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Instructional Strategies to
Support Digital Agent

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RESEARCH-BACKED INSTRUCTIONAL STRATEGIES TO SUPPORT BECOMING A DIGITAL AGENT

One of the three critical areas of becoming a digital citizen is the capacity of students to become digital agents. The following provides instructional strategies that teachers and administrators can use to build the capacity of students to proactively become agents in their own digital learning experiences, to serve as advocates of digital rights and to develop students' civic and social responsibility.

NOTE: See Pathway 1 for background information and research, and more details on the Digital Agent.

Discussion: Research supports that students learn most effectively when they are able to practice behavior and actions within the structured environment of the classroom. Each time children and youth connect digitally, they are accessing a global cyber commons—a digital space that was designed to be an unfettered forum for sharing perspectives and ideas, a space explicitly designed to be governed by consensus and user-determined norms. As citizens of this digital commons, students have the right, and indeed, the opportunity to exercise digital, civic, and social responsibility. This means they act in the capacity of a good citizen by putting the public good first. The concept of students as digital agents has its genesis in the idea of that students can realize their digital rights and opportunities in the form of social and civic responsibility, while acting with integrity, empathy, sensitivity, and safety.

Thoughtful action when becoming a digital agent is crucial to meeting the ISTE Standard, Digital Citizen, most notably indicators 2.a, 2.b, and 2.c:

- a. **Students cultivate and manage their digital identity and reputation** and are aware of the permanence of their actions in the digital world.
- b. **Students engage in positive, safe, legal and ethical behavior** when using technology, including social interactions online or when using networked devices.
- c. Students understand an understanding of and **respect for the rights and obligations** of using and sharing intellectual property.



Digital agents also encompass the overarching vision of the Digital Citizen standard, including students being empowered to proactively embrace, manage, and define their civic, personal, and social engagement online. Using the instructional strategies below will support your students in meeting this indicator and becoming savvy digital citizens.



Defining digital agent: Students who are digital agents are proactive, informed engagers with technology as they digitally explore, discuss, and advance social and civic actions that adhere to legal requirements, extend social norms, and contribute to the public good.

Furthering the definition: Digital agents consider themselves to be stewards of responsible use in online spaces. They are curious about and interested in civic and social issues at the local, state, national, and global levels, and use digital means to learn about and stay current with these issues. They take informed positions on controversial issues including issues caused by disruptive technologies (i.e., internet of Things, driverless cars, robotics taking over jobs, artificial intelligence, etc.). They use their social capital online to bring various perspectives into open discussions and to argue for social good. They know how and why their online behavior needs to be legal and ethical, and how to ensure the accuracy of what they share online in today's era of fake news.

Student Profile: Profile of a student who is a digital agent:

- Proactive advocate of the rights and responsibilities of all members of digital communities.
- Recognizes the internet as a digital “commons” and acts as a civic-minded, empathetic steward within it.
- Contributes to positive social change within the digital commons (i.e., an agent of change).
- Develops social capital in online communities as a person who speaks from informed positions and uses social capital to contribute to the public good.
- Respects and advocates for legal rights and protections in digital spaces.

Instructional strategies: To develop a student's propensity and capacity to be a digital agent, teachers can use the following research-based strategies:

1. Use authentic and/or service learning projects that utilize digital resources to build self-efficacy of students around civic and social responsibility, as well as stewardship in online spaces.



2. Develop self-direction in students to promote independence in their civic and social engagements.
- 3: Use interactive modeling to showcase digital citizenship skills and behaviors, including how to find legal or school-based requirements and expectations.
- 4: Build students' empathy with others to ensure their stewardship in online environments is conducted with kindness and sensitivity.

TECHNOLOGIES TO EMPOWER THE DEVELOPMENT OF DIGITAL AGENTS

Technologies can be used in a variety of ways to enhance and accelerate opportunities for students to develop the knowledge, skills, and dispositions that will enable them to participate in digital spaces as purposeful agents. Examples of these technologies include:

- Information sources, including news aggregators and syndicated news feeds as well as search engines leading to websites.
- Collaborative productivity tools such as word processors, spreadsheets, presentation tools, drop boxes, and others enable students to share ideas, comments, phraseology, perspectives, edits, and critiques with each other.
- Blogging tools enable students to share their own perspectives and have classmates and others respectfully and publicly comment and respond

Getting specific about the strategies to develop digital agents.

Each of the strategies is more fully discussed below, with examples of the strategy provided.



Strategy 1. Use authentic and/or service learning projects that utilize digital resources to build self-efficacy of students around civic and social responsibility, as well as stewardship in online spaces.

Discussion: Self-efficacy is defined as the students' belief that they can produce desired effects through their actions. It is the foundation of the students' motivation, agency, sense of well-being, and accomplishments.[i] Without self-efficacy students will have little incentive to be civically or socially responsible because they will not believe that their actions online matter or that they have an influence. It is a key element in student agency and in the student being a digital agent. Research also tells us that self-efficacy is bolstered by success, a single



example is “proof of concept” to the student that through her actions she can change outcomes.

Consider:

- If students are to be civically responsible, they must believe that through their actions, they can make a difference that advances aspects of the democratic process (e.g., increase the number of voters, increase the knowledge of voters around issues, influence the results in an election).
- If students are to be socially responsible, they must believe that their actions could result in social policy or practices that benefit others (e.g., better services for the homeless, less children going hungry, healthier environment, etc.).
- If students are to be stewards of the global cyber-commons (i.e., the internet), they must believe that their actions and behaviors online and digitally make a positive difference to the commons.

By providing students with the opportunity, structure, and scaffolding necessary to engage successfully in authentic projects related to civic and social issues, with similar projects related to users’ influences on the internet, students’ self-efficacy will be developed in addition to specific knowledge, skills, and dispositions.

The most well developed conception of **authentic learning** is likely that found in the work of Dr. Fred Newmann and colleagues.[ii] Newmann describes three major characteristics of authentic teaching and learning: construction of knowledge, disciplined inquiry, and value beyond school. Embedded within these standards are other key characteristics associated with authentic learning including:

1. Consideration of alternatives: the work requires students to consider alternative solutions, strategies, or perspectives;
2. Core disciplinary concepts: the work requires students to show

Service learning is a teaching and learning strategy that integrates meaningful community service with instruction and reflection to enrich the learning experience, teach civic responsibility, and strengthen communities.[v] To be most effective, service learning[vi] should:

1. Actively engage participants in meaningful, personally-relevant service activities.
2. Intentionally link to curriculum.
3. Incorporate multiple reflection activities that prompt deep thinking and analysis about oneself and one’s relationship to society.
4. Promote understanding of diversity



<p>understanding of theories, ideas or perspectives central to the academic discipline;</p> <p>3. Elaborated written communication: the work asks students to elaborate on their understanding or explanations, usually in writing;</p> <p>4. Deep knowledge: the work addresses central ideas or topics with enough thoroughness to produce complex understandings;</p> <p>5. Substantive conversation: students engage in extended conversations with teachers and peers about subject matter in a way that builds shared understandings; and</p> <p>6. Connections to the world beyond the classroom: the work helps students make connections between substantive knowledge and either public problems or personal experiences.</p>	<p>and mutual respect.</p> <p>5. Provide youth with a strong voice in planning, implementing, and evaluating the experience.</p> <p>6. Be collaborative, mutually beneficial, and address community needs.</p> <p>7. Monitor progress toward goals and readjust as necessary.</p> <p>8. Have sufficient duration and intensity to address community needs and meet specified outcomes.</p>
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EXAMPLES OF STRATEGY 1 FOR BECOMING A DIGITAL AGENT

Ages 11-14

Mr. Williams' 7th grade science students have been learning about the water purification process and have discovered that the drinking water in a nearby city is barely in the safe range. Mr. Williams challenges his students to think about what they can do to help. They research the causes and effects of unsafe water, and they decide to create infographics, newsletters, and other research-based, digital materials to develop awareness about the issue. They distribute these materials to community members via social media and teachers' email accounts. Many of the students have acquaintances in the nearby town and share their materials electronically with these friends and relatives, encouraging them to contact their elected officials and media about the issue.



Ages 14-18

The students in the high school AVID class have a strong orientation toward community and want to do a service project that will make an impact in their community. After reading about a computer education program in a nearby retirement community, they contact the program administrator and offer to help teach the seniors basic technology skills. They begin with in-person visits to the retirement community on weekends. After determining the capabilities of the retirement community's technology components, they show the residents how to use video conferencing software. The residents connect not only to family members, but also want to continue to learn about the students. The project grows into a popular Adopt-a-Grandparent program, with students using technology to teach seniors what they are learning and seniors offering guidance with life skills.



Strategy 2: Develop self-direction in students to promote independence in their civic and social engagements.

Discussion: Researchers have found that students who are self-directed are more capable online. [iii] Students who are self-directed take initiative and direct most aspects of their learning, including: diagnosing their own learning needs, formulating learning goals, identifying resources for learning, and independently managing time and effort. As they do so, they are informed by independent assessments of the effectiveness of the learning strategies used and the quality of resultant products. The key activities that self-directed learners engage in when they start working on a project are pre-planning, self-regulating their own learning behaviors, switching between strategies when needed, owning their own actions and subsequent consequences, and reflecting on their work and their actions for potential improvements in the future.

EXAMPLES OF STRATEGY 2 FOR BECOMING A DIGITAL AGENT

Ages 14-18

Ms. Adams challenges her freshman Computer Science class to work in groups on a semester-long project to create a video game that will encompass cross-curricular goals and standards and that will address a particular social issue. The students in one group use a search engine to find the email address of a local game designer and, after exchanging a few emails, the designer comes to their campus to work with them on their project. The game



designer talks to the students about the design thinking process and the importance of empathy in that process. Based on that information, the students create an online survey that they send to the entire freshman class to solicit feedback on what social problems are important to them, what kind of game elements they prefer, and what motivates them to return to a game. As they develop their game, the students continue to solicit feedback from a wider audience and iterate on their design by posting their game and goals on various social media platforms for comment.



Strategy 3: Use interactive modeling to showcase digital citizenship skills and behaviors, including how to find legal or school-based requirements and expectations.

Discussion: Interactive modeling not only demonstrates a positive process for students to replicate, but it also shows them how to do each skill, routine, or procedure. They learn why each is important for learning, observe classmates' modeling of the routine, practice it immediately after the demonstration, and receive feedback and coaching from their teacher. With interactive modeling, children create clear, positive mental images of what is expected of them. They do the noticing themselves, which builds up their powers of observation and their analysis and communication skills. In addition, because they get immediate practice, they gain quicker expertise and stronger mastery of the procedure or skill being taught.

Seven steps to interactive modeling:[iv]

1. Briefly state what you will model, and why.
2. Model the behavior exactly as you expect students to do it (the right way, not the wrong way, and without describing what you're doing unless you need to "show" a thinking process).
3. Ask students what they noticed. (You may need to do some prompting, but children soon notice every little detail, especially as they gain expertise with this practice.)
4. Invite one or more students to model the same way you did.
5. Again, ask students what they noticed the modelers doing.
6. Have all students model while you observe and coach them.
7. Provide feedback, naming specific, positive actions you notice and redirecting respectfully but clearly when students go off track.



In the case of digital citizenship, students can be stronger digital agents if they see good citizenship modeled by teachers and other adults, and if they are empowered to find out for themselves their legal rights and responsibilities.

EXAMPLES OF STRATEGY 3 FOR BECOMING A DIGITAL AGENT

Ages 7-11

Mr. Perez’s 4th graders enjoy using the class social media account, but they all want to have their own personal social media accounts. Mr. Perez models searching the privacy policies and terms of use of various social media sites and uses a “think-aloud” process to narrate his findings and decision-making responses to the results. He encourages his students to consider why those policies might be in place, to focus positively on what the students *can* do on the internet, and why social media accounts are important to the students. He also explains to them that their use of the class social media account is very similar to the driver’s ed process—they are learning to navigate social media in an acceptable way and as they get older they will have both more freedom and more responsibility. Mr. Perez also shares this “driver’s ed” approach to social media with his students’ parents and guardians in an effort to educate them about social media and privacy policies.

Ages 11-14

Mr. Anderson wants his students to create presentations to demonstrate their learning about the geography unit they are completing. He works with his school’s librarian, Mr. Tanaka, to design a lesson on the importance of evaluating, using, and citing sources appropriately. Mr. Tanaka comes to class and leads a lesson on using and citing sources. He uses the “seven steps” approach to interactively model how to evaluate a source, a couple of different ways to use that source, and how to cite it appropriately. He gives the students a goal and has them work in pairs modeling for each other and giving feedback while he and Mr. Anderson circulate, checking in and answering questions.

Mr. Anderson also wants this to be a dynamic presentation so encourages his students to utilize video and other multimedia sources to spice up their work. (Bonus, the students also learn how to evaluate, use, and cite different kinds of sources.) He reviews all of the students’ draft presentations with them, individually, and talks through his thinking and feedback process to help them recognize and credit other’s intellectual and copyright responsibilities.



Strategy 4: Build students' empathy with others to ensure their stewardship in online environments is conducted with kindness and sensitivity.

Discussion: Uncivil interactions online are due, in part, to a lack of empathy in users. One of the key strategies to civil online interactions is to build students' capacity for empathy—to be able to sympathetically imagine the experience of another person and connect to how they might be feeling. Empathetic students recognize feelings, have a moral identity, understand the needs of others, practice kindness, and can better self-regulate their own emotions. Empathy is a critical element of developing civic and social responsibility in students.

Some techniques for building empathy include:

- Expose students to diverse individuals and groups of different backgrounds including race, ability, ideology, gender, culture, religion, and age.
- Teaching students to establish eye contact, to listen intentionally, to read body language, and to express feelings.
- Develop a vocabulary for describing feelings and use it consistently.
- Provide positive feedback for empathic responses; align praise with the concept of "character."
- Model empathetic behavior; discuss the impact of uncaring behavior on others.
- Help students to see themselves as caring people, and help them to mentally step into another's shoes.

EXAMPLES OF STRATEGY 3 FOR BECOMING A DIGITAL AGENT

Ages 4-7

Ms. Kinney and Mr. Romero are kindergarten teachers who live in different parts of the country and have met via social media. Ms. Kinney teaches in an urban district and Mr. Romero works in a rural school. They have exchanged posts via their private class social media accounts and now want to connect their students via video conference. During the course of getting to know one another, the teachers have used maps to explain where the other class lives and the ways in which its climate, geography, transportation, and general lifestyle might be similar and different to their own. They have contributed to a shared brainstorming tool about how their classes are the same and different. Prior to the video conference, both teachers talk to their students about manners when meeting new people, coach them about questions they want to ask their new friends, and determine the things they would like to share about themselves with the other class.



Ages 14-18

Students in Miss Smith's Digital and Mass Media class have been learning about both empathy and rhetoric. Miss Smith is using a class forum so the students can practice respectful, productive, and kind discussions online. Each week she posts an article on a contemporary topic or issue for the students to read independently and then opens up the forum for responses and debate. Beyond working with the students to set up shared norms and guidelines, Miss Smith has tried to take a hands off approach to moderating the discussions, letting the students moderate themselves. They have been doing great so she decides to complicate the task.

One week Miss Smith's article is particularly controversial and complicated, and it elicits multiple strong reactions from the students. At first, they do well at responding but things begin to get more heated as the students realize that they have passionate counter-feelings and beliefs about the topic. Miss Smith decides to step in, but tangentially. She holds a class discussion where the students learn about active listening and responding with empathy while respectfully explaining the limits of their agreement. The next week Miss Smith again posts a tough article but this time the students have a stronger toolbox for responding. When things begin to get emotional and disrespectful, various students step in to remind each other about how to respond empathetically during disagreement and they all practice and model this activity for each other.

[i] Bandura, A. (2006). Adolescent development from an agentic perspective. *Self-efficacy beliefs of adolescents*, 5(1-43).

[ii] Newmann, F. M., Carmichael, D. L., & King, M. B. (2015). *Authentic Intellectual Work: Improving teaching for rigorous learning*. Corwin Press.

[iii] Joo, Y. J., Bong, M., & Choi, H. J. (2000). Self-efficacy for self-regulated learning, academic self-efficacy, and internet self-efficacy in Web-based instruction. *Educational Technology Research and Development*, 48(2), 5-17.

[iv] <https://www.responsiveclassroom.org/what-is-interactive-modeling/>

[v] National Leadership Youth Council Clearinghouse. Accessed 4/18/17 from <https://gsn.nylc.org/clearinghouse>

[vi] National Leadership Youth Council. (n/a). Rubrics for GSN Self-Assessment Process. Accessed 4/18/17 from <https://gsn.nylc.org/topics/332/documents/1066>.

