporting the development of their self-assessment skills (Digivisio, 2023, p.5). That being the case, assessment criteria should be explicitly described, e.g. using rubrics, which is a "scoring tool that lists the criteria by which a paper or presentation will be graded (Burke, 2011, p. 92). The rubrics provide "detailed breakdowns of points that are awarded and how those points are awarded" (Burke, 2011, p. 92) thus ensuring that performances are adequately measured (Asikainen et al., 2013, p. 211) and are competence-based (Digivisio, 2023, p.5). Furthermore, the grading method must involve alternative assessment forms to provide students with different pathways for assessment. One reason is that having different assessment options could influence expectations, motivation for learning, efforts, and work rate (Entwistle & Peterson, 2004). It has also been argued that different assessment methods influence the styles or a combination of learning styles (Mayer, 1991). Thus, it is essential to "align the course objective and the targets for assessing student performance" (Biggs, 1996, p.347).

Finally, the criteria note that “the learner's activity in the learning process is planned and diverse assessment methods are used” (Digivisio, 2023, p.5). The rationale is that the diversity of assessment methods can enhance students’ self-assessment skills because they have foreknowledge of the activities used in assessing them. For instance, as Figure 3 below demonstrates, based on Burke's (2011, p.92) idea, the evaluation's focus could be on the final task, the process of completing it, or both. Hence, digital content and platforms should be designed to enable the assessment of learning activities and progress (Joshi et al., 2023, p.223), such as class attendance, active participation in group discussions, group work, and the quality of final assignment, among other considerations.

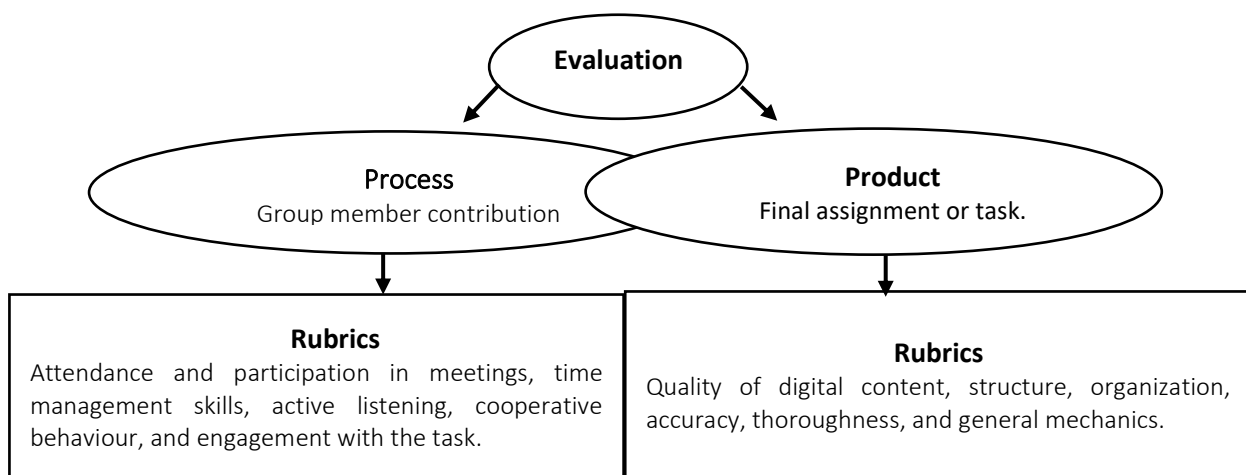


Figure 3. Diverse assessment methods in distance learning (own source)

Accessibility of digitally supported learning

The accessibility criteria stipulate that digital content must be “clear, logical, and the information is easy to find” (Digivisio, 2023, p.6). Planning and teaching could provide students with an enriching experience, thus forming an integral part of the learning process. Therefore, the clarity of the digital content is vital in capturing students' attention and raising their interest during an online lecture session, which can be achieved when the learning material is not ambiguous. Hence, teachers need to keep digital content simple and less complex, as the goal should be to enhance the logical transmission of information to support students' learning rather than impress them through sophisticated digital

content. The digital content, such as the PowerPoint slides, must be catchy with bright colour combinations, standardized font size and a thorough spell check before publishing the material on the module.

Regarding the ease of access, empirical studies have shown the importance of “teachers and students having easy access to digi-tools” (Lavonen & Salmela-Aro 2022, p.117). It is the teacher's responsibility to ensure that the digital learning resources are up to date; they can do this by checking with the librarian to ensure that the school's journal subscription is active and not expired, as this allows access to articles and other digital learning materials. The teacher also ensures that the links to various learning resources, such as websites and reports, are functional. The digital material must also be user-friendly, meaning it can be seamlessly accessed from multiple devices. The teacher is responsible for conducting a self-assessment test on multiple devices to ensure they work optimally. A logically organized, easily accessible content can increase students' motivation, giving them a positive outlook, which is an essential factor in learning and academic performance (Lonka & Ketonen, 2012). Also, well-organized content can enhance the performance of task-oriented students and raise their interest (cf. Vermunt & Endedijk, 2011).

Availability

The availability criteria emphasize the ease of navigating or using the digital platform based on its design. For instance, "the information must be easily navigated and effortlessly found on the learning platform" (Digivisio, 2023, p.7). What it means is that any platform teachers utilize must be designed to enable the student right from the onset of enrolling into a course and, upon completion, to track and view the various actions they undertake. Having a functionality on the digital platform that enables self-monitoring of study progression is particularly relevant where the study is entirely based on the self-study of online material. In such a situation, the student should be able to see their overall

progress, such as the completed and outstanding tasks on the platform, as it keeps them on track and reinforces their commitment to completing the learning activities within the allotted period.

Furthermore, the criteria stipulate that the “learning platform should have a consistent structure, and preferably uniform content structure within the higher education institutions” (Digivisio, 2023, p.7). One potential benefit from this criterion is that it may encourage, motivate, and facilitate students' engagement in modular learning, i.e., enrolling in courses at other universities. For example, when students believe that engaging in modular learning involves a seamless process due to the standardization of digital content, they will be more likely to enrol in courses that support their learning at other universities. Such learning behaviour aligns with the claim that students' belief influences their planning and goal setting (Winne & Hadwin, 1998), and their motivation drives commitment to learning (Kendt, Dochy, Struyven & Cascaller, 2011). Therefore, the standardization of content and platforms across universities could reduce the adaptation time to an entirely different structured platform. The criteria further note that even when there are differences in the digital content or template, they should be minimal (Digivisio, 2023, p.7). Teachers can ensure this by continuing intra and inter-institutional cooperation across universities when deciding on or developing digital content and platforms.

Discussion

The practical implication of the e-criteria on active and collaborative learning.

Covid-19 represents a change in the socio-technical landscape (Geels et al., 2017, p.464) that has significantly influenced learning by *catalyzing* the adoption of distance learning. Adjusting to the changes in the landscape reinforces Eekelen, Boshuizen, and Vermunt (2005) and Verloop's (2001) claim of the dynamism in the teaching process where knowledge and experience are acquired over time through practice. The experiences during the lockdown reveal variations in teachers' digital

competence and the need to provide students with learning support. The e-criterion can improve distance learning by ensuring a standardized template for teachers in the planning and developing of their digital content and platforms. A standardized digital structure will improve the quality of the teaching and learning experience. Also, students can seamlessly engage in modular learning with their peers at other educational institutions due to the similarity of the digital platform and content structure.

The e-criteria upholds the *principles* of distance education built around equality, equity, and trust. The criteria promote equality by recognizing the diversity of the class composition of students from different socio-economic and cultural backgrounds. Taking cognizance of this is vital, especially with the recent government policy of increased internationalization of 75% of international students, meaning the class will be diverse (cf. Ministry of Education and Culture, 2016). The criteria thus promote equality in the learning process by emphasizing active and collaborative activities where students with different skills and creativity can learn from each other (Digivisio, 2023, p.5). Active learning usually requires working in small groups through collaboration, which (Burke, 2011, p. 88; Barkley, Cross & Major, 2005; Davis, 1993) claims to increase the remembrance of what was learnt. Working in groups also has challenges, such as pressure to conform to mainstream opinion, the domineering nature of some members, overdependency by others and the time-consuming nature of group work compared to working alone (Beebe & Masterson, 2003).

Class diversity also means that students' motivations in learning may vary; for students with socially oriented motivation, active learning involves high social interaction (cf. Vermunt & Endedijk, 2011). In addition, diverse class composition means different belief systems among students, influencing their learning. Krista (2007, p.177) outlines the beliefs that shape learning, such as belief in "the task conditions, i.e. external contextual conditions, which include two of the four areas for regulation—behaviour and context, and the cognitive and affective conditions, i.e. internal conditions which

include the other two areas for regulation—cognition, motivation and affect". The latter also influences the targets and goals students set for themselves (Krista, 2007, p.178). The learning activities during the class session, as advocated in the criteria, encourage the adoption of different digital tools and alternative learning methods that foster active and collaborative learning, e.g. discussion questions and tasks that can be conducted in the Zoom break out rooms, Flinga, Padlet, Kahoot and others.

The criteria encourage teachers to develop alternative learning methods (Digivisio, 2023, p.5) as it provides the opportunity for equitable participation in learning. For example, students who, for some reason, do not enjoy working in groups (cf. Sorenson, 1981; Burke, 2011, p. 87) can use, e.g., Flinga to contribute to group work through text as such tool enables off-camera participation, especially if they are shy or have other social anxiety. Indeed, to optimize participatory distance learning requires having the correct number of students in a group. The criteria expect the teacher to make the best decision, leveraging the decentralized system that confers autonomy based on *trust*. For example, the teacher uses discretion to determine the suitable group size for each activity in the digital platform so that everyone can equally and actively participate and contribute to group discussions and tasks. Such a decision on size is contingent on the amount of time available for the task's completion, e.g., tasks with shorter timeframes should have smaller group sizes (Johnson, Johnson, & Smith, 1991). If the teacher assigns students to break out rooms, this may be done randomly if the class size is significant to ensure heterogeneity (Davis, 1993). However, if the class size is small, the teacher can consciously assign students to groups, provided he or she knows each student's abilities, strengths, and weaknesses (Connery, 1988). Participatory learning also entails that students can be given the flexibility to form groups (Csernica et al., 2002). However, this may lead to less productivity due to the time spent on trivia matters among students (Cooper, 1990). Although scholars have different opinions on the best group size (Davis, 1993; Csernica et al., 2002; Beebe & Masterson, 2003), however, it is generally

agreed that smaller groups ensure cohesion and group unity (Burke, 2011, p. 90). Therefore, digital content and learning activities should be designed to suit smaller group sizes where necessary to foster active and collaborative learning.

Digital infrastructure is one of the *preconditions* for distance learning in Finnish education. The criteria serve as a guide to optimize their utilization to ensure that digital content is designed in a clear, logical, and easily accessible manner. The government also supports research-based learning, e.g., the FinELib Consortium, a scientific journal contract among Finnish institutions that provides teachers and students free access to online scientific resources. With these at their disposal, they can implement research-based digital content. In addition, many schools rely on government funding to increasingly provide access to digital platforms (e.g., Microsoft 360, Teams, and Zoom) that enable and enhance distance learning. Also, there is growth in the Public-Private Partnerships (Kiesi, 2023) that have seen several Finnish companies making impacts in providing digital educational services. Teivainen (2021) highlights some of the Finnish companies, e.g., Seppo, which develops gamified learning platforms, e.g., an English-based game referred to as the Rise and Shine game, to motivate collaborative learning. Freed company fosters professional development and collaborative support among teachers, while Upiopi provides virtual after-school lessons for kids. Indeed, Finland has an enabling environment that supports distance learning, and the criteria serve as a guide to optimize these favourable conditions.

Experiences from the *unpreparedness* to transition to distance learning due to COVID-19 were challenging. On the one hand, the e-criteria has the potential to reduce the gap between teachers' digital competence by providing a common framework to guide the development of digital content, meaning the least competent can quickly learn from the template of the more experienced thus bridging the knowledge gap in the design of digital content. Perhaps the criteria could also strengthen teachers' pedagogical competence by ensuring that learning activities are well planned (Digivisio, 2023, p.5) and align with the learning objectives and outcomes rather than left to serendipity or assumption,

which can potentially devalue teaching (cf. Weimer, 1997). The learning process has different activities (cf. Lonka & Ketonen, 2012) and alignment in teaching is imperative (Murtonen, 2023) because it leads to improved learning outcomes compared to non-aligned instruction (Cohen, 1987) and better performative aspect of understanding (Biggs, 1996, p.351). Many young researchers are undergoing pedagogical training in Finnish universities, meaning the e-criteria can guide the planning and design of digital content, and this could contribute towards reducing burnout, worry, and confusion on how to navigate the creation of digital content, which were some of the reported challenges during the sudden transition to distance learning (cf. Lavonen & Salmela-Aro 2022, p.114).

Limitations and future work

This paper only provides an overview of a single strategic document, i.e., the e-criteria for governing digital content and its implication for active and collaborative learning. Future studies could examine other governance for distance learning within the Digivisio project (Nordlund & Piironen, 2022, p. 160) and their significance in distance learning. Additionally, the experiences of developing the e-criteria and how the process can be strengthened when working on subsequent strategies could be explored.

Conclusions and Contributions

The adoption of distance learning as a complimentary alternative to physical lectures was low until the outbreak of COVID-19, despite the favourable conditions that support distance learning, such as the well-established ICT infrastructure, strong Public-Private partnership in providing digital educational tools and platforms, and the decentralized governance system. The challenges of distance learning highlight the need for digital content governance, which until recently was lacking. This study, therefore, analysed the e-criteria, a strategic policy document governing digital content creation for distance learning. The results reveal that digital content increases standardization, compatibility,

flexibility, and ease of learning. This paper contributes another dimension to understanding the governance of education in the Finnish context through the pedagogy-based analysis of the e-criteria; by so doing, the practical implication of governing digital content, such as in strengthening active and collaborative learning, was discussed. A lesson drawn from the paper is that governing digital content via the e-criteria can improve the quality of teaching because of the standard framework for planning and designing digital content and learning activities. Students' learning experiences can also be enhanced due to the high clarity and ease of navigating content and their active involvement in learning.

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