The Pros, Cons, and Temptations of Gadgets for Democratic Education in the "Caged" University*

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Setting the Problem

There is an uneasy relationship between students' gadgets—smartphones, tablets, laptops, etc.—and educators, even democratic educators involved in "free education." Some educators see students' gadgets as distractors from self-directed learning, if not a kind of addictive drug, whereas others consider students' gadgets as another source of the students' activism, including their educational activism. Should democratic educators impose a moratorium on the students' use of gadgets or at least limit it? Or is students' free use of gadgets the final commitment to free education by democratic educators? In this article, grounded on my own professional pedagogical experiences in a university democratic education, I want to reflect on and consider these issues.

How I Understand "Free Education"

For me, genuine education is always self-education, in which a person decides whether to study, what to study, how, with whom, when, for how long,

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where, for what purpose, what constitutes the quality of education, and so on. Learning or insight becomes education only when the person makes authorial value judgments about their own learning or insights. Through this decision making, the person becomes the author of their own education, an educatee (Matusov 2021b). Thus, making decisions about what learning is good for the person is robbing the person of their education.

The educatee's decisions about their education are not necessarily made alone. Self-education is not necessarily equal to "autodidact," self-directed learning when the student defines and organizes their own education solely, without the involvement of other people. An autodidact is indeed a form of self-education, but there are other forms. Elsewhere, I have abstracted at least five major forms of self-education, including the autodidact, varying by the engagement of the educatee with others (Matusov 2022). The second form is the "symdidact" of studying together with more-or-less equal peers. The third form of self-education is the "autodidact with advisement," when the student asks a trusted person for advice about their own self-education. These three forms of self-education are more or less self-directed. The following two are not. That is why I do not equate the concepts of "free education," "democratic education," or "self-education" with the concept of "self-directed education."

The fourth form is the "odigósdidact"—studying under the direction and guidance of a trusted teacher, although the student remains the final authority for their own education.

The fifth, and probably the most controversial, form of self-education is a student's "autopaternalism," when the student demands a trusted person (e.g., a teacher) to force and motivate them to study what the student wants to study. I argue that a student can combine or dynamically move from one to another form of their own self-education. In self-education, all relationships of trust are conditional: as soon as the educatee stops their trust, their relations with the adviser or teacher will legitimately stop. This is how self-education is different from foisted education (Matusov 2022).

The role of an educator in "free education" is defined by the educator's pedagogical fiduciary duty (Matusov 2022). It is based on the conviction that teaching is initiated at the request of the educatee for guiding help and based on a conditional relationship of pedagogical trust that the educator can be pedagogically helpful to the educatee. This relationship can be legitimately ended by one of the sides (i.e., "no-fault divorce"). The educator accepts that the educatee is the final authority of their own education (and life). Sometimes, but not always, the educatee might not know what is educationally good for them or how to achieve this good. In this case,

the educator's role is to help the educatee to figure it out for themselves. It is a violation of the educator's pedagogical fiduciary duty to decide and impose what is educationally good for the educatee, unless the educatee asks for this judgment and imposition (i.e., autopaternalism). The pedagogical art and pedagogical authorship are rooted in the fact that the educational goodness for the educatee is often unknown in advance for the educatee and the educator but mostly emerges in their interactions.

I strongly believe that it is the educatee who defines the nature and goal of their own education (with or without the help of others). At the same time, I am aware of my personal professional bias to define education as a critical examination of the educatee's life, world, society, and education itself through considering and testing alternatives (cf. Socrates's motto in *Apology*: "the unexamined life is not worth living" [Plato and Riddell 1973, 38a]). Not all my students want to define education this way all the time or even at all for themselves—and I respect and follow their wishes. Indeed, it might be pedagogically insensitive and a violation of pedagogical fiduciary duty to try to engage a person in critical conceptualization of the phenomenon when the person is interested in its instrumental aspect. This reminds me of a famous joke about a five-year-old child asking her parents about why bus doors become open and then closed. The father starts a long lecture about the principles of how hydraulic pumps work. Meanwhile, the mother, noticing her daughter's fading look, explains: "Sweetie, do you see the bus driver push on the green button?" The girl nodded. "Look, the door gets opened. When the bus driver pushes on the red button, the door will be closed. Did you get it?" The daughter's face shines with a smile.

My Current Pedagogical Practice

I try to run all my classes—undergraduate for future teachers and doctoral for future educational researchers—democratically in various degrees by engaging my students in decision making about their own education through dialogue, as much as possible. One of these opportunities for decision making is to let the class choose what to study: at the end of each class meeting, the students decide what topic to study next from a list of curricular topics (the Curricular Map) that we created together. A student would propose a topic from the Curricular Map and then try to convince their peers to choose it (among other topics proposed by other students). Then the students usually vote on all proposed topics to select the topic for the next class meeting (Matusov 2021c).

A second opportunity for decision making concerns the "pedagogical regime" the students would prefer for themselves. The students have a choice of four pedagogical regimes that I provide to them, and they change according to their wants and needs:

1. Open Syllabus for self-responsible learners, where students can make all decisions about their own education, including their final grade.
2. Opening Syllabus for "other-responsible learners," where I have made the initial decisions about the organization of the class and then gradually transfer responsibility to the students, that is, the default pedagogical regime from which the students can switch to the other three regimes.
3. Nontraditional Closed Syllabus for credential students who just want to be certified via passing exams, similar to receiving a driver's license.
4. Nonsyllabus for "prisoners of education"—that is, students who are forced to take my class by the university but who feel that the class is unnecessary and even painful for them. They would be given a grade of their wish and told "goodbye" to avoid education being a "cruel and unusual punishment" for them.

Third, I try to turn any emerging problem or organizational question in the class into an opportunity for collective deliberation and democratic decision making (e.g., Should we have a break in our three-hour class meetings?). Finally, another area of decision making is how to make collective decisions—by majority vote, by consensus, by flipping a coin, by making individual decisions, by delegating decision making to me, by splitting into groups having common curricular interests, and so on.

So far, I have noticed the caged nature of my educational practice in the following four aspects. First, most of my students and I have been colonized by foisted education that seems to be "natural" for us. It is often difficult to notice its artifacts and think of alternatives.

Second, my classes are embedded in the institutional structure of foisted education. I have to use grades (even if I sabotage them), class periods, semesters, institutional enrollment, and so on. By the very fact that my students are at a university, they are expected to study something, whether they want it or not. Even if some of my students choose to enroll in my classes rather than be required to take them, their freedom of choice might be limited because they still might be required to take electives or a certain number

of classes for their full-time student institutional status to get financial aid or a diploma. In this case, their "choice" may reflect their slight interest in my class, or its easiness to get a good grade, or a lesser evil. For example, in the fall of 2018, a student of mine wrote on the RateMyProfessors.com website about the class, giving it a 4 out 5 rating: "Take for a multicultural requirement or breadth! In the 2nd class we went over the course, and you have options as to your syllabus, CHOOSE AN OPEN SYLLABUS. I literally wrote a paragraph or two on what I planned on doing in this class and stuck to it for the semester, and was able to grade myself with an A! No hw [homework], no exams, no attendance, still an A" (https://www.ratemyprofessors.com/ShowRatings.jsp?tid=586).[1]

Third, my students have pressures to survive and succeed in their other classes based on foisted education. They may move their time, energy, and efforts there to survive my class at the expense of their own genuine educational interests. For example, a student of mine shared with me,

> In short, I am having a terrible semester. I have bit off more than I can chew in having a part time job and taking 2 honors classes as well as extracurricular activities. When I miss class it is because I am either working extra hours at work or I am cramming for my next exam. I realize I have not been the ideal participant in our class but I can assure you I do really enjoy our Educ395 class and the topics we discuss. Urban education is a passion of mine and I looked forward to this class until I became so stressed this semester. It [is] probably obvious to you, as well as to myself, that because of our open syllabus and "no grades" policy, that I have used this class as a cushion for my heavy workload. I apologize because I know I have taken advantage of what was supposed to [be] beneficial to my learning and our class. I don't know how to make up for the class time that I have missed except to tell you that I really have enjoyed what I have been there for and that I have tried to use webtalk to understand the days I missed.[2] I hope you see that

1. It is interesting that this student did not choose the Prisoner of Education pedagogical regime, available to them, even though they were obviously not interested in studying multicultural education, but rather apparently preferred to "cheat" on the Open Syllabus.
2. WebTalk is an online forum in my classes.

when I am in class I enjoy participating and have a lot to offer. (Email, November 2012)

Fourth, I am a benevolent dictator granting my students freedom of self-education. Genuine freedom cannot be granted but only affirmed. If I have the power to give freedom, I can withdraw it at my will. I am forced into the role of a benevolent dictator by my conventional institution. That is why I called my commitment to self-education "caged." To be not caged, I should not have this power created by the institution of foisted education (see Matusov 2023b for more description and critical analysis of my democratic dialogic pedagogy).

What Is a "Gadget"?

For the purpose of my article, I define "gadget" as a "device" that affords, provides choices, consumes, and even spontaneously initiates numerous (unlimited?) closed- and open-ended activities for its user. By this definition, a traditional watch or a calculator is not a gadget, but a notebook with a pen is—one can draw, write, read, and doodle in unimaginable ways. A friend of mine claimed that the availability of a notebook and a pen made him doodle without making a deliberate decision—he did not feel his control over his notebook. Modern electronic gadgets such as computers, tablets, smartphones, and virtual reality (VR) glasses provide infinite diverse activities for their users in diverse fields of human life: science, art, games, social media, politics, library, databases, banking, support groups, shopping, medicine, love, sex, friendship, bullying, war, spying, business, work, education, VR, telecommunication, military, hacking, policing, and so on. Modern gadgets double, amplify, and transform reality and shape our attention. Gadgets greatly promote, amplify, tacitly shape, and, perhaps paradoxically, severely curb or even hijack human authorial agency.

An anonymous reviewer of this article asked me: "Could the curricular map and the pedagogical regimes be considered gadgets? They're certainly types of technology." I think so, although I had not thought this before. As one of my students wrote in the past, the Curricular Map invites the students' question: "What do I want to study?" It promotes the students' educational activism as they choose and add new curricular topics. Also, many students write in their anonymous evaluation that they felt sorry that we could not study topics of their interests because we had so many of them. Thus, the Curricular Map helps create a certain educational nostalgia. It

helps the students transform their educational authorial agency. I want to thank the reviewer for this keen observation.

Gadgets: The Pros

Modern gadgets are one of the biggest enemies of traditional foisted education for the following two major reasons. The gadgets destroy or at least severely undermine (1) the teacher's unilateral control over their students and (2) the teacher's epistemological authority—that is, as the main and only source of knowledge in the classroom. Gadgets put a user in control or in the center of the activity. A user can start or stop their gadget. A user can decide for what purpose to use or not to use the gadget. A user can be in the position of consumer or creator/author, or both. A user decides when, where, and with whom to use a gadget. A user can be creative, imaginative, critical, traditional, and grounded with the gadget at their will. The modern gadget models the condition of self-education. A gadget can promote but does not guarantee self-education.

Once, I asked my undergraduate students, future teachers, about what their biggest professional anxiety was. I expected to hear about unruly children, disengaged students, or overinvolved parents. To my surprise, my students' biggest anxiety was not knowing something that their pupils might ask, or even worse: when their pupils might know more than they knew. The rapidly changing gadget technology guarantees that children or students in general will always be more knowledgeable and more comfortable with the gadgets than their older teachers. Also, modern gadgets open the possibility for democratizing access to knowledge, making traditional teachers obsolete as the only holders and guards of knowledge. Modern gadgets make the school monopoly on knowledge collapse. The gadgets' disruptive power for traditional pedagogy has always attracted me.

I started using gadgets in my teaching, beyond word processing, in 1996 at the University of California at Santa Cruz (UCSC). I designed the gadget in the form of the Microsoft FrontPage-based class web environment for my university undergraduate students majoring in psychology, education, and other social sciences. Primarily, this class web environment allowed the students to dialogue with each other and me outside of the class, share resources, and search for information of our interest on the internet. Through these functions, the gadget made it possible for my students to develop more ownership of their own education by choosing their own topics for web discussions and goals of our investigations, which might transcend the main

subject of our course. It diversified the mode of our dialogue, which was not only face-to-face in the classroom but also asynchronous at home at any time without competing for taking the public floor.

Finally, the gadget dramatically democratized the epistemological authority of our class, because the source of the knowledge and verification of truth was coming not only from me but also from the students themselves. At the time, my students found and shared information on the internet that contradicted what I was teaching or created a new dimension or approach unfamiliar to me. For example, I did not know that such a political entity as India did not exist before British colonization, and it fully emerged after the British left. A student found it on the internet and shared it with the class, which was relevant to our discussion at hand. It positioned me in the role of learner and not only teacher, which was attractive to me. Disagreeable and even low-quality, unreliable information often deepened our class discussions and promoted testing our ideas grounded on the internet-sought information.

The introduction of the web-based gadget in my classes met initial resistance from some of my students, but it quickly sucked in many others. Back then, my web-based gadget was nearly the only social media available to them. As one of my UCSC students wrote on our class WebTalk, "Folks, admit that you like to bitch on the WebTalk about how much you dislike WebTalk." The overall anonymous feedback by the students at the end of the class term on the class web gadget was positive. The students appreciated the freedom, dialogicity, and learning activism that the "gadget" promoted in them.[3]

However, until the early 2010s, computers were mostly desktops kept at home, laptop batteries did not last long, the universities did not have Wi-Fi, the internet search engines were not very good, and smartphones had just emerged—their internet use was slow and expensive. In other words, it was difficult to use gadgets in the classroom. Before the 2010s, my class web gadget heavily affected the class discussions and learning activities, but it was not a part of the class meeting itself. Things were about to change.

As soon as it became technologically possible, I immediately embraced the use of gadgets—the students' laptops, smartphones, and tablets in my classrooms. Although many of my colleagues and other professors forbade

3. I use the term "gadget" for the class web I designed in the quotation marks here because I was not sure that it was perceived as a real gadget for all of my students back then in the way I defined it as a self-directed device. My sense was that it might be a gadget for some of my students, a nongadget for others, and a hybrid for yet others. I noticed that some students tried to use it even after the class was over, but not for too long.

their students from using the gadgets in the classrooms in the early 2010s, I actively encouraged my students to use them for their own purposes.

Besides the attractive reasons listed above, I had a philosophical reason. I felt that our classroom meetings were too much activity-based, too much collectivistic, too much monofocus, too much teacher control. We had whole-class discussions, group discussions, and class, group, and solo activities mostly designed by me. All that was fine if other ways of being were available for my students in the classroom, but they were not. Back then, I observed a terrific educator, Steve Villanueva, at an after-school program at a local Latin American community center (Matusov 2009, 313–46). His learning environment was not activity-based but rather, I'd say, ecology-based. For example, Steve introduced Lego-Logo robotic activities (https://en.wikipedia.org/wiki/Lego_Mindstorms) in which children build robots out of Lego blocks containing programmable microchips. Imagine a long rectangular room with a long table in the center on which many Lego-Logo pieces were placed. On the perimeter of the room were tables with computers. Some kids were assembling robots out of the Lego-Logo pieces on the central table, some programmed the robots' complex behavior on the computers, some played video games, some chatted with kids from another state, some very little children were sitting under the central table playing with Legos, a group of teenage girls was gossiping about their romantic affairs and conflicts with their parents. There were many parallel conversations on diverse topics, including about building and programming robots, in which many kids were in and out. Jokes, conflicts, camaraderie, collaborations, fights, serious endeavors, and play constituted the life of the room. Mr. Steve (this is what kids called him) attended many conversations and ignored others, constantly joking with the kids. Children could leave the room at any time and come back—and they did, which Mr. Steve supported and encouraged.[4] That kind of learning ecology was and still is my dream for my classes.[5] I hoped that gadgets would move our classroom from activity to ecology. And to some degree, they did.

The student-controlled gadgets—laptops, smartphones, and tablets—allow the students to initiate their own activities in the classroom, which may or may not be related to our class. For example, the gadgets allow the students to test their own, their peers', and my claims and ideas by googling

4. I described and analyzed Steve Villanueva's educational ecology in detail (Matusov 2009, 313–46).

5. But can this ecology be inserted in a cage of a classroom? Should it be conceptualized as a "club" and not a "class," instead? See Shugurova et al. (2022).

them. They find relevant statistics, scholarly articles, videos, and opinions and bring them almost immediately into the class discussion. At times, the information they find on the internet through their gadgets sparks discussions about the validity and quality of internet information and how to access it. Also, when engaged in learning activities, students can explore the issues of their interests on the internet. In some (rare) cases, the students texted their parents and peers to get their opinions on issues we discussed in class.

At the same time, as I observed, the students can also participate in activities and communications irrelevant to our class, such as texting with their friends outside the class, shopping, browsing the internet, participating on social media, playing games, doing their homework for other classes, and so on. I do not try to suppress or discourage these activities and communications, which promote diverse forms of the students' being, participation, and dynamics in our class (an ecology-based approach). Some students at some points centrally participate in the class, some students at some points participate peripherally, and some students at some points do not participate in the class. These modes of legitimate (non)participation can fluidly change and be a matter of their choice. Because their class attendance is voluntary, the students manifest that they value it by coming to class. In contrast to the activity-based approach, the ecological approach to education seems to promote conditions for students' self-education, and create a leisurely environment and overall ownership of their being.[6] Gadgets help the student raise questions defining self-education: Do I want to engage in education now? If so, what do I want to study, how, with whom, and so on?

Gadgets: The Cons

I believe that any pros are pregnant with some cons, and any cons are pregnant with some pros. Gadgets often create centrifugal forces away from the collective focus, away from the classroom culture, away from the classroom dialogue, away from the topic at hand, and away from education. As I argued above, in themselves, these centrifugal forces are not necessarily bad. They create a protected personal space of activity, authorship, and interests. However, when centrifugal forces are too strong, they can destroy any

6. The Greek word "school" means "leisure." Ancient Greeks considered education as a form of leisure for "free people"—people whose life is self-directed and not heavily predetermined by necessities or by authorities. This would exclude slaves, peasants, artisans, women, and children (Arendt 1958).

dialogue, community, public space, and culture. The lack of critical dialogue, which is always, at least, semipublic, can lock the student in their own uncritical opinionship colonized by the mainstream culture, limited experiences, corrupted biases, and untested myths. For example, many (but not all!) of my students who chose the autodidact form of learning often produce these uncritical opinions in their "educational diaries." Thus, recently, a student of mine enthusiastically articulated her opinion in her educational diary about how students from low-income families lack language. She provided support for her opinion using questionable research and opinions on the internet but did not search to investigate alternative evidence, ideas, and approaches and did not consider the quality of her evidence. Although these uncritical opinions are an important start for self-education, they often remain a dead end without being challenged in critical dialogue, in my observation. Of course, gadgets are not the only contributors to the centrifugal forces.[7] And gadgets can also generate centripetal forces of the collective focus and dialogue, as I described above. Nevertheless, gadgets are powerful sources of such dissipation.

Gadgets are a super new form of human existence. We have not yet developed a culture or etiquette addressing the problem. For example, when a person talks to you as you are reading Facebook feeds, it can send the person a message of disrespect or, at least, discouragement, even if you can attend to the person. Should we learn to suppress our immediate negative feelings? Or should we learn to negotiate, something like: "Excuse me, I'd like to talk to you, but I see you reading your smartphone. When are you available?" Recently, a student of mine provided her feedback on the class in the middle of the semester: "I never really find small group discussions beneficial because my group really doesn't talk much because they are more focused on other things [i.e., engaged in their gadgets]." A whole-class discussion of this issue in class did not help to address this issue. Eventually, this student moved away from her group to the students who did not use their gadgets during the group discussions. I have noticed that some of her peers seemed to follow her move. Meanwhile, other students seemed to be OK with their use of gadgets during or instead of the group discussion. In my future classes, I plan to share this solution of actively seeking peers who do not engage with their gadgets during group discussions and activities.

7. In the past, the biggest distractors in the classroom were students' chats with each other, passing notes, doodling, doing homework for other classes, reading or writing smuggled texts. As distractors, gadgets make the classroom a bit quieter and emotionally flatter, in my observation.

This accumulation and sharing of the solutions may help my students and me develop a good gadget culture in my future classes.

Finally, many modern gadgets are intentionally designed to grab, manipulate, and capture our attention for commercial and political propaganda reasons. At their worst, modern gadgets spread disinformation, exhaust our critical thinking, twist our desires, and pollute our hearts with hate. They exploit the machinery of our mind (Kahneman 2013), so we lose control over them and, thus, our life (Pariser 2011). In this sense, by exploiting and manipulating our "machine mind" at the expense of our deliberate attention and will, gadgets are antiecological and antieducational. I observed of myself that when a movie develops slowly, I have sometimes started using my smartphone, making it almost impossible for me to get back to the movie, regardless of how interesting it might be (I checked the latter by rewatching the movie). Similarly, if my students choose to start using their gadgets during "a slow development" of our class (or group) discussion, it is difficult for them to get back even if, otherwise, they might want to do so. I feel that the students' awareness of this problem is important, but I doubt that it is fully sufficient to address it. Besides making a deliberate decision of using or not using a gadget, a student has to wake up from the captive charms of their gadgets from time to time so they can prioritize in what activity they want to get involved at this given moment and why. This reminds me of the third book of *Gulliver's Travels* by Jonathan Swift, in which Gulliver finds himself in the land of Laputa. The people there have terribly short attention spans because they are deeply consumed by their own thoughts (cf. gadgets), so they are followed around by "flappers," special servants who carry a kind of rattle at the end of a long stick that they use to touch the mouth of a Laputian who is supposed to be speaking, the ear of a Laputian who is supposed to be listening, and the eye of a Laputian who is supposed to be looking at something. I wonder if gadget technology will evolve to provide flappers to us via artificial intelligence.

Gadgets: The Temptations

My pedagogical background is heavily rooted in progressive education, which I reject now (see my definition, analysis, and critique of progressive education in Matusov 2021a). Progressive education focuses an educator on creating an "educational vortex" that predictably sucks (fascinates) all their students into the subject, topic, and curriculum the educator currently teaches. It wants to exploit students' authorial agency for the achievement of the educator's educational goals. A father of progressive education, Jean-Jacques

Rousseau, advised a progressive educator in his pedagogical novel *Emile*: "Let him [the student] always think he is master while you are really master" (Rousseau 1979, 120). In my critique of progressive education, I called it "the opium of educators," because progressive education promises educators, burdened with foisted education, the pedagogical "Holy Grail" of a magic pedagogy that allows them to engage deeply every student in every curricular topic every time.[8] Or in the words of another progressive educator and psychologist, Jerome Bruner: "Any subject could be taught to any child at any age in some form that was honest" (Bruner 1986, 129). Progressive education makes foisted education, involving imposed curricula and imprisoned, unwilling students, bearable for educators.

Thus, gadgets, competing for the students' attention, create an exciting pedagogical challenge to test the progressive educator's pedagogical skills in creating a powerful educational vortex of their instruction. Progressive educators often love pedagogical challenges like that. They love to focus their pedagogical efforts of fascination on the most disengaged students. When I was still committed to progressive education, I listed this distractive nature of gadgets as one of their powerful pros, allowing me to compete for the students' attention. I used a lot of pedagogical and psychological gimmicks to engage my students in the curriculum I wanted to teach, including my own personal charisma, theatrical effects, playfulness, dialogic provocations, and enthusiasm for the taught topic. In this process, I welcomed competition from the students' gadgets. When I succeeded, and all students switched their attention from their gadgets to me and my subject, it gave me the professional satisfaction of seeing concrete evidence that my teaching was good. When I failed, it prompted me to find better pedagogical solutions and, thus, to become a better progressive teacher. For me, students' distractive gadgets created the authentic final test of the quality of my progressive teaching.

Only later I realized that my devotion to progressive education was uncritical and misguided. I came to the conclusion that an educator should not desire to become the most powerful gadget in the classroom—the Educational Gadget—among other possible attention-sucking gadgets, because it robs the student of their own authorial agency. I see the biggest problem with progressive education is not so much whether an educational vortex is always possible with a given student in a given moment but whether

8. The German philosopher Karl Marx famously compared religion with opium: "Religion is the sigh of the oppressed creature, the sentiment of a heartless world, and the soul of soulless conditions. It is the opium of the people" (Marx 1977, 131).

it is educationally desirable (Matusov 2021a). Genuine education involves a person's authorial judgment of how beneficial their learning is for themselves and their deliberate selection of what and when to study, with whom, and how. In short, genuine education is always self-education with or without the help of other people.

Another (related?) temptation associated with gadgets in the classroom is to blame gadgets for other problems emerging in the classroom, for which gadgets are symptoms and not causes. For example, I realized that in one of my recent classes, all my students were peripheral participants in their own education on the subject matter of the class. In the other classes, I often had enough central participants in their education who actively want to study something of their interest related to the class. Peripheral participants, peripheral students, are legitimate and normal learners who position themselves in an observational listener role in the classroom. Often, the nature of their educational periphery is flexibly, contextually, and dynamically oscillating between observation, listening, episodical talking and acting, and nonparticipation (or, often, participating in activities unrelated to the class study). I think this oscillation is common for all participants; what makes them different is the degree and intensity of its diverse forms. It is great to have peripheral learners in the classroom when there are many central learners. However, having only peripheral participants uncomfortably forces me to become a "one-actor show," where I am the only central and active learner. The students of this particular class only episodically attended to my performance by listening to it, observing, or participating in discussions or activities I offered.

I initially blamed gadgets for my students' lack of attention before realizing what was the matter. Besides brief moments of our intense discussions or activities, my students were consumed by their laptops and smartphones. They were waiting for the moment in my solo performance when something captured their attention to pull themselves out of their gadgets. They came to the class voluntarily. They told me they liked our class because they were interested in those intense dialogue and engagement moments. But it drove me crazy because it pulled me back to my progressive roots of fighting for my students' attention. At the same time, I felt that if this was what they wanted and needed, I must do it as a professional educator. I was here for them, but they were not here for me. The educator is for their students, not the students are for their educator. Still, I'm looking for ways to disrupt this situation meaningfully by making those students more active, more central participants of their own education. But is this in itself a progressive desire?

I wonder whether the problem of having only peripheral students in a class is in itself a by-product of a traditional educational institution based on foisted education overall. Outside the traditional educational institution based on foisted education, peripheral participation is secondary to central participation, which is primary in time. People come to look and hear something interesting that is already occurring. In contrast, in the traditional educational institution, central participation is institutionalized and can exist nominally, without any genuine central participation at all, forcing me to become a one-actor show. Also, although my students in this class chose to enroll in my class, they were pressured by the university to take some number of classes—so, the choice of my class was a "lesser evil." I am not sure they would have chosen it if they were absolutely free in their education.

In Conclusion

When I enrolled in a school in the late 1960s in the Soviet Union, the big pedagogical debate was about allowing students to use ballpoint pens. Some educators and the general public worried that ball pens would destroy people's handwriting. When I became a schoolteacher in the early 1980s in the USSR, the debates were about the use of calculators. There were fears that calculators would destroy mathematical thinking. When my son was in school in the early 1990s in the United States, the debates were about allowing students to use computer word processors to write their papers. The critics of computer writing were concerned about not only students' collapse of handwriting but also spelling and grammar knowledge. Looking back, it is clear that the emerging technology decisively defeated worried educators. However, the traditional school has survived so far by domesticating this new technology for its overall design of foisted education. Will it be the fate of modern gadgets to become a domesticated tool of conventional foisted education? Or will modern gadgets, based on self-directed use, make foisted education obsolete? Alternatively, paraphrasing Rousseau, will modern gadgets become the final progressive teacher by powerfully manipulating students' subjectivity ("let the user always think he is master while the gadget is really master")?

The editor of this journal and an anonymous reviewer of a previous version of the article asked me, "Define more clearly what a gadget is, especially the ways in which your sense of gadget fosters new and democratic relationships between teacher and student. Are gadgets in themselves good or bad, or is it the use of gadgets that you are concerned about?" Of course, I reject technological essentialism: tools in general and gadgets in specific do not

have inherent goodness or badness. In the hand of a surgeon, a knife is a tool of medicine, but in the hand of a criminal, a knife is a tool of crime. As I argued above, I value gadgets that can enrich the authorial agency of the educatee. However, it is up to the educatee to judge the value of the gadget they use or consider using, because this judgment constitutes education itself. Finally, I want to comment about "democratic relationship between teacher and student." As I pointed out above, I do not see the relationship between teacher and student as democratic but rather as fiduciary (Matusov 2022). In my view, the teacher is a servant of the student's self-education, not their equal. Democratic relationships are very important among peers, for educatees who are involved in joint self-education.[9]

I think that modern gadgets are a new norm in our life that supports, disrupts, hijacks, and demands education. In my view, the excesses of modern gadgets—their manipulation and exploitation of the machinery of our mind—call our attention to the importance of education for critical authorship, so well articulated by Socrates in his motto, "The unexamined life is not worth living." Will critical education alone be enough to solve the problems of modern gadgets? I doubt it. However, sharing the problems with the students and engaging them in finding good solutions for them can be helpful.

My Students' Comments on the Article

Peining Wang (Chinese student):

> Dear professor
>
> Hi Eugene, I'm sorry for giving you feedback about your [essay] that late. But I'm really busy doing final projects. In this passage, I think you explain the definition of "gadget" clearly and concisely. I agree with your opinion about the gadgets' pro that breaks the authority of the teacher to achieve free education. While what we should not ignore is the pressure from parents or outside.
>
> During my high school years, my parents carefully controlled my e-device time. They firmly believe in the authority of the teacher and make me believe it too. And also the resource online is not carefully selected so it may mislead young age students. Which makes teachers have absolute authority in high school students' minds.

9. The relationship between self-education and democracy is complex and not straightforward (see Matusov 2023a for a nuanced discussion of this relationship).

And I also agree with your idea that "gadgets" will take away students' collective focus, it's unavoidable. And I think free education is so hard to achieve, maybe partly because of the distraction of e-devices.😂

Madison Billips (American student):

To begin, I really enjoy and appreciate your pedagogical practice; it has redirected my view of education to a time where I truly loved it because I am able to spend time truly learning and engaging with the content instead of stressing and memorizing to do well, so I have always favored your class as I view it as more of a true learning experience rather than a grade. As for the gadgets, you raised many interesting points; I feel that gadgets can be a great tool especially within this class as it requires the input of numerous perspectives in order to truly understand the concept at hand.

As for younger children, I feel that gadgets are also very valuable for them as our current world is so technologically advanced and will only continue to grow in that direction so it is important for them to engage with these technologies early on to give them a wide range of opportunities.

I do however see the cons as well especially within our class and I can admit to some of my wrongdoings as well. I remember during the first few classes, I would look around and everyone would be online shopping and it did truly upset me because I was so eager about the content. With that being said, I have found myself falling into a pit of constantly looking at my phone and I attribute that to the lack of engaging conversations; I feel like I talk way too much and only recently have been hearing the opinions of others in the class.

Lastly, I found it very interesting when you said you were straying away from progressive education as I would consider you one. In my history of education class, I learned that the qualities of progressive education were heavily surrounding the student: choice, student-teacher relationships, enjoyment, etc. and these are all factors that I see in your classroom. All in all, I found the chapter very interesting.

Shuangqing Deng (Chinese student):

Dear Eugene,

I hope you are doing well!

First, I am so sorry for the late reply because of the "busy" final projects. I apologize for my bad behavior.

The following words are my personal thoughts about the chapter.

Thank you very much. I have learned that writing an academic essay requires logical structure and rigorous writing. And the informative information and explanation helped me have further understanding, such as self-education. Before reading this chapter, I always thought that it equals individual studying with the teacher's task. Now, I believe my understanding was wrong.

Besides, as for allowing students to propose a topic from the Curricular Map and trying to convince their peers to choose it, I felt that it was very interesting, and we could select or add other topics we think were necessary to discuss with convincing explanations.

In addition, the "gadgets" actually are beneficial for us in the classroom, and I was also profoundly experienced in class. These "gadgets," sometimes, bring the cons in our real life. For example, when I stay at home, my father usually looks at his smartphones or laptops and just has me study, staying in the study room with books. Still, he just watches short videos like Tik Tok in the living room. Gradually, I also become reliant on technology because it can make me find more fun by communicating with others or purely killing time. Sometimes, I think gadgets distance the relationship between family members.

Thank you very much. And I apologize for this late reply again.

Warm wishes,

Shuangqing Deng

Coda

Democracy is characterized by the public presence of diverse voices (Matusov 2023a). Democratic education affirms the centrality of the students' voices. That is why I thought it was crucial to bring voices of my students into the issue. Let me share the lessons that I have learned from my students' comments.

Peining concurred with my observations that gadgets often take away the students' collective focus and make class discussions difficult. She elaborated that conventional education and parenting tries to solve this problem via unilateral and total control over the student/child.

Madison agreed with me that gadgets may have very complex and even contradictory functions that require diverse perspectives for their analysis. She values gadgets as important tools for our lives and education, including for younger students. Like Peining, Madison also agrees with my observations about the centrifugal function of gadgets in our classroom. However, she also indicated that at the end of the 15-week semester she seemed to start

recovering from the gadget spell. This promotes an interesting hypothesis that a prolonged self-education, however limited or "caged," might address some of the distractive, centrifugal problems caused by gadgets. It is worth examining this hypothesis by studying prolonged democratic college education beyond one semester. Finally, Madison's comment about progressive education—her thinking that I was a progressive educator—prompted me to discuss the differences between progressive and democratic education in my classes after writing this article when such an opportunity emerges.

As to Shuangqing's comment, it was a real gift for me. After reading it, I went on a "fishing expedition" to explore the literature on self-directed education to see if I could find a version of Shuangqing's original understanding of self-education as a student studying rigorously whatever learning task the teacher assigns to the student. I was able to find it in Deci's and Ryan's notion of "self-determined education." The self-determination theory common in psychology focuses on how extrinsic control becomes intrinsic: "Extrinsically motivated behaviors become self-determined through the developmental processes of *internalization* and *integration*" (Deci and Ryan 1994, 5, italics in original). In a way, Deci and Ryan, cofounders of the self-determination theory in psychology, describe how culture and society colonize the person with their values, goals, obligations, and motivations. In their article, they described "self-determined education" as the one in which students "find interest and value" in doing their homework assigned by the teacher. Also, "self-determination" is defined as a person's activism and enthusiasm in doing what the authorities want the person to do. In contrast, my notion of self-education is based on a person's authorship, transcendence of the given: culture, norms, society, and so on (Matusov 2011, 2020).

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