

Trust, Pedagogy and Play

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Abstract: This paper reports selected findings from a set of classroom studies across several elementary school grades that involved a program of “just playing”, where videogame play was the focus of positive pedagogical attention. The focus here is on observations and analysis of gameplay in two middle school Canadian classrooms. The paper argues that, and illustrates how, playing video games engaged participating students, and their teachers, in overlooked, but educationally impactful, pedagogical practices--- specifically those engendering social relationships of mutual trust. Trust forms an overlooked bridge connecting play and pedagogy. Indispensable to both, trust is a central, indeed a necessary, condition of learning and play: you have to trust to play; you have to trust to learn. Building on observations and analyses of a 10-week videogame study with 2 middle school classes, this paper highlights the important role trust plays in learning generally, and in learning from video games in particular.

Keywords: Game-Based learning, Trust, Play, Pedagogy, Nintendo Switch, Learning

1. Studying “Trust” in a Play-Based Learning Program

The study here reported was one of a series aimed at understanding whether and how collaborative digital game play could help elementary students develop their language and communication skills. Two previous iterations had been in early elementary (K, 1, 2); this time two senior elementary (grade 7) teachers in a small suburban community school in British Columbia had expressed interest in trying out a game-based learning program. To better align our game-based learning study with the grade 7 curriculum guidelines, we added to our language and literacy-focused study design, a set of digital design activities linked to their gameplay. For 9 weeks, 15 minutes a day, these grade 7 classes played two games on the Nintendo switch: *Warioware: Get it Together*, a fast past pure fun party game, and *Super Mario Maker 2*, a game for learning game design. Students played in teams (set by their teachers), and their progression in both games was tracked at the beginning, middle and end of the study.

The first game was used as an easy and fun way to give everyone functional familiarity with the game controllers, basic game conventions, and, through extension activities, to draw students’ attention to fundamental game elements as models for their own game designs, including character, setting, game instructions, goals and tracking, level design, narrative, mechanics and some coding basics. The second game, which included comprehensive tutorials and an extended introductory example game (in “story mode”), had students designing and creating and testing and modifying their own games (in “maker mode”). Teachers were invited to devise extension activities of their own, encouraged to play alongside their students and urged to learn both games. To minimize disrupting the “usual” classroom environment, we documented the study remotely, using audiovisual recordings of daily play sessions and post-play debriefs, short *in situ* videos taken by teachers ‘on the fly’, student sketchbooks, player progression data stored on the game devices, and recordings of the games that students produced by the end of the program. This “hands off” approach, initiated during COVID when in- class research became impossible, while it enhanced ecological validity by minimizing researcher influence/interference, did place greater demands upon collaborating teachers. They were asked to distribute, collect and charge the class set of switches, oversee the use of the pair of GoPro cameras we installed in each classroom, and to use a (provided) iPad to record interactions, student gameplay or any other notable situations they found of interest. At the end of each week, we asked teachers to complete a quick, 5 question online “check in” form, sharing any photos they felt important from that week, as well as having a short (30 minute) zoom chat with the researchers. At the end of the study each teacher was interviewed individually.

Data sources for two grade seven classes included 265 pages of student notebooks, 375 supplementary photos and videos taken by the researchers, and 98 photos and 58 supplementary videos by teacher-participants on a (provided) i-Pad. One class teacher contributed six short, (optional) paired interviews. Another shared a PowerPoint presentation on videogames used instructionally to support students’ game-based learning. For the two classes combined, we compiled 33.8 hours of recorded and accessible footage, made up of 21 hours of playing time, 5 hours of debrief, and 7.8 hours of instructional time.

Analysis involved viewing and transcribing audiovisual recordings of play, debrief and extension activities: then re-viewing for both unusual events, and recurrent patterns, looking at types of interaction, types of discourse, disruptions, quiet periods, high attention, distraction, incidence and patterns of student mobility), drafting and sharing reflections in the form of “researcher notes”, discussing experiences and interpretations at weekly meetings, posting all research documents and data online (which only the researchers and teachers could access), and examining students sketchbooks with special interest in the alignment (or not) between the game they designed “on paper” and the one they actually developed in *Mario Maker 2*.

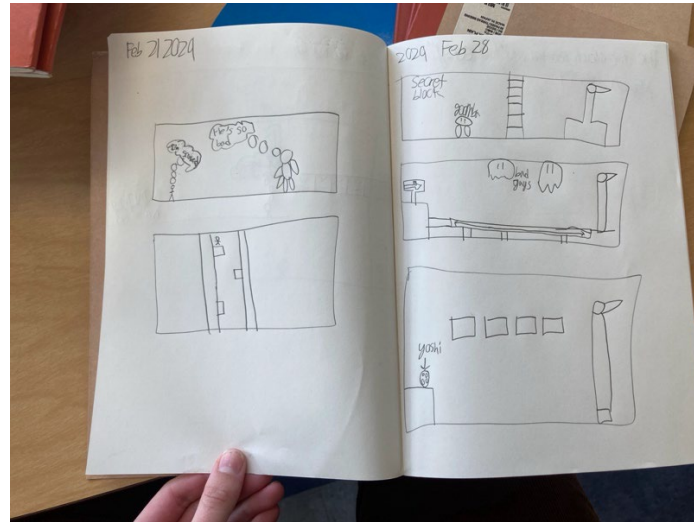


Figure 1: Game Design Concepts

As we sifted through, discussed, re-thought and re-examined our data, we tried to put together an explanatory framework that might account for the kinds of play-based experiences and activities we observed, to help us understand what was going on when things came together, and what was going on they came apart.

Having carried out the first part of this same study twice before (with early years students) the most surprising finding was that these more advanced students progressed more slowly thorough the game, with most students producing less well-developed sketches and drawings, and the class appeared less interested in discussing their gameplay in debrief sessions than their much younger counterparts. As surprising was discovering that these seventh-grade teachers appeared less interested in, and could find less time for, ‘digging in’ to games as a medium for learning, and their extension activities often did not support gameplay, or invite the use of media beyond text, or encourage and scaffold high-level or complex kinds of thinking about playing and designing games. With very few exceptions, these students’ sketchbook productions were underdeveloped, evidencing little creativity or risk-taking and even less playfulness or humour. This was not what we had expected, and we wrestled with how to make sense of what we were seeing, which looked less like engagement in play, and more like detached compliance with the program activities. While these students appeared happy enough when engaged in playing the games, they didn’t display much interest or effort in debriefs, game challenges, or extension activities. This kind of detached, under-involved relationship with classroom learning activities is by no means unusual in classrooms---which is what made it so strange! Because multiple iterations of this kind of game-based learning program have led us to expect marked *improvements* in student attention, engagement and productivity, evidenced by more detailed and developed drawings, a burst of growth in vocabulary, new relationships among students previously not “friends”, increased class solidarity demonstrated through patience, support and kindness, longer and more detailed stories, greater physical proximity and mobility within the classroom space, and different uses of space, like huddling on cushions on the floor instead of sitting in chairs at desks. It was almost as if classes of grade seven students didn’t “buy in” to what we were inviting them to do, didn’t believe it was a worthwhile investment of their interest and energies. It’s telling that, at the end of the study, asked by their teacher if they thought games should be used in school, unlike in previous studies like this one, (Author, 2023), the majority in that class disapproved. Where did thing go awry this time?

Classroom artefacts and progression data provided evidence that these students were not greatly impacted, inspired, engaged or challenged, even as classroom video recordings provided plenty of examples of high enjoyment during play, expanded “friendship groups”, and classes that did not require much, if any, teacher management during daily play periods. Videogame play, in this study, made for good entertainment and good

social relations---but perhaps not so much for good learning. Reviewing video data, transcribing, analyzing and looking for patterns that might help explain students' compliant but educationally inconsequential engagement with game focused learning activities, we asked why 'just playing' games in class looked and felt so much like "regular school", with a bit of an entertainment break every day. . How could something so different from regular school come to look and feel so much like it? Conversely, how is it that the strong catalytic effects of gameplay on student effort, attention and productivity that we had observed and documented in previous studies were far less in evidence in this one? The question came over time to turn on the matter of trust: did students trust that it would be worthwhile for them to put serious effort into the program activities? The analysis began to focus on the many ways trust appeared an overlooked but critical element in pedagogy in general, and game-based pedagogy in particular, and in so doing, changed from research reporting to theory-building as it became clear how trust was in play at many levels: the game, the technology, the teacher/s, classmates—and even the researchers (of which more later.)

Participants, teachers and students, had to trust in the game itself—that it would be suitable for these students, that it would or could support some worthwhile kinds of learning, that the game would engage participants and that it would work well, not be buggy or boring or glitchy. Students had to trust their teachers: that this would be a worthwhile use of their class time, that they would enjoy the study because it was based in play, that they would be learning in a different way, and learning different kinds of things than in their usual classroom activities. And students had to trust their co-playing partners, and their co-participating classmates, that they could relax and enjoy playing without being "messed with"—humiliated, shamed, threatened, ridiculed, exposed—or cheated.

2. "Trust me, I'm Your Teacher"

Students shuffle into their classrooms on the first day of school justifiably hesitant and watchful. Most often, they do not know who their teacher is beyond a name, sometimes teacher 'reputations' are garnered from siblings or previous students. We don't hear much about 'trust' in education, but it's a hugely important, indeed a necessary condition of play, and critical to students' ability to learn from someone else, to take risks, to try (and fail), to ask difficult questions, to go along with their directions even when—especially when—you either don't agree with those directions, or don't even understand the purpose or expected outcome of what you are being directed to do, read, say, act out, imagine, paint, sing...To get on well at school, it helps to trust your teacher.

A quite specific kind of trust is at stake here: just as doctor trust is believing your doctor has the knowledge, ability and intention to heal you, and above all not to harm you; contractor-trust is the belief that your contractor has the know-how and experience to carry out your building needs, and not sink you in a shoddy money-pit. Teacher trust is believing your teacher has the knowledge, ability and intention to educate you, and above all, not to miseducate, deceive, distract, or—since attendance at school is compelled by law—to bore you to death. It is trust that the time you are compelled to be sequestered away under someone else's authority and control is time spent on learning, and not time wasted. Since time turns out to be the most precious of all commodities (and "lack of time" invariably appears the primary impediment for teachers in implementing digital literacies and technologies), wasting time is surely among our cardinal sins. Videogame play, along with 'play' writ large, has been viewed by many teachers as a 'waste of time', and versions of "Stop playing around!" have been ubiquitous in teacher reprimands. In this study, however, videogame play was the focus of strongly positive teacher-attention and support. Identifying and describing the range of pedagogical practices we observed led us to explore trust as a key "para-pedagogical" condition integral to game-based learning.

3. Trust and Learning; "Epistemic Trust"

Trust has not had much attention in educational theory and research—and it will not be a familiar topic to games and learning scholars either. Chew (2023) observed "there is remarkably little research on the role of trust in educational settings." ¹ He further reports that his own research showed that "students are more willing to work hard and take on more challenging work when trust in the teacher is high" (Chew et al., 2020). Trust so

¹ Chew, a psychologist, defines teacher trust as involving 3 components: (1) Competence: The teacher has both the disciplinary knowledge and teaching skill to teach a successful class; (2) Integrity: The teacher is truthful and conscientious, and treats students respectfully, and (3) Beneficence: The teacher will work to promote and enhance the learning and development of students in the class

seen is a “paracognitive condition,” not itself knowledge/understanding, but working right alongside it, in a supportive but essential role. It’s essential because learning is a risky business.

Learning is an epistemic undertaking, concerned first and foremost with developing knowledge and understanding, and cultivating and sustaining students’ epistemic trust—their ability to believe what is being communicated to them—must therefore be a primary pedagogical concern. When what is being communicated to you is NOT what you already believe, learning poses epistemic *risk*. And that’s because when we learn something new, we are in effect also learning that we are, or anyway we have been, thus far, wrong about that thing (Beckett, K. 1983). Learning contradicts (contra=against; dict[um]=authoritative assertion) what we (thought we) knew, and requires us to change, modify, correct or further develop what we (thought we) knew. Learning must, of necessity, destabilize us, whether only slightly, or profoundly: significant learning means epistemic vertigo, and takes some getting used to. Thus, unavoidably, teaching risks a kind of violence, and learning risks becoming a kind of oppression. That’s not thought about as much as it should be.

Because learning is a profoundly unsettling thing, it requires well-supported engagement and attention, what educational philosopher R.S. Peters memorably described as “willingness and wittingness”. *Ethical* educational work, however compromised that may be by schooling being compulsory, must still involve students’ wanting to learn something, and students having their ‘wits about them’, that is, being attentive and engaged in learning, and be able to trust enough to take the dizzying risks that learning entails.

It doesn’t help matters that the classroom is an enclosed social space that is regulated by external rules levelling all individuals into ‘students’ and authorizing adults as primary (Teacher/s) and secondary (Assistants) leaders. Any utterance (or action) by a student is thrust immediately into a hierarchically structured and regulated discursive order, whether individuals so enmeshed like it or not.

However, this pre-figuring discourse requires a kind of language many students withdraw from, or outright refuse to enter. For example, normatively re-mediated by and for that social space, any utterance can be read as either ‘consent’ (or ‘dissent’) to its identity-forming structuration. Speaking out in class has always had complex constraints as well as affordances, making student participation a fraught and perilous journey. Freire many years ago spoke of a “culture of silence” among the people he was writing about at that time; the classroom can be no less such a culture. Silence speaks volumes, as Freire there observed. So, it’s valuable to recognize that there is always risk and danger for students who speak (or otherwise participate) in class, because within the regulative surveillance culture of the classroom, every discernible communication can, legitimately, be taken up as a “symptom” of who a student is or where they are going or what they think. Those institutionally imposed relations of power and control just have to be worked within and around by teachers as they build the social order of their own classrooms. This can be a slow and difficult process, and sometimes an uneasy collaborative performance will satisfy basic requirements until the year is over. To counterbalance the disempowering and silencing epistemic and cultural architecture of schooling, we can identify some ways of building the supportive classroom social relations that are foundational for epistemic trust, because there has to be some safety net, incentive, or support, something that makes learning both less risky, and worth the risk.

Teachers’ epistemic trust in technologies—like videogames—that change educational media ecologies, by destabilizing traditional text-based literacies and replacing familiar media with new media and digital tools, present quite dizzying ‘epistemic risk’ to teachers. In terms of curricular content, people who would never think of assigning to their class a book they hadn’t read, that they didn’t get enough time for, or found too difficult, or just didn’t find they were interested in, or they just weren’t that great at at reading...And yet its understandable that, even while encouraging students to engage with a videogame-based study, it is only exceptionally that a teacher has seen sufficient value in knowing the ‘text’ her students have been assigned to learn with and from. It might be that the principal message conveyed to students is that this exposure to games is a ‘special event’ that’s more for fun, as a break in the day, than a springboard for significant learning. And in terms of pedagogical process, trusting the game technology means letting the tool co-control the interaction, and needs no further regulation by a third party. When a good teacher is one who has classroom control, this can be experienced as an *existential* epistemic risk, because if that is true, why a teacher? For these and more reasons it is probably important to consider the epistemic risk for teachers of a technology—in this case a videogame—and especially a technology that takes control of student attention and brings with it a whole new medium.

4. Trust and Play: “Ludic Trust”

Like learning, play has to be both “witting” and “willing”. You can no more be compelled to play than you can be forced to be free—even though, in professional athletics or compulsory school sports, you can be required, even compelled, to perform the role of a player, but paradigmatically, play is voluntary.

And, like learning, play depends upon trust. Try playing with a person you don’t trust. All the ways trust is essential for play come easily to mind. Some of these are the necessary belief that person will ‘play fair’, not only not rule-break or cheat in game terms but potentially cause direct harm by making play serious—physically dangerous, for example. Traditionally theorized as a “magic circle”, play so seen inhabits an imaginary protected zone in which fantasy, physical challenges, role-play and story weave together a world apart from everyday life. But suspending the norms and certainties of the everyday world brings risks of every kind, which is why inhabiting that vertiginous domain requires players to trust one another—that this is really “play”, and it’s by the “rules”, whether adopted or contrived in the moment. Play in this sense is un-strategic---that is to say, it is ‘not-for-profit’, so to speak, not intentionally deployed to achieve some desired end in the ‘real world’, the world that is **not** play. Of course play is full of strategizing which is also a major part of its challenges, excitements and rewards. But play’s strategies are “within the game”, and part of ‘fair play’ is the operating assumption that players purposes are intrinsic to the game and to playing it. In that paradigmatic sense of play, “ludic trust” is a necessary condition of play, just as than “epistemic trust” is for learning.

What makes trust of particular interest to games-focused researchers is that while not everything that requires trust is play, everything that is play requires trust.

5. Trusting the Game: Is This Playable?

In terms of the *game* itself, when students were asked how they enjoyed the two games they were asked to play, their verbal responses, and our observations of their game play behaviour, made clear that while they regarded the initial game *Warioware: Get it Together* as too ‘young’ for them, they nevertheless enjoyed playing it, and, with the exception of a small group in one class that did not participate in the study, the class as a whole was keenly engaged in playing, and the game itself presented no technical problems at all. Students also told us they enjoyed the second game (*Mario Maker 2*), with several expressing a strong preference for the second, more challenging game, but several others largely withdrawing from its challenges. Both games were perceived as solid and well-functioning, not ‘buggy’, or laggy or disjointed—and, even if a bit too young in the first case, engaging and fun. It was clear students saw the first game as entertaining, and the second as more recognizably ‘educational’. No one challenged the adequacy of these two as “good games”, indicating they trusted the games, as games, to be both playable and worth playing.

6. Technological Trust: Machinery and Agency

Trusting the technology cannot be overlooked—and promises to be an increasingly important consideration with the sudden and transformative emergence of AI Chatbots as legitimate educational agents. It may be supposed that what is at stake in relation to technologies is not “trust” so much as “reliance” (See Hawley, 2017), a more pedestrian and, indeed, mechanical virtue: the thing will work. Distrust, argues Haley, embodies a moral criticism. As she goes on to explain, “We trust people as *speakers*, (as writers, as signers, etc.) and we trust people as *actors*” (Hawley, 2017, p.72.). As more than just hardware, though, as programmed hardware, non-humans can become, and have become, actors, as learning technologies, paradigmatically LMS systems and ‘tutors’ direct and regulate and control human action and interaction, both individual and social. It will be of great interest to discover over time their epistemic ‘resiliency’, that is, the extent to which, despite known and oft identified AI-generated errors in learning management system content and feedback, these technologies come, nevertheless, to be “trusted” by school boards, teachers, parents and students, to be regarded as “beyond criticism”, very much—even more than—in the way that school textbooks used to be. Looking at the materiality of gameplay, the *devices* students were given to play on were a classic and well-respected “brand” (Nintendo switch), and although the ones we used were not the latest version, there was never any tension observed around the devices being too hard or not working, or any kind of “blaming the tool”.

7. Trusting the Teacher: Are we Really Going to (*Learn Through*) Play?

Are we really going to be *allowed* to play (and will it really be fun or just ‘fun’?), and are we really going to learn something worthwhile, or is this videogame study, as Greta Thunburg most famously said, just more “blah, blah, blah”? (<https://www.theguardian.com/environment/2021/sep/28/blah-greta-thunberg-leaders-climate-crisis->

co2-emissions). Imagined or not, these, or questions like them, probably shape, for students, the seriousness with which they attend to and engage with class activities—and the teacher is in authority.

How do teachers convey to students what and how they can learn by playing? One way is by simply allowing students the time, space and conditions to play. For example, simply leaving students free to play, to move around the class, chat with their playing partners and classmates, and play uninterrupted for the designated period, giving just one time reminder in the last few minutes, enables them to focus entirely on their play, and in that temporarily suspended play space, interacting with ‘reality’ only as gameplay demands (which is of course what drives parents to distraction, but this is not the place to take that up). Impeding students’ focused engagement on play, or immersive ‘flow’ experience in play, were teacher- provided frequent “time checks” (sometimes with minute-by-minute countdowns). Interspersed interruptions about organizational matters throughout the assigned 15 minutes of daily play meant the only way students could concentrate on playing was by ignoring what the teacher was saying! Time was also the issue in a class where considerable time in one class was taken up every day in “set up”, that is, in distributing switches to, and collecting them from, their pre-assigned teams, a task carried out by the class’s “educational assistant”. In the other class, where students were directed to collect (and return) their switches by themselves, this less teacher-driven process left the class with several minutes more playtime every day than their counterparts.

What about *learning* through play? (Or is this not a learning activity?) Although the recreational and social aspects of gameplay are certainly important conditions for learning, there are other directly curricular objectives that gameplay can serve, objectives that students can share, if they are made sufficiently evident. Such evidence, in our study, consisted in teacher questions that probed into students’ initial responses, and that sometimes challenged those responses with counterexamples. Taking time for students to formulate, and then asking them to reformulate, responses to significant (and answerable!) questions demonstrated to students the importance placed by their teacher on their own developing understanding— ‘recall Chew’s beneficence’ condition for teacher trust: “The teacher will work to promote and enhance the learning and development of students”).(Chew, 2023) When a teacher assigned a task, however, and then within the lesson iteratively reduced its original demands (“Write a letter to the superintendent about whether you should have videogames in school”) to “use any form you like, word cloud, list, pros and cons”, to “just 3 bullet points”, behavioural compliance gets prioritized over cognitive engagement. Other instances that may have signaled a lack of ‘beneficent’ concern with students’ learning included questions being posed, then students asked their opinions in a show of hands that were, however, never actually counted, or being given just minutes to write answers in their ‘notebooks’ to a question on the board, then the teacher circulating giving students one example after another of what they “might say” or “might argue”. In these ways, the game-focused “extension activities” designed at the outset did not serve their intended purpose of challenging students to learn a new skill set (game design) and to take risks and create in non-textual forms (sketchbooks), becoming instead undemanding exercises in compliance.

When teachers gave control over to the technology and the students, there was more time for play. Whether that time was spent, however, in what has been elsewhere described as “serious play” (Beavis, et al., 2017) is likely to be influenced by what the teacher conveys about the importance or educational value of doing so. But when teachers chose not to play alongside their students, or, if they played, when they directed attention away from their students’ play experiences and towards their own, by disavowing competence or game experience, or asking for student (invariably boy) help, play, and the educational value of play, was undermined. Because why else would a teacher be unable to play a game that first-graders were successful at?

8. Trusting the Medium: Making Media Ecology Shifts Credible

The promise of educational value through play can be supported, or it can be undermined. Not only students, but teachers as well, can offer powerful resistance the introduction of a new technology, with its shifting of the familiar media ecology of the classroom. Change can be resisted by converting experiences of and in the new medium (here, videogames) into ‘regular’ classroom activity. For example, to deepen and enrich her students’ videogame experiences, one teacher created and delivered a multi-part series of ‘lessons’ on videogames, informing students about videogame history, famous game designers, types of games and game characters, and touching on issues (‘addiction’, violence, business), concluding with questions about whether videogames should be used in schools. The majority in this teacher’s class said no. (They may have thought that asking if the activity the class had been engaged in should have a place in the classroom expresses their teacher’s lack of confidence in its educational value).

In designing the study, “game designer’s sketchbook” was an integral element. The intent was to provide each student with their own individual (to keep after the study) ‘canvas’ to express their ideas in a different form than usual, a blank-page booklet whose structure suggests and invites development over time—continuity and iteration--rather than separate thoughts, information, or images.



Figure 2: Game Designers Sketchbook

We provided a series of activities that these sketchbooks could be useful for, as well as a few complementary resources about how people have used their sketchbooks to come up with game ideas and components. In both classes, teachers invited students to use “any form they like (picture, list, word web, sentences, etc.)” in their sketchbooks (see Figure 3). From the first day forward, however, teachers referred to these as “your game notebooks” and assigned questions to which written answers in the game notebooks were assigned. Beyond an initial naming of alternative ways/other media assigned “game notebook” tasks could take, we observed no further explicit attention to the specific and quite different media involved in game play and in learning from games: how to design and develop sound, images, characters, mechanics, coding, how to experiment and take playful risks in game design. Game-based activities had to be translated into the traditional “textual preferences” of school-based learning.

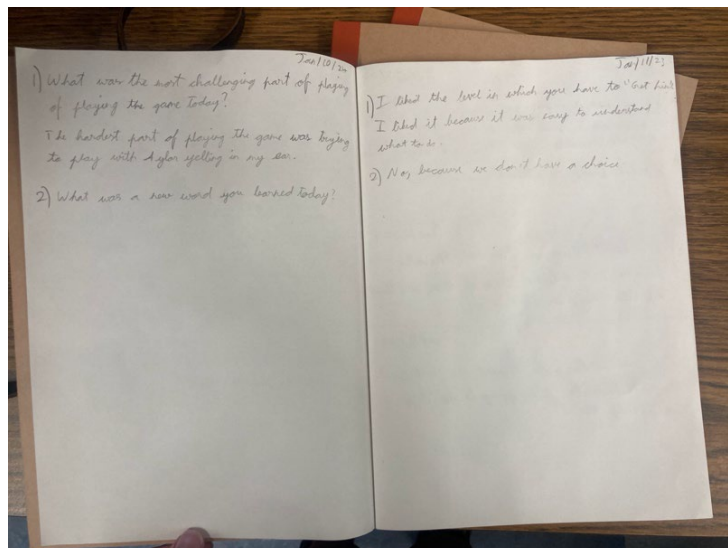


Figure 3: Written answers: From Sketchbook to Notebook

But the intent had been that a “game designer’s notebook” would extend a different kind of invitation for students to learn, in a different medium, on the presumption that building game-based pedagogies call upon a set of abilities qualitatively distinct from those enabled in educational theories and pedagogical practices that are rooted in language and text.

When teachers refer to the sketchbooks as notebooks, however, and ask students to use them to provide written answers to questions on the board, they ‘cancel out’ the kind of information and understanding students can derive from playing and thinking about and making games. Instructive here is McLuhan’s answer to what “media ecology” means: “It means,” he explained: “arranging various media to help each other so they won’t cancel each other out, to buttress one medium with another. You might say, for example, that radio is a bigger help to literacy than television, but television might be a very wonderful aid to teaching languages. And so you can do some things on some media that you cannot do on others. And, therefore, if you watch the whole field, you can prevent this waste that comes by one canceling the other out” (McLuhan, 2003b, p. 271). What this means for educational media ecology is that, whatever the educational value of videogame play, it would be impossible to benefit from it if its interactive multisensorial medium is cancelled, in McLuhan’s sense, out by traditional didactic and textual forms. Whatever the value of sketchbooks, their affordances are lost if students are told that “three sentences is your ticket to recess”.

9. Trusting the Researcher

Always, in the background and normally not spoken about, is the issue of trust in the research and in the researcher, for both teachers and students. Students had all been told about the study, of course, and asked to give their assent, in addition to their parent’s consent. Notwithstanding these standard processes, the extent to which students did so as “informed” and “consenting” participants is always in question when the context is the classroom, where the teacher holds both authority and power, and where both peer and parental pressure can exert a considerable influence on what students “freely” do. Because we used audiovisual documentation in place of in-person observations as our primary data source, students had little direct contact with the researchers beyond a visit by the research assistant to set up cameras or pick up sd (data) cards. It may well be because the subject of the study was videogames, rather than because of any trust in the worth of the study, that explained students’ willingness to comply with its various activities. Students made their awareness of the cameras in their classroom apparent in several ways: they looked up then actively moved out of the way, they directly addressed the camera/researcher, for example saying hello, or “acting up” for the camera, or reminding a swearing student of the presence of the camera. In those small ways we could see students deferring to the camera, and changing their behaviour in front of it, however we saw no evidence that the presence of the camera in any significant way skewed students’ usual patterns of daily classroom behaviour.

Teachers were also fully aware of the cameras since they were in charge of turning them on and off each day, and they were far more directly in contact with the research team, with weekly zoom meetings and online check-ins, as well as interviews at the start and on completion of the project, with intermittent emails concerning arrangements, tech needs, schedule changes and the like. However, no researcher was present during instructional time or daily, play sessions, nor was there any direct contact between school administrative staff and the research team. Nevertheless, as every teacher knows, it is a risky business inviting research into your classroom, and it takes a high degree of confidence, as well as some initial trust, because access to the “everyday classroom” means access to “the good, the bad and the ugly”— a potentially intimidating thing in itself. Remember that these teachers had not used videogames in their classrooms, were not familiar with the games we proposed to use, and were not themselves avid game players, so unlike studying subjects in which teachers had expertise, this study was looking at something they were decidedly not experienced or expert at. As with so many classroom studies, however, this one was introduced in the context of a personal acquaintance (between the graduate research assistant (GRA) and one of the two teachers in this study. As well, the GRA was herself a fully qualified teacher. So whereas it has been shown that institutional trust is the primary reason for agreeing to participate in a study—that is, the credibility of the institution is what gives prospective participants confidence that the research is worthwhile and will be conducted capably and ethically, (Guillemin, M. 2018) “interpersonal” trust likely played a role in building “researcher trust” in this study. Two other elements may have contributed to teachers’ trust in the researchers/research: first, it was made clear from the start that the purpose was to observe (using cameras and teachers’ own documentation an, videos and images), and to describe. There was no researcher intervention, and no ‘agenda’ about what teachers “ought” to be doing—we simply asked to observe and describe, analyze what we were seeing (always the tricky part!) and share that analysis with the teachers participating. We shared meeting notes (recorded) and researcher notes (intermittent preliminary analyses, discussed ideas about extension activities, questions to pursue, and so on) on email. As well, and this is both extremely important in principle, and also probably inconsequential in practice, our explicit aim was transparency. That meant making ALL data and ALL analyses available to the teachers, excepting only the occasional (unrecorded) conversation between the lead researcher and the Graduate RA. Recognizing how classroom research can impose requirements at odds with teachers’ instructional wants and needs (Quinsaas,

1997), and can too often result in critical and even undermining representations of teachers, their classrooms and their pedagogical activities, this study aimed to find a way to make critical observations and reflections possible, at the same time making a commitment that we would not include anything in our documentation and analysis that we were not willing to share with the participating teachers. Nevertheless, whether or not this move impacted teachers' trust of the research/researchers, it certainly helped to "keep US honest" to recognize that whatever we did would be available to teachers, even if they might not avail themselves of it. The greatest responsibility for researchers is to make good use of the time and space and generosity—and bravery!—of research participants, given all the kinds of risks that courageous generosity can incur, is to make good use of the study data, at the same time respecting the feelings of the teachers whose classes we observed, and who are doubtless as aware of "the bad and the ugly" as they are of the 'good'.

Transparency is a grand aspiration conveying mutuality of regard and respect for participants by the researcher/s. However, it's also common knowledge that participants, even when given hard copy of printed transcripts, and not just links to online data, typically do not much change, correct or modify the transcripts, and indeed may not actually read them closely, or at all. This study's aspirations to transparency worked mostly as a kind of ethical self-discipline, to keep us in check, conscious of how participants might feel or react to the ways we were—unavoidably selectively—taking up and interpreting the data captured. If we had hoped teacher participants might themselves view particularly unsettling events and provide insights or an alternative interpretation or some explanation that made sense of what we were perceiving—like the several times the educational assistant had up to a third of the class hovering around his desk playing a card game he routinely carried on with 4 students who did not consent to participating during gameplay sessions—we soon realized this was not going to happen. So, the onus has remained very much on us to navigate the tricky ground between an honest, fulsome and critical accounting of the observational data these teachers so generously provided, and taking care to respect their rights and dignity and self-esteem. And in the end, this obligation has been the reason the present paper gradually shifted from a close examination and dispassionate analytical report of research findings, to a philosophical exploration that ranged beyond this one study to reflect on the whole set of studies of which this was a part. This approach, we very much hope, has afforded a way of honoring participants' trust, while at the same time making illuminating use of the insights their participation enabled, that helped us recognize and describe the challenges classroom teachers find, and make, to successfully implementing videogames as a legitimate and impactful educational technology.

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AI declaration: There was no use of AI in this paper, nor in the research study.

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