

The Paradox of Electronic Literature in the Classroom: The Challenges for New Literacy Practices within the Platformized School

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Abstract

Reviewing the history of computing, the educational potential of new ways of knowledge representation and new literary affordances have sparked many influential ideas and reform efforts, spanning from “frantic systems” (Nelson, 1970) to constructionist discovery learning (Papert, 1993) to the reconfiguration of literary education (Landow, 2006, ch. 7). Yet, the current usages of electronic literature in education arguably fall behind those early anticipations. Therefore, this paper explores the wider educational and social entanglements that withhold electronic literature from entering classrooms in the context of current technology transformations. Considering the recent pandemic-related global upsurge of the digitalization of educational systems, the mere lack of supply of digital devices and equipment will cease to be the main obstacle for the adoption of electronic literature in K12 classrooms. Nonetheless, the question shifts to what imaginaries and discourses shape (and limit) the use of new digital literary affordances. Reviewing current trends, three issues are identified. These concern (1) fixations of technological disruption, (2) literacy learning objectives and (3) the marginalization of teaching. The focus on technological disruption (and solutionism) refers to a tendency for innovators to overly emphasize particular technological aspects and to become fixated on their “disruptive” benefits while disregarding the need for cultural and artistic conventions and communities of education practices to grow within the digital medium. Secondly, the problematization of learning objectives relates to a prioritization of basic skills and 21st century workforce preparation while neglecting the need to address new critical literacy practices. Rather than responding with a restricted, preservationist stance limited to paper-based literacy, educators and authors may find ways of combining material affordances and electronic literature to introduce wider literacy conceptions in educational practice. In a similar vein, the marginalization of teaching is concerned with how technology is being used to quantify, classify and control teaching practices within new regimes of digital governance. In other words, teachers are being increasingly framed as technicians and behavioral managers in place of enhancing their role as “cyberbards” (Murray, 2016). Given that some of the issues raised correspond to known problems in the field of electronic literature, they also provide opportunities for further transdisciplinary research into the production and adaptation of electronic literature for educational purposes.

1 Introduction: E-lit as educational media

As has been remarked in a recent UN-report, a substantial part of digital educational media proposed by publishers are continuations of paper textbooks. At the same time a “plausible definition does not seem to exist” and digital textbooks are often just considered as “electronic versions of traditional print textbooks” (Mahatma Gandhi Institute of Education for Peace and Sustainable Development [UNESCO MGIEP], 2019, p. 32). While the specific reasons for the limited use of interactive

features and affordances of the digital medium in K12 education are not sufficiently investigated, research on electronic literature is able to help clarify the underlying problems by conceptualizing the distinctions between traditional educational media and the new type of literary works made possible by computational media. Hayles (2008, p. 3) refers to “electronic literature” as “digital born”, i.e. “a first-generation digital object created on a computer”. In a more extensive definition electronic literature is described as a “work with an important literary aspect that takes advantage of the capabilities and contexts provided by the stand-alone or networked computer” (Hayles, 2008, p. 3). Hayles (2008, p. 4) acknowledges that this definition is still entangled with expectations of print conventions and print literary modes, but electronic literature remains distinct in that it is “performed by properly executed code”. A key notion expressed by this is that a work of electronic literature is always dependent on sociotechnical systems, commonly labeled “platforms”, that are necessary to afford those performances. This is especially the case with “third generation” works of electronic literature that circulate within well established platforms and social networks (Flores, 2019). While it has been noted that print literature is also contingent on particular inventions, social conventions and literacy (Borsuk, 2018), the platform aspect of electronic literature introduces new issues of design, prescribed usage, compatibility, economic feasibility and equity that influence how electronic artifacts are developed, made and used for educational purposes.

Early ideas about educational uses of digital artifacts span from feeled-effect systems (“fantics”) consisting of stretchtexts, hypertexts, hypergrams and other hypermedia (Nelson, 2003) to visions of constructionist discovery learning (Papert, 1993) and to the reconfiguration of literary education (Landow, 2006, ch. 7). Yet, if we understand “genre” as something driven by cultural and technological contexts (Rettberg, 2018), up until now no distinct “genre” has developed within or out of the educational realm. What is more, reading researchers such as (Mangen & van der Weel, 2017, p. 10) take the marginal role of hypertext novels as an indicator for a “failed paradigm” which allegedly ignores cognitive information processing and the evolutionary need for a “hierarchical relationship between author and a receptive, passive reader”. While it is not necessary to agree with this statement, this type of controversy however raises the question of whether the success of a form of electronic literature is determined by cognitive aspects alone. Arguably, another important issue is connected to electronic literature being constrained by underlying sociotechnical contingencies and platforms, which leads us to the main question this article addresses. Thus, from a platform perspective, what are possible obstacles to the entrance of electronic literature into the mix of educational media used in K12 education?

2 Platforms and platformization

During the COVID19-related switches to emergency remote teaching on a global scale, recent debates have concentrated on the “platforms” offered by the major ed-tech players. In the context of this conference, however, the notion of platform also addresses the technical foundations for forms and communities of electronic literature to emerge. This indicates a need to define of the platform concept as it is interpreted by specific research strands that are different from everyday language. Within platform studies, Bogost and Montfort (2009) understand platform as a computational platform on which digital media work is based. They echo Marc Andreessen in defining a platform as a:

“a system that can be reprogrammed and therefore customized by outside developers—users—and in that way, adapted to countless needs and niches that the platform’s original developers could not have possibly contemplated, much less had time to accommodate.”

On the other side, those who study the current technological transformations of the educational sector from a critical and sociological perspective also have been finding ways to account for the

increasing role of code and information processing. In an editorial dedicated to these issues, Decuyper et al. (2021) reintroduce the definition of platforms proposed by van Dijck et al. (2018):

“An online ‘platform’ is a programmable digital architecture designed to organize interactions between users – not just end users but also corporate entities and public bodies. It is geared toward the systematic collection, algorithmic processing, circulation, and monetization of user data.”

Both definitions do not necessarily contradict each other. Rather, they emphasize different aspects of what platforms are. While the first definition highlights the adaptability of platforms to countless needs and niches that are unanticipated by the developers, the second definition acknowledges that many of those unanticipated uses are nevertheless embedded in larger socioeconomic frames and power dynamics. Baring this in mind, a major concern with the trend of “platformization” (Srnicek, 2017) is how the educational sector as a whole has increasingly become “programmable” through technological infrastructure with implications on a pedagogical and social level that are otherwise neglected. As such, educational platforms act as “as connective artifacts constitutive of, as well as constituted by, active socio-technical assemblages that are in the process of significantly transforming the educational sector” (Decuyper et al., 2021, p. 2).

With this perspective, it still not clear whether current iterations of digital educational platforms actually promote or continue to marginalize literary engagement with digital-born artifacts. One of the concerns is that platforms often reproduce the kinds of classroom configurations and pedagogies that have been inscribed into traditional education for the past century. As Perrotta et al. (2020) observe with reference to Google Classroom, “the tried and tested mechanisms and structures of formal schooling (classrooms, course work, student submissions and the asymmetrical relationship between teachers and students) are abstracted into a predefined template for participation.” Thus, with a differentiated look at education as a platform, platform is intended not as a monolithic structure but as “ecologies of practices” where different forces, values and movements come together (Decuyper et al., 2021, p. 8). This enables us to examine resulting paradoxes and ambiguities. For example, efforts to “disrupt” education may also prevent practices and literacy conceptions from changing. In specific, it is useful to look at these issues from the perspective of school reform, literacy conceptions and the role of teaching.

2.1 Disruptive fixations

It is easy to write off early ideas about electronic educational media and literature as examples of utopianism that prospected the possibility of social change simply by redefining the relationship between the author and the reader. Yet, there is a distinction between the kind of technological solutionism that has been associated with various edtech products (Teräs et al., 2020) and technological idealism connected to ideas about constructivist learning. In fact, much of original thinking about interactive digital narrative stems from an urge to go beyond the conception of computers as a “workhorse” for “drill and practice teaching” (Murray, 2016, p. 6).

Ethnographic studies such as Sims (2017) provide a more nuanced insight into the drawbacks of visionary ideas as they are applied to real-world contexts. He argues that processes of school reform often traverse “cycles of disruptive fixations”. Such cycles start with a phase of “problematization and rendering technical”, when experts and allies imagine and represent figured worlds that are particularly amenable to and controllable with envisioned remedies (Sims, 2017, p. 58). These processes of problematization and rendering technical, however, also produce fixations that exclude many factors that introduce unanticipated problems in practice. In other words, “unanticipated forces overflow the project and destabilize reformers’ carefully designed activities” (Sims, 2017, p. 55). Overflowing, if identified and dealt with carefully, can provide a valuable occasion to question underlying assumptions and stereotypes. But, as Sims (2017, p. 97) points out, it is then far more common to quickly search “for [conventional] resources that would stabilize the project

against the unanticipated turbulence of students' unsanctioned behavior". Ames (2018) identifies as typical computer-centric assumptions in constructionism the tendency to emphasize learning as an individualistic process and the belief that computers and technical devices will "naturally captivate children", resulting in the claim of pure discovery learning which is rarely achieved in practice.

Further research questions may consider how these dilemmas can be used to question the assumptions that are made as new platforms for electronic literature are developed. A crucial issue at the intersection of platform studies and education, for example, concerns how prospective creators and contributors are to be involved as participants in ways that are more open, equitable and inclusive without producing further idealizations or fixations.

2.2 Literacy limitations

Part of the neglect of educational forms of electronic literature is related to the type of literacy schools are expected to promote among children. If the notion of "literacy" as a main educational objective has remained static over the past decades, there would be no need for educational media other than print-based works that precede electronic literature. From a new literacies and multi-literacies perspective, this basic literacy idea, understood as simply as reading and writing, was "appropriate for a society that expected its workers to be passively disciplined" in the context of past industrial economies (Cope & Kalantzis, 2009, p. 169). The activity of "reading", however, is subject to change within contemporary media environments. Young people are "content with being no less than actors rather than audiences, players rather than spectators, agents rather than voyeurs and users rather than readers of narrative" (Cope & Kalantzis, 2009, p. 173). Instead of reading, it is possible to refer to activities such as to "interact" with or to "play" through a digital literary artifact. Nevertheless, those terms may be used in a ways that overlook the literacy portion needed to engage in those kinds of meaning making, implying an inherent ability of the "digital native" to interact and play naturally with any kind of media. Educational forms of electronic literature may thus be recognized as valuable resources for the promotion of a broadened notion of literacy. In this case, literacy teaching, rather than focusing on skills and competence, would aim "at creating a kind of person, an active designer of meaning, with a sensibility open to differences, change and innovation" (Cope & Kalantzis, 2009). In specific, Burnett and Merchant (2015) propose to restate the principles of literacy education as a consequence of these contemporary educational challenges. Accompanied by future electronic literary forms, literacy education should, for example, promote collaboration around and through texts and artifacts, acknowledge the role of multimodality, the affective embodied and material dimensions of meaning-making as well as the changing nature of meaning making (Burnett & Merchant, 2015, pp. 272-273). There is a tendency for processes of platformization to prescribe specific version of literacy as universal. Therefore, it is crucial to seek ways for platform cultures to evolve from collective practices of meaning making, rather than predetermining them.

2.3 Neglecting teaching

Biesta (2012) admonishes that there is a flattening of educational discourse which neglects "crucial educational questions about content, purpose and relationships". He refers to this trend as "learnification". In other words, teaching is often reduced to matters of control, which substantiates a simplistic opposition between teacher-centered and student-centered pedagogy. As critics note, old and new edtech promises are often accompanied by the portrayal of personalized (individualized) learning solutions as student-centric and transformative (Facer & Selwyn, 2021). Yet, issues of data collection, control and surveillance are often the other side of the medal (Jarke & Breiter, 2019). Even before the entrance of computers in schools, there has already been an extensive debate on educational media such as standardized textbooks and their potential role in deskilling teachers while also imposing cultural imaginaries (Apple, 1992). A similar tendency can be found by exam-

ining original technology conceptions. For example, the “teaching” in teaching machines, as they have been conceived by Skinner (1968, p. 79), consisted in “the arrangement of contingencies of reinforcement under which students learn”. According to Watters (2021) similar assumptions about teaching have persisted throughout the history of educational technology. From this perspective, learnification signifies the mechanization of teaching through technological means, without necessarily augmenting the agency of students and learners. A departure from learnification, on the other side, would aim at conferring new agency to students and teachers. With regard to electronic literature, there are different ways in which teaching can be amplified, rather than limiting or deskilling teachers. While in the past good teachers have been described as storytellers that are competent in configuring flexible assemblages of learning, the field of electronic literature may support teachers with notions such as “procedural authority” (Murray, 2016, p. 346) that transcend the binarism between learner-centric freedom and teacher-centric control. As a result, platforms in conjunction with efforts in teacher education should support teachers in partially becoming “cyberbards” themselves (Murray, 2016, ch. 7).

3 Conclusions

While it is impractical to predict forms of electronic literature that may thrive within contexts of formal education at this point, this contribution outlines some issues that are relevant when assessing current platform cultures. Thinking of educational platforms as connected socio-technical assemblages helps clarify some of the obstacles to the entrance of electronic literature in K12 education. Those obstacles concern the unreflected recourse to disruptive fixations, limiting literacy conceptions and teachers and students whose agency is undermined in processes of learnification. Platforms can emerge from, but also contribute in stabilizing these circumstances. While current educational platforms are intertwined with data-based commercial interests, it is however possible to conceive future educational assemblages as platforms that provide spaces for electronic literature depending on different sets of assumptions that are to be made.

Works cited

- Ames, M. G. (2018). Hackers, computers, and cooperation: A critical history of logo and constructionist learning. *Proceedings of the ACM on Human-Computer Interaction*, 2(CSCW), 1–19.
- Apple, M. W. (1992). The text and cultural politics. *Educational Researcher*, 21(7), 4–19. <https://doi.org/10.3102/0013189x021007004>
- Biesta, G. J. (2012). Giving teaching back to education: Responding to the disappearance of the teacher. *Phenomenology & Practice*, 6(2), 35–49. <https://doi.org/10.29173/pandpr19860>
- Bogost, I., & Montfort, N. (2009). *Platform studies: Frequently questioned answers*. UC Irvine: Digital Arts; Culture 2009. <https://escholarship.org/uc/item/01r0k9br>
- Borsuk, A. (2018). *The book*. MIT Press.
- Burnett, C., & Merchant, G. (2015). The challenge of 21st-century literacies. *Journal of Adolescent & Adult Literacy*, 59(3), 271–274. <https://doi.org/10.1002/jaal.482>
- Cope, B., & Kalantzis, M. (2009). “multiliteracies”: New literacies, new learning. *Pedagogies: An International Journal*, 4(3), 164–195. <https://doi.org/10.1080/15544800903076044>
- Decuypere, M., Grimaldi, E., & Landri, P. (2021). Introduction: Critical studies of digital education platforms. *Critical Studies in Education*, 62(1), 1–16. <https://doi.org/10.1080/17508487.2020.1866050>
- Facer, K., & Selwyn, N. (2021). Digital technology and the futures of education – towards ‘non-stupid’ optimism. *Paper commissioned for the UNESCO Futures of Education report (forthcoming)*.

- Flores, L. (2019). Third generation electronic literature. *Electronic book review*, 7.
- Hayles, N. K. (2008). *Electronic literature: New horizons for the literary*. University of Notre Dame Press.
- Jarke, J., & Breiter, A. (2019). Editorial: The datafication of education. *Learning, Media and Technology*, 44(1), 1–6. <https://doi.org/10.1080/17439884.2019.1573833>
- Landow, G. P. (2006). *Hypertext 3.0: Critical theory and new media in an era of globalization*. JHU Press.
- Mahatma Gandhi Institute of Education for Peace and Sustainable Development. (2019). *Rethinking pedagogy: Exploring the potential of digital technology in achieving quality education* (tech. rep.). Mahatma Gandhi Institute of Education for Peace and Sustainable Development.
- Mangen, A., & van der Weel, A. (2017). Why don't we read hypertext novels? *Convergence: The International Journal of Research into New Media Technologies*, 23(2), 166–181. <https://doi.org/10.1177/1354856515586042>
- Murray, J. H. (2016). *Hamlet on the holodeck: The future of narrative in cyberspace* (2nd ed.). New York, The Free Press.
- Nelson, T. H. (1970). No more teachers' dirty looks. *Computer decisions*, 9(8), 16–23.
- Nelson, T. H. (2003). From computer lib/dream machines, 1974. In N. Montfort & N. Wardrip-Fruin (Eds.), *The new media reader*. MIT press.
- Papert, S. (1993). *The children's machine: Rethinking school in the age of the computer*. New York, Basic Books.
- Perrotta, C., Gulson, K. N., Williamson, B., & Witzemberger, K. (2020). Automation, APIs and the distributed labour of platform pedagogies in google classroom. *Critical Studies in Education*, 1–17. <https://doi.org/10.1080/17508487.2020.1855597>
- Rettberg, S. (2018). *Electronic literature*. John Wiley & Sons.
- Sims, C. (2017). *Disruptive fixation: School reform and the pitfalls of techno-idealism*. Princeton University Press.
- Skinner, B. (1968). *The technology of teaching*. New York, Appleton.
- Srnicek, N. (2017). *Platform capitalism*. John Wiley & Sons.
- Teräs, M., Suoranta, J., Teräs, H., & Curcher, M. (2020). Post-covid-19 education and education technology 'solutionism': A seller's market. *Postdigital Science and Education*. <https://doi.org/10.1007/s42438-020-00164-x>
- van Dijck, J., Poell, T., & de Waal, M. (2018). *The platform society*. Oxford University Press. <https://doi.org/10.1093/oso/9780190889760.001.0001>
- Watters, A. (2021). *Teaching machines*. MIT Press.