

**Gamify Your Way to an Engaging Specialist Classroom:
Lessons Learned in the Library From Teaching During a Pandemic**

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Abstract

This paper presents one elementary school librarian's experience using gamification and game-based learning in the specialist classroom. While the academic literature on gamification and game-based learning is increasing, there has not been much written on using these techniques in the specialist classroom. Using a case study method, the researcher explored the question, "How might a specialist teacher apply gamification and game-based learning techniques in the specialist classroom to improve student engagement and overall classroom management?" Data for this case study included a comparison of student work over 3 years, 1 year without gamification and game-based learning, and 2 years with gamification and game-based learning, and direct observation of student participation, attentiveness, and overall behavior. Analysis of the data showed that students responded positively to gamification and game-based learning, and the quality of student work improved when game-based learning and gamification techniques were employed in the specialist classroom.

Keywords: gamification, game-based learning, specialists, play to learn, classroom management

Students who are engaged in classroom activities are typically well-behaved, meaning they are actively participating in an instructional activity, and not drawing attention away from the academic task at hand (Fulton, 2019; Sparks, 2013). Gamification and game-based learning are capturing the interest of classroom teachers who are looking to increase engagement

among all students in their curricular activities (Chen et al., 2019). It is necessary to distinguish between game-based learning and gamification. Gamification refers to using game elements, such as points, rewards, and competition in non-game-based activities. Game-based learning on the other hand refers to creating learning activities that are inherently game-like and playful (Abu-Hammad & Hamtini, 2023; Pho & Dinscore, 2015).

Classroom management in the specialist (e.g., art, library, music, physical education) classroom poses unique challenges for the specialist teacher and the students. For students, a specialist class provides a break from the structure of a typical day, and an opportunity to connect with a different teacher while exploring enriching content (Kuykendall, 2022). A student who loves to draw may find relief during art class to have time dedicated to practicing the craft. A student who loves books may have the opportunity during library time to engage with stories far and wide, while also learning valuable information gathering skills. A student who is musically inclined may relish the opportunity to sing, dance, and explore music with the music specialist, and a physically active student will welcome the opportunity to run and play during physical education. For students whose favorite special is “not” art, library, music, or physical education, that class period might be challenging.

For the specialist teacher, in a school with only one specialist per course, the class rotation provides the opportunity to work with every student in a school over the course of the week, and to expose every student to everything that the specialist teacher loves about art or library or music or physical education. The challenge for a specialist teacher is in establishing classroom routines with students who are only in the class one day per week, while also differentiating instruction and assignments to meet the needs of every student in the school. Classroom routines are just as important in the specialist classroom as in the primary classroom. The specialist teacher needs to establish routines quickly and efficiently, and hook students early into the specialist class, to have ample time to complete planned projects and

activities. Game-based learning and gamification are proving to be effective ways to increase student engagement (Chen et al., 2020, p. 1). Morgan (2015) stated the answer to increasing student engagement is not to simply allow young people to play games all day, or to sit in front of a computer for hours. The answer involves taking those elements from gaming that keep players returning for more: deep engagement in an activity, playfulness, collaboration, communication, creativity, and engagement with technology. In this process, teachers also can develop opportunities to learn from other students and opportunities to teach other students. (Morgan, 2015, pp. 183–184). It is possible to incorporate all of these components in a specialist classroom despite the limitations of schedule and time, and the large number of students typically on a specialist's roster. In this study, I explored, as a library specialist teacher, my approach to establishing procedures and building classroom community through games-based learning and gamifying the library experience.

Literature Review

Classroom Management in the Specialist Classroom

Elementary public-school students are assigned to a classroom with one or more teachers, who are responsible for establishing a positive learning environment and making sure students learn the state required curriculum for their grade (Massachusetts Department of Higher Education, 2018, p. 3). Students see their classroom teacher every school day of the school year, and one of the first orders of business for the classroom teacher involves establishing classroom procedures, rules, and norms. It is in developing these routines that teachers create a sense of safety, trust, and community in their classroom (Massachusetts Department of Higher Education, 2018, p. 3). A classroom grounded in safety, trust, and community is ripe for what comes next, promoting engagement, curiosity, and excitement about the curriculum (EISayary et al., 2022, p. 272; Massachusetts Department of Higher Education,

2018, p. 3). It takes time and effort to develop classroom procedures, and it is not unusual for the first weeks of school to be dedicated to classroom management.

In some districts, students might also spend a small portion of the school day, ranging from 30–50 minutes (Massachusetts Board of Library Commissioners, 2018, p. 14), with one of the specialist teachers. The classroom teacher is not typically present for the specialist class (Massachusetts Board of Library Commissioners, 2018, p. 14). A specialist teacher typically refers to those who teach art, library, music, or physical education classes (McConnell, 2018). For those districts with specialist classes, it is not unusual for students to attend a different special class each day of the week. For example, on Monday, students might have library class, on Tuesday and Thursday they might have physical education, on Wednesday students might have music class, and on Friday art class. These specialist classes offer a break from the routine, and an opportunity for students to develop skills outside of state mandated curriculum.

While a break from routine is good, and exposure to art, books, music, and physical activity is important (McConnell, 2018, para. 2), breaks in routines can cause problems for those students who need structure to thrive (Rabadi & Ray, 2017). Classroom teachers develop classroom routines with daily practice, an opportunity that specialist teachers do not have if they see students only once per week. It is just as important for specialist teachers to develop classroom routines, and it is just as important for students to feel the same sense of safety, trust, and community in the specialist classroom, so students can thrive in their specialist classes, but it takes much longer because the practice is spread out over weeks.

Engagement

Classroom management skills include a wide range of activities, from setting up a classroom, determining class rules, preparing activities, and paying attention to behavior (Bozkus, 2020, p. 433). Poor behavior can manifest in a variety of ways, from the seemingly well-behaved child sitting quietly at the desk but not really paying attention, to the disruptive

child sending paper airplanes through the air or blurting out non-sequiturs. Anyone who has worked in an elementary classroom can attest to the idea that a student who is engaged in a learning activity is a well-behaved student. The students who tend to misbehave are those who are disengaged (Fulton, 2019). Students might disengage from a learning activity because the activity might be too challenging or too simple, or the activity might lack meaning for the student (Riches, n.d.). To re-engage a student in a learning activity, it helps to explore the different types of engagement as described by ElSaiyari et al. (2022).

In describing the academic communities of engagement (ACE) framework for blended learning, ElSaiyari et al. (2022) described three different types of student engagement: social emotional engagement, which refers to the “emotional energy associated with learning” (p. 272), cognitive engagement which refers to the mental effort of learning, such as a student’s ability to “focus, questioning, thinking critically, and problem solving” (p. 273); and behavioral engagement which refers to “physical activities associated with completing the course requirements, such as attendance and submitting tasks” (p. 273). Understanding the types of engagement creates space for a teacher to pinpoint where a student is dropping off, and to then develop modifications to the learning activity to bring the student back into the activity. ElSaiyari et al. (2022) emphasized the importance of direct communication with students as a means of increasing their social emotional engagement (p. 272). To improve cognitive engagement, ElSaiyari et al. (2022) suggested scaffolding, questioning, and use of appropriate teaching apps and effective media (p. 273). To improve behavioral engagement, ElSaiyari et al. suggested following up with students who have missed a class, a deadline, or an assignment (p. 274).

When discussing 21st century learning skills it is not uncommon to hear them referred to as the four Cs of education (P21, 2009). The four Cs of education include critical thinking, creative thinking, communicating, and collaborating (P21, 2009). As education and research into education evolves, teachers continue to see the four Cs in many educational initiatives from

design thinking (Flannery, 2018), in the International Society for Technology in Education (ISTE) standards (2023), and in the elements of engagement (EISayary et al., 2022). Even the ISTE standards have evolved from their inception in 1998 as a means for learning to use technology to, a means to use technology to learn in 2007, and as a means of transformative learning with technology in 2016 (ISTE, 2023). Educator tools and resources evolve, student needs and interests evolve, and technology evolves as we ask the question that educators have been asking since the dawn of public education, “How do we best engage today’s students in their education?” (Paterson, 2021; Library of Congress, n.d.).

Gamification

Educators have different resources at their disposal (e.g., frameworks, guidelines, standards, technology, access to information), the question is, “How do teachers apply all of the tools and resources to create a classroom environment that is structured, safe, engaging, and conducive to learning?” Gamifying the classroom is one approach that has been successful in the upper elementary library specialist classroom (Morgan, 2023). McGonigall (2011) wrote, “Games are providing rewards that reality is not. They are teaching and inspiring and engaging us in ways that reality is not. They are bringing us together in ways that reality is not” (p. 13). It makes sense then, to draw on those successful community building and engaging elements of gaming in the classroom. It is possible to draw on both game-based learning and gamification in one classroom setting, as I will display in this case study.

As a teacher trying to implement gaming strategies into my teaching, I first must ask, “How do I cover the curriculum and meet the individual needs of students?” In a heterogenous classroom, one teacher has to meet many different learning styles and needs. “Schools try to strike a balance between covering the curriculum with meeting students’ individual needs” (Sanders, 2021, p. 383). The next question, I ask is, “How do I cover the curriculum and keep students engaged?” Particularly in K–12 classrooms, classroom management is a very

important piece of the day. Students who are engaged are typically better behaved than students who are not engaged but incorporating gaming and fun into a school day is risky for teachers, because it involves giving up control (Sanders, 2021). According to Sanders (2021), “School as an institution seems to be of two minds about how to engage with the students’ interest and also maintain order and focus” (p. 383).

According to Sanders (2021), many teachers are not making full use of a computer’s capabilities in the classroom. Sanders stated, “Traditional School arrangement supports the generalized and simplistic use of computers as an electronic grade book or paper collection and dissemination tool” (p. 383). While gamifying a classroom does not specifically refer to computer games, computers do provide opportunities for creating an immersive and engaging academic gaming experience for students when those computers are used to the fullest extent of their potential.

Games have been around since the ancient people walked this earth, and references to gaming appear in Herodotus' seminal work, *The Histories*, (as cited in McGonigall, 2011). Teachers have been using different kinds of games since the beginning of formal schooling. According to Sanders (2021), though, to be effective in education, gaming has to be immersive. Learning and the game need to be one, teachers should not make students leave the game to get the academics (Aprea & Ifenthaler, 2022, p. 400). Neither game-based learning nor gamification require a digital platform to be fun. While the majority of what will later be described will be digitally gamifying the elementary library classroom, there are elements from most of the learning activities that could be carried out using traditional, paper and pencil, methods.

Games have the potential to give students unique ways to interact with the curriculum and each other. Sanders (2021) stated, “Game based learning environments present new ways for students to encounter, interact with, and create information” (p. 384). Minecraft is one game that creates an opportunity to completely flip the approach to teaching and learning. According

to Sanders (2021), “Minecraft is a block building game environment where the player can theoretically create almost anything imaginable” (p. 384), including opportunities to interact with the curriculum in meaningful ways. “Minecraft gameplay has two modes, sandbox (creative) and survival mode. Both modes are customizable” (Sanders, 2021, p. 384). The main difference is that in creative mode the builder has access to all of the materials, and in survival mode, the builder must make, grow or gather the materials. Additionally, in survival mode the building process can be interrupted or destroyed by creatures. There is a version made just for schools, Minecraft Education. “Minecraft is one of the few games that has captured the imagination of educators and students alike” (Sanders, 2021, p. 384).

From my experiences, there are several challenges, especially in public schools, to moving to a game-based teaching and learning system. To experience the true benefits of game-based learning, the game must be immersive, and to be immersive may require an active shift from standards-based learning (Sanders, 2021). Private schools appear to have more freedom from standardized testing to break from traditional approaches to education; public schools do not have that freedom. How do specialist teachers find time to create space during class time for an immersive experience (Sanders, 2021, p. 385)? Further issues of equity arise with regard to availability of devices. Prior to the COVID-19 pandemic, there were many school districts throughout the United States that did not provide devices to all students. Device availability changed dramatically as a result of the pandemic (Kuykendall, 2022), and now many more districts do put devices in students’ hands, even so, not all students have devices. There are still students without access to technology. For that reason, it is important for teachers in those districts to consider the options for game-based learning and gamification sans devices.

COVID-19

The COVID-19 pandemic changed many aspects of education; administrators, teachers, students, and families came out of the pandemic with new fears, concerns, and challenges

(Vidić et al., 2023). As a result, post-COVID-19 classroom management includes an even greater focus on social emotional learning, relationship building, and individualized instruction (Moore et al., 2022). Post-COVID-19, students and families are feeling higher levels of anxiety and mental health issues (Moore et al., 2022), and a greater dissatisfaction with teachers and school (Vidic et al., 2023, p. 22). Some students' views of teachers were impacted during COVID-19, when teachers were forced into teaching digitally, many whom were unprepared and had to focus more of their energy on learning the technology, and thus had less left for supporting the students (Vidić et al., 2023). Now teachers are struggling to manage the mental health and behavioral issues they are seeing in their students as a result of the pandemic (Moore et al., 2022).

Because so many students have fallen behind socially, psychologically, and behaviorally (Moore et al., 2022), I believe that relationship building between teachers and students and among students has become even more important in our post-COVID-19 education. Gamification has the potential to help teachers in efforts to bridge the gap from where students were prior to COVID-19 to post-COVID-19. The social aspects of gaming and the natural engagement of students in the gamification process can benefit students socially, academically, and emotionally. Since gamification does not have to be digital to be effective, every teacher can use this tool to help re-engage students and help students to build up their emotional, social, and behavioral strengths. In schools in which students and teachers had access and training and who actually grew in terms of technology skills during COVID-19, those teachers and students can continue their technology development (Erwin et al., 2021).

Some teachers might worry about changing their approach to teaching so soon after COVID-19 to incorporate elements of gaming into their curriculum, and they might worry about relying on technology. However, relationship building that can occur through game-based learning is even more important now in post-Covid-19 education. Many teachers and students

did develop new skills with technology as a result of the pandemic and those skills should be maintained and further developed (Erwin et al., 2021). As for shifting approaches to teaching, one might argue that good teaching involves continuously adapting teaching to support continually evolving student populations (Erwin et al., 2021). Did anything good come from the pandemic? For at least one elementary library teacher, the pandemic created an opportunity to make the shift to a gamified classroom, and that proved to be most beneficial for both students and the teacher.

Methodology

This qualitative study used case study method to gather information about my experiences as library teacher using game-based learning and gamification in my grades 3–6, library classes during the 2020–2021 and 2021–2022 school years. I gathered data through observational methods in my library classroom and through a comparison of student work and behaviors from the 2020–2021 and 2021–2022 school years with work and behaviors from the previous academic year. Changes to my teaching schedule as a result of the COVID-19 pandemic, forced me to make drastic changes to “where I taught,” so I took the opportunity to capitalize on gaming elements that had worked for me in the past and intentionally brought those elements into everything that I did with students in my library classroom to change “how” I taught.

Problem

EISayary et al. (2022) pointed out the importance of teacher to student, and student to student interactions in improving social emotional engagement, cognitive engagement, and physical engagement in a class. The types of interactions can be difficult to foster in a specialist classroom due to limitations of time; time required to foster individual relationships with students, the limited amount of class time given the amount of material to cover (e.g., transitioning in, introducing lesson, transitioning to activity, time for clean-up, transitioning out,

time required for book checkout). The problem for a library specialist teacher is getting to know students individually in a sufficient manner to make them feel seen, and having the classroom routines established to the degree that creates the space for students to interact with each other productively, not in such a way as to distract classmates from the task at hand.

Background

In March of 2020 a raging world-wide pandemic brought the world to its knees. In September of 2020, the district in which I work created a plan for returning students to school safely. The plan included a combination of remote and in person learning options, and for specialists, a traditional weekly specialist schedule at the lower elementary school for students in grades K–2, and a rotating 34-day schedule at the upper elementary school for grades 3–6, where specialist (art, innovation, library, music, and physical education) teachers would see the same four classes every day for 34 days and then switch to a new rotation of students. The 34-day rotation was a vastly different model than specialist teachers had been previously accustomed. Typically, specialists would see every student in the district, about 600 students, once each week. To reduce the challenges with working with 600 students each week online, all specialist teachers in the district switched to the rotation model at the upper elementary school.

This new schedule meant specialists needed to be prepared with 136 lessons, one lesson for each rotation day for 3rd, 4th, 5th, and 6th grade students. Given the unpredictability of teaching modality with COVID-19, lessons needed to be suited for live in-person instruction, remote in-person instruction, and asynchronous instruction. Every specialist approached the challenge differently. I immediately saw the potential with this model. In the library special classes, I set out to develop lessons that would work for all models and could be used throughout the year. This was to be my second year in the district, however, the first year was cut short due to the pandemic, which meant I had quite a bit of work to do to come up with

lessons for all grades. At the beginning of the 2020–2021 school year, the district started classes 2 weeks later than usual to provide time for the teachers to prepare their lessons.

During my first few years of teaching, I relied on the photocopier for library activities. Dealing with handouts for over 600 students was cumbersome and wasteful. Handwritten comments on the printed activities were one directional and did not create space for two-way communication with students. I would write comments, return the paper to the student, and given the short class period and once-a-week class schedule there was not time to follow up with every student on the feedback. But I had many questions. Did students read the comments? Did students have an opportunity to apply that feedback to future assignments? Did I have a way of keeping track of the feedback given so that I could tell whether the student had applied the feedback? All of the elements of good teaching were very difficult to emulate in a specialist classroom where paper materials dominated. Finding some of those returned assignments in the trash barrel further highlighted the problem. I had the sense that there had to be a better way.

When the pandemic forced me to move all of my library lessons to a digital format, Google Classroom offered an appropriate space. I transitioned every assignment to a digital assignment. During this process, I also took the opportunity to eliminate all but the most successful assignments and in developing new assignments took only the most successful elements of the best assignments to use as the basis for new assignments. Quickly, I realized that the most successful assignments had one thing in common: they involved some sort of game. With this in mind, I started to assess the work I did my first year in the district. Some of those lessons had been very successful. Those I kept intact. Others had been good, but not great. Those I revised. Some did not work at all, and I eliminated those lessons. One thing I learned as a library teacher is that behavior problems came with bored students. If students were not behaving, then the fault was usually with the teacher and the lessons. During the

2019–2020 school year, I could see the more successful students trying very hard to please me, but I lost other students. I needed to fix that.

It took about 6 weeks of long hours with the computer on my lap, from sunrise to almost midnight every day, to reinvent the library lessons. I stopped to eat, bathe, sleep, and then when school started, teach, but did nothing else. It was a “LOT” of work. But when I was done, I was done. My lessons were set for the year, allowing time to tweak as needed, but not plan. Every second of that time spent had been worthwhile. I loved what I came up with, and even better, so did my students.

The Game

The underlying game used in this study was based on a book series by J.K. Rowling, *Harry Potter*, that was popular among students at that time. All students were sorted into one of the four Hogwarts Houses (Gryffindor, Ravenclaw, Hufflepuff, or Slytherin) and then competed the entire school year to win the “house cup.” The winner of the house cup was announced during the morning announcements on the last day of school. In the library, the winning seating area was decorated in house colors, where the trophy and decor would stay for the entire following year. When the winner was announced, one could hear cheers erupt in classrooms throughout the building. This game included every student in the school, as the game was developed so that every student could participate, whether they were familiar with the book series or not and regardless of academic, physical, or emotional ability. Since the entire school was divided into one of four houses, there were representatives from different grades in every house. Occasionally, siblings were in different houses which brought the competition home for some.

I took inspiration for the Hogwarts houses from the librarian who preceded me in the district. The former librarian used it primarily for seating arrangements and made a big deal of using a sorting hat and completing the process in a very Hogwarts style manner. Initially, I

assigned students to Hogwarts houses by hand, asking students to choose their top three describing words, which were borrowed from a Harry Potter Fandom website, and then used to create the houses. Each classroom had an equal number of students in each house, and students sat in the library with the other members of their house. This by-hand method proved to be very time consuming, and I was already considering other options as I thought ahead to my second year in the district. The second year turned out to be the pandemic year, so initially I only saw students remotely. I needed a digital option for sorting students and also for keeping track of which house students sorted into. Drawing descriptive words from the Wizarding World website, I created a Google Form for students to complete on the first day of remote library class. Students chose the word that best described them, and based on their response were immediately placed into one of the four Hogwarts Houses: Gryffindor, Slytherin, Ravenclaw, or Hufflepuff. For this game to be fair, it was important that each house had an equal number of students. To keep students from outsmarting the form (and intentionally selecting a word to get into a particular house), each of the following years I used different words. It was my expectation that the number of students would be roughly the same in each house through natural selection, however, I did carefully monitor the numbers and adjusted the words students might choose if houses started looking unbalanced.

Once sorted into Hogwarts Houses, everything that students did in library classes all year earned, and occasionally lost, points for their Hogwarts House. The first student to arrive in library class earned Hogwarts House points, which was a great way during the pandemic to get students to show up to my Zoom class on time. The district was only remote for about 6 weeks, and the first to arrive points did not transfer well when we moved back to the in-person classroom. I heard from one classroom teacher that students were racing out of recess and up the stairs to be the first one to library class and the classroom teacher was worried about injuries; thereafter, most points were handed out for events that took place “after” students

arrived at the library. Although, I still did hand out some points outside of the library class. For example, during morning bus duty, I was known to give out Hogwarts House points for students who showed kindness to others by holding open doors, or helping out a friend (and, yes, there were occasionally three (or more) students holding any given door at a time—fortunately, there were plenty of points to go around).

In class, students earned points for completing an assignment according to a rubric. A perfectly completed assignment might earn 25 house points. One missing a citation or two might earn 20 points. I framed my response by emphasizing points earned, rather than points lost. Every student, on every assignment, had individual feedback from me telling them how many points they earned by completing a task. This type of feedback and communication between teacher and student went a long way toward improving social emotional engagement (EISayary et al., 2022). Because my assignment feedback was handled privately in Google Classroom in the assignment comments section, students had an opportunity to read and respond to my feedback, which supported students' cognitive engagement (EISayary et al., 2022). Because I used Google Classroom comments to provide feedback to students as they worked on a particular assignment, I could quickly identify students who were falling behind, and support each student as needed, thus supporting students' behavioral engagement (EISayary et al., 2022). Students who finished early could earn extra points by completing a second assignment on a different topic, or by helping me by straightening bookshelves, cleaning tables, or helping a classmate complete their assignment.

The Hogwarts House framework helped me to establish routines very quickly in my library specialist classroom. Students understood that following expected behavior norms was one way of earning house points, completing assignments was another way to earn points, and showing kindness was a third way to earn house points. I kept track of house points on a Google spreadsheet, and we started each class by reviewing current standings, which changed

greatly from class meeting to class meeting, since the whole school was involved. While I used Google Forms and Google Sheets to set up and maintain the house points, this classroom management technique is one that works equally well in both a digital and non-digital environment.

Discussion

How might one assess the success of these game-based learning and gamification strategies? One way to assess success is through direct observation: observing student work, and students in the classroom, their behavior, their level of engagement, and their motivation. Students looked as if they were having fun. I also appeared happy, and the behavior issues that I had struggled with in the past all but disappeared. I saw students excited to work on and share their library assignments. I saw students being playful and having fun. The work that students turned in was higher quality than work I had received from students in previous years. As the students and I worked in these ways, I learned how to use points in a positive way, rather than punitively. Importantly, I also learned to keep graded points private as much as possible to prevent comparisons and preserve student dignity. The lessons in this case study were initially designed based on a 34-day rotation, where I saw the same students every day for 34 days and covered all of the year's material in 34 days, and then moved onto a new rotation of students. The second year, we moved from a 34-day rotation to a two-week rotation, where specialists saw the same students every day for 2 weeks, and then moved to another rotation of students. This approach worked just as well during the 2-week rotation as in the 34-day rotation. This schedule would also work equally well in a typical specialist schedule where the student comes to special 1 day per week for the entire year. In fact, some elements of this two-week rotation design are better under a traditional approach, because each week students would see a big leap in house points because every student in the school would have had an opportunity to contribute during the course of a week. The true benefit of the 34-day rotation and 2-week

rotation for me was that I felt as if I got to know the students better seeing them every day for 34 days or every day for 2 weeks, but aside from that, the lessons and activities were designed to fit any model, 34-day rotation, 2-week rotation, or a full year of lessons.

One might think this is too much work to manage. Teaching “is” work but taking the time to make lessons and the classroom environment engaging for students created valuable time for me to build relationships and inspire students. Ultimately, it was not really too much time for me to manage, it was freeing. I was able to assign points for assignments during my 45-minute prep. Since my lessons are done for the year, I did not need to spend that time planning. Since my lessons are all digital, I did not have to spend that time making photocopies. I did not make ANY photocopies this year. You are welcome, environment.

So, what worked in this process:

1. The quality of student work improved dramatically from the 2019–2020 year to the following years. I, as the library teacher, gave routine feedback which students applied to their work. Students were motivated to earn additional points, and those students who finished early had the opportunity to earn additional points by either helping classmates who were still working, or by completing the assignment multiple times, choosing different topics. High achieving students had the opportunity to get rewarded for their efforts, while lower achieving students had ample time and extra support to complete their projects.
2. Student motivation to complete library assignments also improved dramatically from the 2019–2020 school year to the following years. Where I used to struggle to get students to complete assignments, now students seemed eager to do the work. They were motivated both by earning Hogwarts house points, and by the intrinsic gamified nature of the assignments. The assignments were fun to do because the topics were

- of the students' choosing, and the assignments were fun to present to the class. No one wanted to be left out of the learning activities.
3. I observed increased engagement by students. They seemed eager to come to library class and were willing participants in the action. I also observed more smiles, laughter, and a sense of playfulness that was not apparent during the 2019–2020 school year.
 4. Planning daily lessons well ahead of time freed me to focus on relationship building. Rather than using planning time to plan upcoming lessons, that time was spent providing feedback to students. Feedback is important in developing cognitive, social, emotional, and physical engagement (ElSayary et al., 2022). Planning time was also used to improve lessons as needed. I found there is comfort in knowing the plan for each day as one enters the school building in the morning.
 5. While digital tools are not essential for gamification and game-based learning, they did provide some advantages. Specialist teachers used SeeSaw at the lower elementary school and Google Classroom at the upper elementary school. All assignments were digital as was all of the student work. It was not necessary to spend time each day making photocopies. When it came time for report cards, there was a digital record of all student work. It was easy to make comments, provide feedback, and see version history. In addition, digital tools also made it easier to build differentiation into every assignment by providing seamless access to word banks, templates, and graphic organizers for all assignments. The resources were there for students who needed them. Further, a digital specialist class site opens the door to increased instructional time. Students receive directions three ways: (a) live during all class instruction, (b) recorded videos for revisiting the lesson, and (c) written step-by-step instructions.

6. I easily created a gamified classroom and game-based assignments using tools such as digital breakouts, mystery research projects, web search challenges, and WebQuests. I also constantly looked for opportunities to build competition or playfulness into student presentations, as it seemed to motivate the students. I made sure students knew they could reach out to me with questions about any of these assignments.
7. Giving students control over specific research topics proved to have a positive impact on motivation. While I selected the larger topic from the state mandated curriculum for the grade (e.g., animals for third grade, inventions for 5th grade) students got to choose “which” animal or invention to research.
8. Research shows that students like to have an audience for their work (Lee & Hannafin, 2016) and presentation skills are included in the 2017 English Language Arts and Literacy Frameworks (DESE, 2017). Therefore, presentations were built into every project and students learned how to make presentations in a variety of formats. Class time was spent going over protocols for being an effective presenter, such as speaking slowly, looking at the audience, and making sure to call on different students. Class time was also spent going over how to be a respectful audience member, raising hands to take guesses, not laughing at mistakes, not blurting out, and not taking a guess if an audience member somehow learned what the secret item was ahead of time. I took great care to emphasize the importance of secrecy and not letting classmates see the Chromebook screen as students worked on their projects, but occasionally a secret animal would be revealed prematurely. For students with anxiety about presenting, they could either choose someone to present on their behalf or create a presentation that did not require the student to stand front and center to present.

9. To assess learning, I followed up all class presentations with a Kahoot, Quizziz, or Google Form activity that included questions from both lessons and student presentations. These assessments provided yet another way to earn house points and validation for the presenters that their messages were received, and students seemed to enjoy seeing points made in their presentations appear in a Kahoot. In addition, all three methods provided data that showed what students had taken from both the presentations and the lessons. In looking at the data, I could immediately identify strengths in learning, and gaps, and use that data to plan future lessons. The data gathered from these low stakes, low pressure assessments showed that student understanding of essential concepts improved over time, as concepts were routinely introduced, practiced, reinforced, and then assessed in a manner that was playful and relaxed. From my observations in class and my review of these formative assessments, I definitely did see an improvement in the quality of student work.

Recommendations

From a review of my experiences with the process of developing lessons and observing students in my library classroom as they navigated the lesson activities, I developed the following recommendations for educators to consider:

1. A large-scale study is needed. My review of the literature showed there to be scant research on classroom management in the specialist classroom, and even fewer studies on using gamification and games-based learning to improve specialist classroom management.
2. Consider using gamification and game-based learning techniques to give students an opportunity to escape for a time from anxiety provoking external stressors. Games provide an escape from reality (McGonigall, 2011). As teachers work to create a safe environment for learning in their classrooms, I found that providing an

- opportunity for students to escape from post-COVID-19 stressors goes a long way toward achieving that goal. Incorporating gamification and games-based learning techniques offered opportunities for students to immerse themselves in the activity and escape from their worries.
3. Students are children and children are playful (Caine & Caine, 2011). I tried to draw on that inherent characteristic to activate their creativity and curiosity while also teaching important content.
 4. Draw on the media for storylines to infuse into your specialist classroom. An art teacher might turn the classroom into a Hokusai “Wave” design studio, for example, where students are tasked with creating a Hokusai inspiration piece. A music class might draw on a current and popular musical such as *Wicked*.
 5. Design learning activities that are game-like. For example, asking students to present facts about an animal or invention without revealing which animal or invention they are discussing. I found that it created opportunities for classmates to listen carefully to clues and take guesses as to the specific presentation topic. Doing so promoted active listening among audience members and gave the presenter an opportunity to interact with the audience, while also creating a playful activity that is game-like.
 6. Schools might want to rethink the specialist class schedule. Schools with specialists who cover teacher preparation periods typically schedule visits with each specialist once per week. My experience with seeing students every day for 2 weeks, or every day for 34 days, showed a huge improvement in relationship building between students and me, and an improvement in student learning. When there is a week between classes, it takes much longer to complete longer projects, and it is necessary to spend more time reviewing work from the previous week. Students are

more likely to forget how to cite a source, or where to find the information, when there are big gaps of time between lessons. When students have an opportunity to work on the same skill every day for two weeks, they are more likely to remember that skill during their next rotation. I found that less time was spent re-teaching previously learned skills, and more time was spent on building off those skills and introducing new content.

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