

Literature and Data-driven Learning

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Abstract

This article aims to examine how and why we can use digital storytelling (DST) to teach literature in the upper secondary classroom, and makes use of Mark Haddon's complex, multimodal novel *The Curious Incident of the Dog in the Night-Time* (2004) as an example. DST is a powerful tool for the 21st century classroom, with the potential to help pupils to become empathetic, creative, inquisitive and critical thinkers. When applied to literature, DST allows pupils to continue the literary text in creative ways by making their own digital story using a basic video editing application such as iMovie or Microsoft Bilder. Such *literature-based DST* (LDST) distinguishes itself from ordinary DST use in school. The values, qualities and peculiarities of literature offer an imaginative point of departure for new ways of using digital media in school. *The Curious Incident* is an exceptionally appropriate novel to use with DST, because the novel and the method share numerous features, not least multimodal ones. The narrative structures and aesthetic dimensions of the novel overlap with characteristics of DST. Furthermore, the many hermeneutic dimensions of Haddon's novel can also be explored by the imaginative possibilities of DST. The definitions and interrelations between literature, text and modality are discussed throughout the article with reference to both philosophers and school didacticians. LDST is remarkable in the way it encourages pupils to sympathise, to interpret, to think critically and to develop their own imaginative ability and language skills. This article argues that LDST is useful in upper secondary education by examining the corresponding educational qualities and possibilities of Haddon's multimodal novel and DST, and by drawing upon the new education reform in Norway articulated in the *Core curriculum* of 2020 and the *Curriculum in English*. Furthermore, the article concludes with the presentation, analysis and assessment of a pilot LDST-project conducted in an upper secondary school in Troms County as part of an MA lector thesis at UiT The Arctic University Norway. Thus, this article's wider aim is to bring new research perspectives to English education, with a special focus on the use of literature and active forms of learning.

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Literature, text and education

Literature, especially imaginative fiction in all its protean forms, has always been conducive to the cultivation of empathy and the development of cognitive capacity, as much as to the fostering of creativity, to the development of critical thinking, to the learning of new languages and, of course, to the teaching of the three Rs (reading, writing and 'rithmetic). This ancient wisdom is supported by twenty-first-century studies by psychologists, neuroscientists, and anthropologists (Mar, Oatley, and Peterson 2009; Tamir et al. 2016; Smith et al. 2017). 'Without the Canon, we cease to think', Harold Bloom states in *The Western Canon* (1994), and points out that 'originally, the canon meant the choice of books in our teaching' (41, 15). His point is made again, decades later, by educators who argue for the importance of imaginative engagement to cognitive development (Immordino-Yang 2016; Gottlieb et al. 2016). The emotional and intellectual merits of reading fiction overlap entirely with the ideas and aims in the new *Core curriculum* for primary and secondary education in Norway (henceforth *CC 2020*) from Utdanningsdirektoratet, the Norwegian Directorate for Education and Training (Utdanningsdirektoratet 2020a). Literature offers infinite possibilities to explore the six principal core values of education and training: 'Human dignity'; 'Identity and cultural diversity'; 'Critical thinking and ethical awareness'; 'The joy of creating, engagement and the urge to explore'; 'Respect for nature and environmental awareness' and 'Democracy and participation' in *CC 2020*. The importance of literature also remains in the Directorate's *Curriculum in English* as children's fiction, young adult fiction and, most precisely, in the 'Competence aims and assessment' for upper secondary school: 'The pupil is expected to be able to read, analyse and interpret fictional texts in English' (Utdanningsdirektoratet 2020b: 12).

While literature remains essential to any type of learning, data-driven learning has assumed an increasingly more significant position in school. Learning from and through new media has now drawn level with more traditional competences and skills: 'The curriculum defines five basic skills: reading, writing, numeracy, oral skills and digital skills'

(Utdanningsdirektoratet 2020a). Consequently, '[d]igital skills in English involve being able to use digital media and resources to strengthen language learning, to encounter authentic language models and interlocutors in English, and to acquire relevant knowledge in English' and '[l]anguage learning takes place in the encounter with texts in English' that can be 'spoken and written, printed and digital, graphic and artistic, formal and informal, fictional and factual, contemporary and historical' (Utdanningsdirektoratet 2020b: 4, 3]. Data-driven learning recurs in the aims for all levels, and the one for upper secondary school states: 'use appropriate digital resources and other aids in language learning, text creation and interaction' (Utdanningsdirektoratet 2020b: 10).

These ideas of texts are not new. Neither is the idea of pupil participation. In fact, the Directorate's concept of text and its emphasis on pupil involvement characterize many types of literature and reading. Mikhail Bakhtin demonstrates during the Communist suppression in the Soviet regime how literature is marked by its heteroglossia, dialogism and open-endedness in *The Dialogic Imagination* (1981). Many of the characteristics of texts and learning are predicated upon literature and reading, as Roland Barthes meditates upon in many of his essays. In his deliberations on text in 'From Work to Text,' Barthes (1988b) stresses the move to multiple, irreducible, paradoxical and heterogenous texts that are ludic, metatextual and subversive from conventional works of literature that are monological, mimetic and consumerist. 'The birth of the reader must be at the cost of the death of the author', Barthes continues in 'The Death of the Author' (1988a: 148) and thus anticipates reader reception theories. Derrida's philosophical considerations of 'writing' and 'program' in 'The End of the Book and the Beginning of Writing' (1976) elucidates how literature informs the concept of text, and how literature and text supplement each other as much as they differ from each other. Similar reader participation has been observed in so-called fandom communities, where simple texts are expanded into new stories by fans, and it is perhaps present in the communal authorship of mythology and folklore (Barnes 2018). However canonical literature frequently achieves active, participatory reading due to what Bloom terms aesthetic supremacy and weirdness, and contemporary literature achieves it due to its novelty, metatextuality and subversiveness (see, e.g., Carney and Robertson (2018) for a quantification of unpredictability in Virginia Woolf). Canonical and

experimental fiction pave the way for our understanding of texts, digital tools and pupil involvement.

Texts of all kinds, written and literary as much as digital and multimodal, promote student-active interpretation, and the use of digital media facilitates the pupil as co-producer of new text. The diversity of literature invites a wide range of digital tools. Frequently, specific novels invite a particular type of digital tool. The exploration of Mark Haddon's *The Curious Incident of the Dog in the Night-Time* (2004) provides a specimen of such hermeneutic co-productivity in correspondence with *CC 2020* (Utdanningsdirektoratet 2020a) and the *Curriculum in English* (Utdanningsdirektoratet 2020b). The pupil's coproduction of a new text in DST enhances the educational possibilities of Mark Haddon's intriguing novel *The Curious Incident*. The subsequent theoretical discussion, the text analysis and the empirical results from an 8-week practice period at an upper secondary school in Norway in the fourth year of the students' MA lector programme (February–April 2020) at UiT the Arctic University of Norway add some arguments to the discussion of the use of literature and DST in Norwegian classrooms in an increasingly digital world. Central parts of the discussion on the use of literature in school argue why teachers and pupils benefit from using complex, contemporary and multilayered novels, as they bring forward opportunities of imagination, creativity and learning on a variety of levels. Additionally, DST can be used to enhance and accelerate text comprehension by integrating visual images with written texts. This *literature-based DST* (LDST) project for upper secondary school corresponds with the principles, definitions and aims of *CC 2020* and the *Curriculum in English*.

The Curious Incident of the Dog in the Night-Time

Haddon's *The Curious Incident* is an exceptionally appropriate novel to use with digital storytelling, due to the fact that the novel and method share numerous features. The derailing dog-murder mystery novel is beautifully written, thought-provoking and empathy-inspiring. It is weird and brims with aesthetic awareness; it is mysterious, metatextual, dialogic and subversive. The novel's aesthetic and complex strategies also evoke strong emotional reactions and prejudices in readers. According to Shannon Wooden in 'Narrative Medicine in the Literature Classroom,' Haddon's novel 'presents a wide array of easily interpretable concrete details; builds suspense; and uses emotionally compelling surprises to keep readers

hooked' (2011: 278). The narrator and protagonist is fifteen-year-old Christopher John Francis Boone, a character described as an extraordinary though complex pupil. In 'Cross-Curricular Teaching' Kukovec points out that Christopher

has a photographic memory, is incapable of telling lies, and prefers animals to most people; he thus feels at a loss in the real world, which is full of ambiguity and replete with idiomatic use of words, and he feels safe in his world of numbers, order and his own unique system of interpretation of complex mathematical problems. (Kukovec 2014: 146)

At the beginning of the novel, Christopher finds his neighbor's dog, Wellington, dead in a front yard with a garden fork through its side. He sets out to uncover who the murderer is. He chronicles his own investigation in a book as part of a school assignment. By the use of first-person narration, Christopher communicates with the use of emoticons, and makes use of maps and drawings to portray his experiences and observations. Christopher's investigation is sometimes aided, and at other times hampered, by the social relation issues he has to live with. While the murder is solved at an early stage in the novel, he begins to uncover new mysteries. The uncovering of family secrets and neighbourhood secrecy offer challenges to the talented and complex young boy, who is often assisted by his contact teacher Siobhan.

The narrative structures and aesthetic dimensions of *The Curious Incident* overlap with digital storytelling (DST). The many hermeneutic dimensions of Haddon's novel can be further explored by the imaginative possibilities in DST. The protagonist Christopher Boone, like a latter-day Sherlock Holmes in Conan Doyle's *The Hound of the Baskervilles*, must investigate and gather information about the murder in order to narrate his murder mystery novel, and the pupils have to analyze and collect information to make their own digital story. Pupils must be curious, visionary and creative, a kind of inquisitive detective and explorer like Christopher, to gather the essential details and to create a story worth telling in their own DST project. Haddon enables the reader to enter the intricate mind of Christopher by means of a text of a highly multimodal nature, deploying lists, maps, graphs, drawings and mathematical equations. According to the Norwegian Directorate in 'Competence aims and assessment' in the *Curriculum in English*, pupils should be able to 'write different types of formal and informal texts, including multimedia

texts with structure and coherence that describe, discuss, reason and reflect adapted to the purpose, receiver and situation' as well as 'express himself or herself in a nuanced and precise manner with fluency and coherence, using idiomatic expressions and varied sentence structures adapted to the purpose, receiver and situation' (Utdanningsdirektoratet 2020b: 12). Christopher is an exceptional inspiration for accomplishing these aims. In Haddon's novel, Christopher narrates his investigation as part of a school assignment, which is exactly what the pupils are expected to do as part of making their digital story based upon the novel. Even though the main character is at times hampered by his social relation issues, he recognizes and takes pride in his strengths. Christopher has a remarkably accurate memory which allows him to recall entire scenes and events in extraordinary detail, which enables him to resolve the byzantine mysteries. This creativity and attention to detail are expected of our pupils too: 'The school must appreciate and stimulate the curiosity and creative power of the pupils, and the pupils must be allowed to use their creative energy throughout their entire schooling' (Utdanningsdirektoratet 2020a). The didactic possibilities of DST continue and develop the narrative structures, thematic concerns and the challenges of Haddon's novel and Christopher's character, and further help to inspire pupils when they make their own imaginative, multimodal and empowering text.

The Curious Incident and Digital Storytelling

DST offers a powerful digital tool for the 21st century classroom, just as Haddon's novel brims with artistic elan and numerous didactic opportunities. In an educational context, DST works as a tool which allows pupils to make a digital story using a basic video editing application, such as iMovie or Microsoft Bilder. Traditionally, digital stories are about oneself, however in this project DST is used as a means for teaching literature, in order to explore the novel's imaginative qualities and its hermeneutic possibilities. Anita Normann (2012: 196) states that 'the process of making a digital story allows for many different possibilities for learning and critical thinking' (our translation). By combining their own creative videos or still images with their own voice narration, the method allows for a combination of analytical and creative approaches to literature. Christian Carlsen (2020: 214) describes this method as a 'productive and motivating way to work with digital skills in combination with language proficiency in general and literature in particular'. Lisbeth

Brevik and Ulrikke Rindal (2020) argue that coproducing or cocreating content gives pupils a chance to make literary texts their own, and to communicate their knowledge about the literary texts. Based on both their knowledge and interpretation of the pre-prepared text, such as *The Curious Incident*, the pupils create personal, imaginative and multimodal texts. Furthermore, Lynell Burmark (2004) finds that integrating visual images with written text both enhances and accelerates pupil comprehension. Carlsen (2020: 216) also remarks on DST's potential for differentiation: 'for struggling readers, who often have difficulties visualizing words on a page, the visual components of DST can make this an especially helpful approach'. In sum, the scholars all agree with the Norwegian Directorate's emphasis on the importance of reading, analysing and interpreting young adult fiction, and the importance of using appropriate digital sources for doing so.

DST is remarkable in the way pupils are encouraged to interpret, to think critically and to develop their own imaginative ability, writing skills and empathy. DST is also admirable in the way it provides pupils with a strong foundation of 21st century skills. As pupils actively participate in the creation of the story, they need to read and understand *The Curious Incident*. They also develop enhanced communication skills as they learn to conduct research on a topic, ask questions, organize their ideas, express opinions and construct meaningful narratives—in a manner very similar to how Christopher Boone conducts his research on Haddon's novel. All of these abilities concur with other aims from 'Competence aims and assessment' in English such as 'read, discuss and reflect on the content and language features and literary devices in various types of texts' and 'read, analyse and interpret fictional texts in English' (Utdanningsdirektoratet 2020b: 12). Therefore, DST facilitates a potent learning situation that encompasses aspects that society requires pupils to know and perform in the 21st century, such as critical thinking, creativity and technology literacy. Critiquing their own work, as well as the work of others, facilitates social learning and emotional intelligence which they also benefit from. DST offers new ideas for teaching literature in the classroom. Bernard Robin (2008: 222) states in his article on digital storytelling: 'we are currently witnessing dramatic growth in the educational use of digital storytelling, as a convergence of affordable technologies interacts with a contemporary agenda for today's classroom'. The use of LDST in classrooms and education can be viewed as a

relatively new research field. Thus, this article adds to the current research on both the advantages and disadvantages of DST when teaching literature in classrooms in an increasingly digital world.

The Curious Incident, *Movie Makers* and CC 2020

In their work with the novel, the pupils have to co-create a new multimodal text in a digital medium. The pupils are given the task of creating a new multimodal story in iMovie or Microsoft Bilder, where they add new dimensions to Haddon's novel by creating a new story from another character's point of view, in reaction to or in continuation of Haddon's narrative. Such an approach, i.e., LDST, to Haddon's *The Curious Incident* and the use of digital tools in the classroom correspond with the new CC 2020 and the 'Competence aims and assessment' in the *Curriculum in English. CC 2020* elaborates on the core values and the objective clause in the Education Act and the overriding principles for upper secondary education. The curriculum describes the fundamental approach that shall direct the pedagogical practice. The Directorate states in CC 2020, 1.3, 'Critical thinking and ethical awareness' that 'school shall help pupils to be inquisitive and ask questions, develop scientific and critical thinking and act with ethical awareness' (Utdanningsdirektoratet 2020a). In addition, in 1.4, 'The joy of creating, engagement and the urge to explore', the Directorate writes: 'school shall allow the pupils to experience the joy of creating, engagement and the urge to explore, and allow them to experience seeing opportunities and transforming ideas into practical actions' (Utdanningsdirektoratet 2020a). The core values concern educating critical and creative pupils. These aims can be achieved through literature and pupil-active forms of learning. *The Curious Incident* can be used as an inroad to imagination, creativity, self-empowerment, empathy, human diversity and enhanced communication. The novel also provides creative possibilities and inspiration for how to make a digital story. Christopher narrates his derailing murder mystery novel and provides the reader with drawings to support his thoughts and views, much like the pupils are expected to do when they create their own interpretation in a movie maker such as iMovie or Microsoft Bilder. The teacher in the novel, Siobhan, offers an additional point of identification to both teachers and pupils. Readers are also presented with an insight into extraordinary people and minds, and how their unusual personalities and abilities can be seen and discussed as self-empowerment and expertise instead of

impairment. With LDST, the pupils use digital sources in a critical way, which mirrors the values in *CC 2020*. This story-explorative method could therefore be experienced as a more successful and motivating way to work with literature in an increasingly digitized world.

Literature, text and multimodality

Multimodality is not a new phenomenon, as is made clear by Bakhtin, Barthes, Derrida and the ancient history of performative and pictorial storytelling. However, in combination with digital communication, new methods and modes surface, resulting in a need for people to understand how to comprehend, respond to, and make meaning of multimodal texts. Multimodality attends to the complex repertoire of semiotic resources and organizational means through which people make meaning. Hege Emma Rimmereide (2020: 192) describes in ‘Multimodal Texts in the English Classroom’ how ‘multimodal texts utilize different *modes*, which include the overarching systems of visual, audial and textual communication, and examples of modalities within these systems, to make meaning’. Each individual mode uses specific semiotic resources to create and enhance its meaning. Courtney Cazden et al. (1996) argue in ‘A Pedagogy of Multiliteracies’ for a more diverse understanding of literacy and the ability to comprehend and produce written and verbal language. They claim the importance for effective communication of taking different modes or semiotic systems into account, identifying five elements in the meaning-making process that they call multiliteracies: linguistic, visual, audio, gestural and spatial systems. Briefly explained, linguistic elements include vocabulary, grammar, genre and register. Visual resources include images, point of view, symbols, colors, framing and contrast. Audio involves aspects such as volume, tempo, pitch and sound effects. Gestural elements include facial expressions and body language, eye movement and gaze. Lastly, spatial resources are conveyed through the designs of space, as Rimmereide (2020: 194) describes: ‘where layout is important through the use of boundaries, proximity, and organization of objects in space’. Multimodal texts include different combinations of these meaning-making elements to achieve and convey meaning to the best of its ability. The different modes often form complementary functions.

Novels are particularly well suited for multimodal meaning-making as the language and text constitute the principal narrative mode of signification. Novels probably excel as a multimodal genre, as Bakhtin

argues, although poetry, film, video games and photographs also engender multimodal possibilities, which can all motivate and enable both pupils and teachers. In order to explore the multimodal constitution and capacity of multimodal genres, an important question arises. As Marie-Laure Ryan and Jan-Noël Thon (2014: 4) put it: ‘what can medium x do in terms of storyworld creation (or representation) that medium y cannot?’. To discuss adequately the differences between narrative meaning in different genres, the assessment between narratological concepts and media categories become important. Ryan and Thon (2014: 15) discuss the distinction between ‘medium free’ and ‘medium specific elements’. Medium free components consist of the fundamental parts of narrativity: character, events, setting, time, space, and causality. An example of a non-media specific element is interactivity, which is the dialogue that occurs between a human being and a computer program (such as in video games). Medium specific elements, however, are ‘explicitly developed for a certain medium, but they can occasionally be extended to other media through a metaphoric transfer’. In comics, such examples would be gutter, frame and the arrangements of panels on a page. The distinction between these concepts is relatively fuzzy. Though the medium-specific elements are explicitly developed for a medium, such media also incorporates medium-free elements. The basis of a medium consists of the fundamental parts of narrativity. Thus, we do not only have multimodal representations that combine various types of semiotics, but also storyworlds that combine different modes and genres. As an example, Ryan and Thon (2014: 19) discuss two different media with strongly contrasting features: ‘literature is a temporal art with immense narrative resources, while painting is a spatial art with limited narrative potential’. Paintings can also convey stories; however, these are frequently either known to the spectator from other narratives or media or correspond to stereotypical scripts. Literature, both oral and written and across its many imaginative genres from folktales, novels and drama to short stories and poetry, remains primary to storytelling. A multimodal novel, such as *The Curious Incident*, constructs the world using elements such as photos, maps, diagrams, tables, text, emoticons and graphs. Importantly, while these combinations of multimodal elements can construct the storyworld in much clearer visual and conceptual forms than language alone, verbal language remains the principal narrative mode of signification. If one were to remove the visual elements, the novel would persist in the power of its language, narrativity

and imagination. However, if one took away the linguistic component, what remains is a collection of visual documents that do not cohere into a whole.

As Bakhtin's analysis of novels, Barthes' constellation of work and text and Derrida's philosophical excursions into writing reiterate, most types of imaginative literature are multimodal, though some more tellingly so than others. Multimodal literature can be described as existing on a spectrum, from minimal to extensive in their incorporation of different modes. Wolfgang Hallet (2014: 124) claims that 'the traditional novel is basically monomodal (although, strictly speaking, layout, black letters, paper, and margins on the page are also different modes and meaningful semiotic resources)' in *The Rise of the Multimodal Novel*. Zoë Sadokierski (2010) distinguishes between what she describes as 'word-only novels' and 'multimodal novels', thus making a statement that the traditional novel differs from the multimodal one as word-only novels are not multimodal. Such definitions of multimodality are useful but limited. Harret and Sadokierski's definitions increase our understanding of many novels, such as Haddon's *The Curious Incident*. Nevertheless, their categorizations of multimodality do not extent to a deeper understanding of the novelistic itself. Most types of literature, especially canonical and experimental novels, fiction and poetry, can be described as multimodal. Fiction, poetry and drama are predicated upon the novelistic. All words have enormous amounts of meaning; they are polysemantic. One single word can be ambiguous and have many meanings. Sentences can be serious, ironic, paradoxical and apparently meaningless. Fiction and poetry are almost always multilinguistic, polyphonic, strange, formally premeditated and even surreal and absurd. According to these Bakhtinian, Barthesian and Derridean expositions on the novel, the text and writing, every single word in a novel or a poem is probably polysemantic, which emphasizes the idea of multimodality. Each word is made up of different letters, pronunciations and meanings. The idea of one single mode is already lost as the very language is multimodal *per se*. Another significant example is the narrative. The narrative consists of a set of events, the story, which is recounted in a process of narration, in which the events are selected and arranged in a particular order (the plot). Employing a set of different narrative techniques, such as embedded stories and multiperspectivity, reinforces the idea that novels are multimodal. The narrative in itself is multimodal as the novelistic is based on the plurality of language.

Sometimes, the text is deliberately metatextual, as in *The Curious Incident* where Christopher frequently meditates upon his own writing and where Sir Arthur Conan Doyle's Sherlock Holmes classic *The Hound of the Baskervilles* presents one specific intertext. A more advanced, intellectual approach to the novelistic than Harret and Sadokierski demonstrate reveals that most canonical and experimental types of literature are multimodal, or *text* or *writing* or *program* in Barthes and Derrida's terminology, and in the definition and aims of the Directorate's new reforms. Imaginative literature is also polyhermeneutic. Although the hermeneutic possibilities to some extent depend on the reader's reception, they are also generated from the multimodal complexity of the novel, or text, itself. The definition of mode is challenged as what is defined as one mode actually consists of multimodal elements itself. All novels are multimodal. Many of them are characterized by the features that Rimmereide, Hallet and Sadokierski point out, but *The Curious Incident*—which subscribes to Bloom's canonical criteria of literature, such as weirdness and aesthetic achievement—belongs to a canonical idea and to an experimental type of literature that is always complex, novelistic and multimodal.

Multimodality, literature and CC 2020

Opening up the field of multimodality leads to encounters with a great variety of texts experienced through various senses. As described by Maria Eisenmann and Theresa Summer (2020: 52) in 'Multimodal Literature in ELT', 'multimodal literature can be a motivating educational resource for learners due to the integration of different modes, their visual appeal, and learner-centered themes'. Dealing with multimodal literature in English language teaching can help pupils understand the meaning-making potential of different modes, particularly the relationship between words and images, but also in and between the words themselves, and the multilayered ambiguities of narrativity and the poly-hermeneutic powers of imaginative writing. Fiction, in its many modalities and mind-expanding capacities, spurs interpretation and co-creativity in multiple forms in the reader. In this particular case, LDST, the reader is a pupil in upper secondary school in Norway who explores the many modes of meaning in *The Curious Incident* by coproducing new text interpretation by using digital tools.

Multimodal texts are specifically mentioned in the *Curriculum in English*, and pupils in upper secondary are also expected to produce

multimodal texts. The aims and purposes of using multimodal texts are articulated repeatedly.

Reading in English means understanding and reflecting on the content of various types of texts on paper and on screen, and contributing to reading pleasure and language acquisition. It means reading and finding information in multimedia texts with competing messages and using reading strategies to understand explicit and implicit information. (Utdanningsdirektoratet 2020b: 4)

Pupils shall also ‘write different types of formal and informal texts, including multimedia texts with structure and coherence that describe, discuss, reason and reflect adapted to the purpose, receiver and situation’, preferably by developing their digital skills (Utdanningsdirektoratet 2020b: 12). The aims and purposes of studying and writing multimodal literature by digital skills, LDST, are clear: pupils ‘shall build the foundation for seeing their own identity and others’ identities in a multilingual and multicultural context’ (Utdanningsdirektoratet 2020b: 3). Imaginative literature in English offers a very helpful source for understanding the identity, life, situation and language of other people in other places. This understanding can be aided by digital coproduction of new interpretation. Such teaching of multimodal texts, e.g., LDST projects, has yet to gain an appropriate place in school. Gunther Kress and Theo van Leeuwen (2006: 17) state categorically that ‘the skill of producing multimodal texts of this kind, however central its role in contemporary society, is not taught in schools’. As further stated by Kress and van Leeuwen (2006: 17) ‘most texts now involve a complex interplay of written text, images and other graphic or sound elements’. Several changes have, however, taken place in Norwegian school learning over the last decade. One of the changes is the introduction of new technology which makes it easier for pupils and teachers to use multimodal resources for meaning making. Even though technology has become more accessible for teachers and pupils, the degree to which it is adopted varies greatly. Ingrid K. Jakobsen and Elise Seip Tønnessen (2020: 88) state in ‘Exploring Multimodal Literacy in Language Teaching and Learning’ that the teacher observed for their study ‘used varied multimodal designs to stimulate her students’ motivation, understanding, and learning, and we found that she regarded these as valuable teaching tools [...] we found that the students were given a more limited range of modes for producing texts than the assortment of modes they were offered during the learning

process'. Thus, teachers teach by various modes to benefit their instruction, however, they do not provide the pupils with the same opportunities of working with different modes. Ideally, pupils should be given opportunities to use a whole range of meaning-making modes when constructing texts to benefit their learning process to the best of its ability.

Reading and producing multimodal texts present multiple advantages for teachers and pupils, such as cultivating empathy, promoting critical awareness and developing reading and language facility, as much as increasing digital competence. One of the types of multimodal texts pupils and teachers can encounter is graphic novels where verbal and visual modes are arranged on the page in a way that together forms a message. The teaching of such novels provides teachers with the possibility to address several aims in the *Curriculum in English*, such as 'listen to, understand and use academic language in working on own oral and written text' and 'use appropriate strategies for language learning, text creation and communication' (Utdanningsdirektoratet 2020b: 12). As stated in Rimmereide (2020: 195): 'the ability to read and understand messages conveyed beyond the written text is crucial and it is important that learners identify semiotic features as necessary skills in today's society'. In addition to deconstructing and understanding distinct modes and media, multimodal novels promote cultural awareness, aesthetic awareness and critical literacy which are all highlighted in *CC 2020* and the *Curriculum in English*. Moreover, multimodal novels integrate visual images with written texts which can be used to enhance and accelerate pupil comprehension as Janice Bland (2015) reports in 'Pictures, Images and Deep Reading'. Bland further argues how images and pictures work as scaffolding and shortcuts to deep reading. Working with multimodal texts in the English classroom inevitably enhances English pupils' empathy, critical awareness, and provides clear advantages for their development of creativity, critical literacy and creating an awareness of the different modes' affordances. Consequently, this LDST project on how to use Mark Haddon's *The Curious Incident* to educate pupils to become creative, engaged, inquisitive and critical thinkers for the didactic benefit of pupils, teachers and society was tried out in a classroom.

The Curious Incident and LDST in the Class Room—a pilot project

The 8-week practice period in the first year at an upper secondary school in Troms County in Northern Norway in the fourth year of our lector

program (February–April 2020) at UiT The Arctic University of Norway provided the opportunity to conduct research on teaching the values of literature through the didactic facilities of DST, LDST, and to explore whether the goal of educating creative, engaged, inquisitive, and critical pupils could be achieved using this method. In January 2021, we sent an application to The Norwegian Centre for Research Data (NSD) requesting approval for collecting, storing and sharing data about the research project using LDST in the classroom. The project was approved in February 2021 and NSD commented that the processing of personal data in the project was in accordance with their privacy legislation. In the agreement, personal data was to be deleted after 15 June 2021. Two ninety-minute sessions each week over four and a half weeks were dedicated to teaching the multimodal *The Curious Incident*, and for the pupils to make their own personal, imaginative and multimodal texts. That the government closed down all schools in Norway for an uncertain length of time due the Covid-19 pandemic on 12 March 2020, the very day the LDST project started, made obvious many of the socio-pedagogical advantages of digital tools. A differentiated reading and study period in class and at home also included at an early stage a presentation of the pupil-centered learning activity.

The introductory lesson of the novel tried to encourage creativity and interest as the pupils were presented with the cover picture of the novel—a dead dog with a garden fork sticking out of it—on a PowerPoint. The task was to discuss what they saw in the picture and how this could be related to the next weeks' English lessons. Second, the pupils were given key words from the title, such as 'curious', 'incident', 'dog' and 'night-time', and asked to create a mind map with meanings and associations to each word. When the task was completed, the teacher introduced the title of the novel and read the first two chapters. The pupils and teacher discussed first impressions of the novel and were given information about a reading plan. *The Curious Incident* can be suitably divided into different sections, chapters 2–53 (the opening), chapters 59–139 (the investigation), chapters 149–173 (the discovery), chapters 179–227 (the journey) and chapters 229–233 (the ending). The allotted time made for a decision to teach parts of the novel, specifically until chapter 173 when the murderer of Wellington is revealed. Nevertheless, to make the process of creating their digital stories more accessible, the pupils were encouraged to read the entire novel.

Three different tasks were presented: 1) Changing Perspectives, 2) Book Trailer and 3) Book Review. The first task, Changing Perspectives, was to take on the role of one of the characters in the novel and tell a story or an episode from the novel, as it might have been experienced from that particular character's perspective. The new narrative would also have to include new information or details to the story, an opportunity for the pupils to engage their imagination and creativity. The story was to be told using first-person narration. The second option was to make a Book Trailer for *The Curious Incident*, introducing the main characters and plot to trigger interest in their peers. The Book Review involved a digital story with facts such as background information, plot overview, formal aspects and their own reaction and recommendations. These three different assignments were presented to allow pupils to create their own personal, imaginative and multimodal texts, and to fit the criteria best suited for the learning objectives and the individual pupils. The combination of reading literature and DST for all three tasks connects perfectly with the aims for reading literature and using digital tools in the 21st century.

Working with Haddon's *The Curious Incident* and the inventive method of DST with this upper secondary class, year one, resulted in 26 unique productions. All of the pupils' digital stories are short LDST presentations (varying from two to five minutes) of events inspired by Mark Haddon's *The Curious Incident*, though at the same time there are distinctive differences in the way each story is constructed, performed and presented. Their individual audiovisual stories and films focus on these unique LDST characteristics descriptively and interpretively. All three tasks were completed by using digital tools such as iMovie, Microsoft Pictures or PowerPoint. The data for the LDST project was collected a year after the project was conducted, which resulted in some complications. The pupils had started year two in their upper secondary education, and as a consequence dispersed into new classes and schools which brought challenges to tracing them. Lack of consent from some pupils, in accordance with the NSD regulations for privacy, also reduced the number of available presentations. Thus, 12 productions remain to constitute the empirical material for research in this field. Of these 12 audiovisual stories, three pupils chose task 1) Changing Perspectives, three pupils chose task 2) Book Trailer and six pupils chose task 3) Book Review. This article focuses on task 1) Changing Perspectives due to its novelty and appropriateness for LDST. The two other tasks were more

conventional and familiar. One of these three was selected as an example for this pilot project due to its originality and creativity. With *Changing Perspectives*, the pupil takes on the role as one of the characters in the novel and tells the story as it might have been experienced from that particular other character's perspective. This singular case of pupil A, presented below, obviously offers too little data for any type of quantitative research, but its results do indicate how and why LDST offers appropriate methods for teaching English in the (Norwegian) classroom and possibly suggests a pilot project that can be developed in future research.

LDST and Changing Perspectives

Pupil A's story, *Changing Perspectives*, creates a new story from Toby's point of view. The pet rat Toby is Christopher's closest friend and companion. When Christopher and Toby are both lost in a train station in London, Christopher suddenly registers with great anxiety that Toby has disappeared: 'and then I realised that Toby was missing because he was not in my pocket, and I didn't want him to be missing because we weren't in Father's house or Mother's house and there wasn't anyone to feed him in the little station and he would die and he might get run over by a train' (Haddon 2004: 221–222). Christopher becomes terribly worried and entirely preoccupied with bringing Toby back. Pupil A's story concentrates on these events from the rat's perspective. Basically, Toby runs happily away shouting FREEDOM and meets another rat before Christopher manages to recapture him. Pupil A's LDST comprises a set of 26 static photographic images spanning a timeline of 4 minutes and 9 seconds and a voiceover that impersonates Toby's voice vividly.

Pupil A creates in this LDST an imaginative and critically reinterpreted new story from the viewpoint of Toby the rat. The pupil's new text is original, interpretive and digital as the pupil coproduced in LDST a new text based on reading, interpreting and engaging creatively with Haddon's multimodal novel. The pupil demonstrates how working with LDST 'has the potential to help English learners create new worlds, take on different identities and challenge the taken-for-granted (stereotypical) views about their world' as Towndrow and Kogut (2021: 9) argue in *Digital Storytelling for Educative Purposes*. Pupil A's storytelling illustrates the ability of identifying in the first person with somebody else's identity, i.e., a rat, and demonstrates the compassion,

imagination and language competence of playing an *other* character for the purposes of developing and understanding a storyline, and for understanding the identity of and culture of other people—and animals. Pupil A directs her/his own story by bringing together several modal elements into a whole unit in a way that achieves the principles of *CC 2020* and the aims and purposes of the *Curriculum in English*. Pupil A, in much the same way, enables the viewer to enter the undiscovered mind of Toby the rat by the imaginative possibilities of DST. Pupil A's LDST project demonstrates his/her empathy, critical thinking, creativity and English language proficiency as much as his/her digital skills. LDST is a valuable tool for invigorating learning and motivating pupils to construct and personalize digital narratives as authentic products of learning.

Learning from The Curious Incident and LDST

That all 26 pupils submitted their specific LDST-task on deadline indicates that the reform-based *The Curious Incident*-LDST project proved extremely inspirational and motivating for the students. Informal feedback throughout the project reinforced the sense of higher motivation among most of the pupils. This LDST project also proved very welcome during the Covid lockdown. The 100% submission rate on deadline is likely to have been lower with more conventional teaching, especially during a long period when pupils did not attend school.

For a tentative project of this type, new to both teachers and pupils, the quality of the pupils' tasks was overall impressive. Haddon's YAF-canonical, experimental and multimodal novel promotes the imperatives of *CC 2020* and interacts with the new aims in the *Curriculum in English*. Furthermore, Haddon's novel proves engaging and conducive to differentiation, interpretation and creativity. However, the full-time online teaching of this LDST project provided challenges for the teacher to maintain a sense of each pupils' progress towards the instructional goals. Online learning, through the communication platform Microsoft Teams, removes many of the conventional methods of teaching, feedback and continuous assessment. As the pupils worked more independently and at home, the learning process became more difficult to assess. Thus, the finished product drew more importance than the actual learning process. Furthermore, the assessment criteria can be reevaluated for the future.

The LDST method differentiates itself from DST by using an imaginative template, Mark Haddon's *The Curious Incident* in this case,

as the basis for the storytelling, as opposed to most DST projects which draw upon personal experience. Consequently, the main criteria for assessment in the fairly new field of LDST need rethinking, as Henrik Bøhn (2020) argues for in *General Perspectives on Assessment*. Bøhn underlines the importance of ‘knowledge of *why* teachers should assess, *what* should be assessed and *how* assessment should be carried out in different situations’ (305). The self-awareness of the evaluation process needs to incorporate the new multimodal and digital media. Sigrid Ørevik’s (2022) discussion of evaluation also stresses multimodality: ‘knowledge of concepts and key principles of multimodal design is required to be able to describe qualities of a multimodal text in explicit terms, assess student’ texts accordingly, and promote multimodal genre awareness’ (260). The assessment criteria for this LDST project were content, structure, language and the use of visual aids. Content involved the presentation itself, the discussion of the topic, and its length and use of sources. Structure concerned the flow of the presentation, if the pupils were able to produce a seamless transition between pictures and coherence. In addition, introduction and conclusion were evaluated. Language was looked at in connection with vocabulary, grammar, sentence construction and pronunciation. Varied and concise vocabulary, for example, would contribute to a high degree of competence. The last criterion is the use of visual aids, such as digital tools, use of script, delivery and eye contact. Based on these principles of evaluation, pupils were assessed from a low to a high degree of competence. Even though the learners in this pilot project were presented with the evaluation criteria as the LDST task was introduced, they were not explicitly aware that the content, structure and use of visual aids in the finished products weighed more in the assessment process than language. The next time DST is introduced to a new class, the assessment criteria should be clear to all pupils, as they should be aware of what they are supposed to learn. However, when teachers assess LDST, originality, imagination and empathy should be acknowledged as much as technical skills, multimodal qualities and verbal competence in accord with the novel’s themes and content and in accordance with the aim of Utdanningsdirektoratet (2020a) in 1.4 ‘The joy of creating, engagement and the urge to explore’: ‘children and young people are curious and want to discover and create. The teaching and training must give the pupils rich opportunities to become engaged and develop the urge to explore’. The case of pupil A indicates

high achievement in this latter respect. Nevertheless, self-assessment of this pilot project's evaluation criteria indicates that this particular LDST project can improve in future by extending the assessment criteria beyond the traditional ones formerly applied to written texts and classroom teaching. The next time LDST is introduced to a new class, a set of updated assessment criteria will be presented to all pupils to make both the teacher and the pupils aware of aims and assessment priorities.

Furthermore, in a new LDST project the application to NSD needs to be submitted earlier and its lease extended. Ideally, the project should be conducted and completed during the year all pupils take the same class. The criteria for evaluation need to be worked out in advance, based on the lessons from this pilot, and they need to be made clearer for the pupils. Finally, a larger database of LDST presentations needs to be collected in order to check, to nuance and to develop the insights gained from this pilot. Still, the experience from this tentative *The Curious Incident*-LDST pilot suggests one of many ways in which literature and data-driven learning can be taught in upper secondary school in concordance with the recent reforms and the digital development in our society.

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