Online Learning: Educational Motivation through FaceTime

Kaylee Adelsberger

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Honors Program of Liberty University.

_____
Monica L. Huband, Ed.D.
Thesis Chair

_____
Maria T. Spaulding, Ph.D.
Committee Member

_____
James H. Nutter, D.A.
Honors Director

_____
Date

Abstract

Digital learning presents challenges, one of which is the ability to motivate students. Elementary students can be motivated through intrinsic and extrinsic means, and it is important that teachers and digital learning mediums such as Google Classroom and Zoom work to motivate students in order to help them learn. Individualized attention provided by the teacher motivates students. Students' are motivated by individualized attention provided to them by the teacher as well as Social Cognitive Theory, noting the importance of watching interactions with other students. The attention can vary from a one-on-one conversation or a personalized comment. Students are also motivated through an understanding of their educational progress and how to utilize the information they have learned and meaningful incentives. Meaningful incentives can include choice in activity, or other various awards. It is important to find creative ways to motivate students in a digital classroom.

Key Words: digital learning, intrinsic motivation, extrinsic motivation, rewards, Cognitive Behavior Theory, elementary students

Online Learning: Educational Motivation through FaceTime

Digital Learning presents numerous challenges and opportunities. The benefit of education through a digital platform is that learning can occur anywhere and regardless of many impediments. Digital learning can connect people across a town, state, country, or even the world, and can be defined as learning occurring via technology unaided by in-person instruction (Potter, 2018). The ability to continue one's education regardless of location or situation, such as the 2020 Covid-19 Pandemic, allows students' learning to continue virtually uninterrupted. However, outside of the classroom there are many distractions due to a myriad of factors as well as a lack of group motivation. While students can and are intrinsically motivated, a great deal of motivation also comes from external factors. Extrinsic motivation can be inhibited by the change of environment, from classroom to home environment, as well as the lack of in-person instruction and contact (Trespalacios, 2017). Students participating in digital learning, especially early elementary school students, struggle with extrinsic and intrinsic motivation in the virtual classroom because they may not have the verbal praise, the person to person contact, or the motivational effects of the physical presence of their teacher, classroom competition, or working toward a common goal with their classmates. Educators of all levels are currently facing the problem of how to motivate students participating in digital learning (Potter, 2018). Students participating in digital learning are motivated through individualized attention, an understanding of improvement and utilization of knowledge, as well as meaningful and intentional incentives.

Digital Learning Defined

Digital learning is becoming more prevalent in the world of education today. Digital learning has been common at the university level since the early 1990s. As the internet and the digital age continue to take hold of the present generation, digital learning is not only used in

addition to in-person instruction, but as the primary and sometimes sole source of instruction.

Digital learning can be defined as "learning through the use of technology without in-person

instruction" (Potter, 2018, pp. 117-118). Primary and secondary educational practices have

gradually worked to include technology and digital learning formats to the degree that it is

incorporated in today but has never seen the mass influx of digital learning that has occurred in

2020 due to the COVID-19 Pandemic (Koh and Kan, 2020).

Benefits of Digital Learning

As digital learning has become more prevalent, digital education has been found by some

individuals to be more practical, convenient, and affordable (Journell, 2012). Digital learning is

becoming highly favored by school districts as it has proved to be increasingly cost effective

(Journell, 2012). It has allowed school districts and educational systems to include a higher

number of students without increasing the budget. In-person classes require a lower student to

teacher ratio for safety purposes, while also ensuring that elementary students are able to

effectively learn. Elementary students are not as capable as post-secondary students to self-direct

their education due to developmental processes, abilities, and basic reading, writing and

comprehension skills (Koh and Kan, 2020).

Digital learning requires fewer teachers and staffing requirements as instruction and

interactions with students are facilitated through a computer-based medium such as Google

Classroom or Zoom. The teacher can efficiently meet the needs of more students when the

interaction of the students is limited through a screen (Journell, 2012). The ability to participate

in digital learning has allowed teachers to have a greater number of students. The convenience of

digital learning eliminates difficulties coordinating in-person logistics and availability. Another

advantage of digital learning is the ability to aid students with physical, social, and or emotional

disabilities in their involvement with class and interaction with others. Merely speaking through a screen or showing your face in a tiny square, in a format when others are equally as visible is extremely helpful to engaging these students. Digital learning may have its shortcomings, but in situations such as a global pandemic it allows education to continue in a safer and more cost-effective manner (Koh and Kan, 2020). Although digital learning is not an exact replica of in-person instruction, it can meet many students' needs. However, the question that arises is whether or not the efficient way is effective.

Disadvantages of Digital Learning

Digital learning can be a great alternative or addition to in-person instruction in many situations; however, it does have some disadvantages. Learning solely through a digital platform requires that all students have access to technology and internet connection. While technology and the ability to access the internet are very common in today's society, it is not an accurate assumption that all students have this privilege. In addition, it is important to note that students who do not have internet access or appropriate technology are not likely to have any assistance from parents or other outside resources (Potter, 2018). However, while this can be helpful to some students, it can also induce anxiety as students feel that they are being watched and could be teased due to their environment (Journell, 2012). The concern of bullying based upon a student's environment is similar to the comparison that occurs about the clothing or supplies that a child wears and brings to school. Some students from low socio-economic backgrounds may not have required technology, internet access, or parental support during instruction due to work schedules; they also may not have care givers around to help them with their school work. This lack of resources places these students at an extreme disadvantage

Another disadvantage of digital learning particularly with early elementary students is the ability for students to use technology correctly and to adequately comprehend the lessons the teacher is communicating. Early elementary students may not be as computer savvy as older students, which could complicate the instruction of basic educational tasks, such as the process of completing an activity about counting (Sousa and Rocha, 2018). In this scenario students are not only learning the skill of counting but also the skill of being able to submit and complete assignments digitally. This again lends to the concern that adults will need to be available to support with early elementary students in order to help them fully complete tasks, as well as to adequately understand the information. Also, the evaluation of students' facial expressions and body language is more accurately assessed for understanding and comprehension, whereas a screen limits ability, quality, and vantage point (Sousa and Rocha, 2018). For instance, a student who is looking at various places but not the teacher may be uninterested and not invested in the instruction.

Digital Learning and Motivation

Another concern of digital learning is the students' motivation. Students who are learning in a digital format may lack many of the motivators that exist in the classroom. Students lack the sense of accountability from working with others in the classroom (Trespalacios, 2017). The lack of accountability of peers and the teacher may cause students to struggle with motivation, but it is also disadvantageous to not have a designated space such as physical classroom in which to complete school work. Other motivational factors present in the physical classroom include reward systems established by the teacher and the school, including incentives if the students display a good work ethic and if they show academic progress (Trespalacios, 2017).

A major disadvantage with digital learning is the difficulty in offering tangible rewards and punishments for good and bad effort and participation, while there may be digital incentives it can be difficult to use as motivator if students are not logged in or online (Trespalacios, 2017). Students who are completing their education completely digitally have no physical receival of grades or encouragement through the sharing of their work on bulletin boards, physical portfolios, etc. Thus, again students' interaction with their grades and progress is limited to their or their parents' own initiative to check grades, but the lack the time to interact with their teacher about their grades, when seeing a teacher in person was mandatory (Petrovic-Dzerdz and Trépanier, 2018). In a physical classroom, students can receive grades on tangible pieces of work that they submitted. If the students are not participating, they likely would not care if they were checking their grades, and in a digital classroom the teacher has fewer opportunities to casually interact with the student as they would if they were in class every day. Intentional interactions can still occur, but they must be planned and facilitated through additional or personal virtual meetings or communication. The concern only increases with younger students because the students control the interaction by their activity and availability on digital learning platforms (Petrovic-Dzerdz and Trépanier, 2018). While it is important to consider students' motivation and consider that some students have adult support to hold them accountable and to aid them in their education, it is not a broad assumption or conclusion that can be made. So, parents are not involved in their child's education, which is where a teacher can help. However, if the students are dependent on parent to help them connect with their teacher, then the students will not be able to get any help.

All disadvantages should be considered when evaluating, discussing, and establishing digital learning. Logistical problems, such as a lack of technology or web access, can be difficult

to solve because they often involve concrete factors that cannot be avoided but require time and

money from more than just a lone educator's perspective (Sousa and Rocha, 2018). However,

teachers do have to leverage their role in a student's education to work to motivate students. The

ability of teachers to motivate has been crucial to their educational experience for decades.

Stories and depictions of teachers in one-room schoolhouses providing rewards or punishments

for students, associated with cleaning the chalkboard, beating erasers, and standing in the corner

display the use of motivational techniques, rewards and punishment support the importance of

their role in the classroom (Petrovic-Dzerdz and Trépanier, 2018). Before paper and technology

became as available as they are in present day, teachers relied on a lot of verbal instruction and

feedback (Trespalacios, 2017). In a completely digital learning experience, student and teacher

interactions occur verbally over some sort of video chat software, and mimics the interaction

model (McNair & Taylor, 2018). With more information and understanding of what motivates

students to learn, teachers have the ability to motivate and encourage students in more effective

and personalized ways, whether they are learning in person or in a digital classroom.

Intrinsic and Extrinsic Motivation

A virtual classroom and a physical classroom have many similarities but also remain

starkly different. Physical classrooms are tangible meeting and learning spaces, where students

can expect tangible tools to help them success, such as white boards, desks, manipulatives,

physical copies of books and more. A digital learning environment also contains numerous

resources to help a student succeed; however, students can be in any location: their home, a

coffeeshop, traveling or a myriad of other places. The resources in a virtual classroom still exist;

however, resources must either must be viewed on a screen, printed, or obtained independently.

A factor in student learning that is very important yet can fluctuate is motivation. Students still require motivation and can be motivated, regardless of type or amount, to complete their work. There can be both intrinsic and extrinsic motivators in both environments, physically and digital. Examples of extrinsic motivators that exist in the traditional classroom include competition among students, physical rewards, direct praise from the teacher, while intrinsic motivators such as the desire to do one's best work, the desire to improve, and the personal desire to learn and grow are a few (McCombs & Shepherd, 2007). It is easier for teachers to do things to impact a student's desire to learn when teachers can directly give praise, physical rewards, and one-on-one attention in person.

Virtual classrooms can still use some of the same motivators; however, it is increasingly difficult outside of the traditional classroom as teachers do not have the in-person connection with the student (Johannesen, 2012). While social media sites have proven that it is possible to connect with others on a digital platform, it is also harder to have deep and meaningful connections due to the loss of in-person human interaction (Petrovic-Dzerdz and Trépanier, 2018). However, the continual reliance on technology is leading to a greater connection through a screen that more closely replicates in-person human interaction. In-person body language, inflexion, tone, stance, hand gestures, and disposition are more easily read and connected with through a level of human empathy that has not been fully matched yet by digital interactions, if not due to individual preferences then due to logistical issues such as internet connection (Petrovic-Dzerdz and Trépanier, 2018). Virtual classrooms must work harder to find extrinsic motivators that can be incorporated into activities or applied to screen time. The intrinsic motivation of digital classrooms remains increasingly difficult as the mode of interaction has changed, affecting the way interaction and motivation is understood and gauged. Understanding

extrinsic and intrinsic motivators the ability to motivate students when learning in a digital

classroom through individualized attention, understanding of improvement and utilization of

knowledge and meaningful and intentional incentives.

Intrinsic Motivation

Intrinsic motivation is driven by internal factors and the student's desire to work hard to

achieve certain goals. Intrinsic motivation is the internal drive to accomplish a task or goal that is

not based on the receival or expectance on any external factors. This is the preferred means of

motivation for the student due to the fact that any intrinsic or internal ties shows more value and

investment into what activity is being done (Johannesen, 2012). It is human nature to give more

effort to something that the student cares about. For example, children are more likely to do more

research on a topic they like, enjoy, or choose rather than one that is assigned. It is also

important to note that intrinsic motivation is also valued because it can carry through to other

areas of life or education. Extrinsic motivators such as peer pressure, competition with peers,

rewards, the approval of others can all change depending on the class, assignment, teacher, time

frame, or reward (Johannesen, 2012). Therefore, it is preferred that a student is motivated by

intrinsic factors because once a student has developed the desire to improve and to do one's best

work, this motivation typically remains consistent and can be applied to other subjects, as well as

other activities and areas outside of school.

However, there are two primary concerns regarding the authenticity of intrinsic

motivation. The first concern is the origins of the intrinsic motivation may have come from

external factors (Williams and Stockdale, 2004). While this is a valid concern especially if there

is a significant change in intrinsic motivation, it is important to note that if an external factor

strongly influences an individual it becomes intrinsic by nature. A second notable concern is that

behaviors and intrinsic motivators that appear to be self-sustaining may be strongly influenced by situational and environmental factors (Williams and Stockdale, 2004). Once a student is in any environment for a period of time, it is likely that the environment will start to influence on that student. It is possible that seemingly intrinsic factors can be affected by factors of the environment and situation, yet it is important to also note that the impact of the environment or situation would be an extrinsic motivator, not an intrinsic motivator. Also, if environmental factors do become impactful enough to make a lasting impression, then students are influenced by the environment which would significantly impact their intrinsic motivators.

Extrinsic Motivation

Many teachers use extrinsic motivators to encourage their students to accomplish certain tasks and meet specific goals. Extrinsic motivation is an external reason for accomplishing the task. Overall extrinsic motivation, such as the desire for your name to be on the student of the week tab on the class website, may not be as effective as intrinsic motivation due to the fact that students can be content or satisfied with a certain level of achievement or reward and not be motivated by internal factors as well as achievement (Williams and Stockdale, 2004). Cognitive Evaluation Theory suggests that there are effects of intrinsic and extrinsic motivational factors. Cognitive Evaluation Theory is the impact external effects have on an individual's intrinsic motivation (Riley, 2016). The students' understanding and evaluation of the impacts, drives them to accomplish the established goals, while also connecting to Social Determination Theory which emphasizes the individual's determination to achieve what the individual wishes to while imitating what is modeled (Riley, 2016). Social Determination Theory would allow students to imitate what they see being done and assimilating it to be their goal. Cognitive Evaluation Theory addresses the influence of external factors and Social Determination Theory if the

student matching the environment and standards as they become the student's own. Students may see external effects of what intrinsic motivation is driving them to do.

Cognitive Evaluation Theory also specifically critically examines the reward type and the repercussions of those motivations, whether they are informational or controlling (Deci, Koestner, & Ryan, 2001). Informational rewards provide the students information on how they are measuring up to the standard, which may serve as an intrinsic motivator. Controlling rewards become the reason why the student strives to achieve the goal. Thus, extrinsic motivators can be very impactful in encouraging the students to accomplish the task at hand.

If a student is intrinsically motivated to take extra time to understand a concept, then externally the student may see an improved grade as the student is studying harder. Factors such as rewards, deadlines, and competition create a motivation to reach personal goals and ideals for achievement. However, it is vital that in order for external factors to be effective there must be some level of self-determination, because the external factors must determinately have value in the eyes of the student in order for the factors to motivate the student (Riley, 2016). While work ethic and internal motivation can be encouraged and modeled as an example, they are something that cannot be taught.

Relationship Between Intrinsic and Extrinsic Motivators

While intrinsic and extrinsic factors are frequently discussed as two entities that are mutually exclusive, it is important to note that the two usually work together in combination. While intrinsic and extrinsic motivators work together, it is more difficult to motivate intrinsically as the effects of that motivation are not visible in a quantitative manner as there is no mathematically equation to show the difference between the intrinsic and extrinsic motivations causing a student to complete the activity (Riley, 2016). Teachers can frequently use

rewards and extrinsic motivators to encourage students while it is harder to foster intrinsic motivation (Williams and Stockdale, 2004).

Rewards

Motivation exists in many types, with the two primary forms including intrinsic and extrinsic, and they include different types of rewards that serve to motivate the student. Verbal rewards typically correlate to a high level of intrinsic motivation (Deci, Koestner, & Ryan, 2001). Verbal rewards can be called a variety of names ranging from encouragement to positive feedback. Verbal rewards often contain positive feedback, which can enhance performance and also increase intrinsic motivation (Deci, Koestner, & Ryan, 2001). The success of verbal rewards is likely due to a correlation with intrinsic motivation. Verbal rewards increase intrinsic motivation because they cause students to feel recognized and acknowledged in high regard (Potter, 2018). The simple compliment or specific comment about what a student did well allows the student to understand the student as an individual has value. Because of the innate community and group mentality, children often seek the approval of the group or the person in charge of them (Trespalacios, 2017). In order for verbal rewards to be successful, a personal relationship with the student will be most effective in causing the student to receive and value the feedback given (Deci, Koestner, & Ryan, 2001). However, it is important to note that verbal rewards can also be the rewards that motivate or essentially control the student to do what the teacher wants instead of success.

Motivators that control the student carry the most value and importance in the student's mind for accomplishing tasks (Deci, Koestner, & Ryan, 2001). The high positive correlation between verbal rewards and motivation is a strong indicator that individualized interaction with a teacher can have a positive impact on students' success (Deci, Koestner, & Ryan, 2001).

Students crave individualized attention and encouragement due to their strong desire to have a positive relationship with their teacher as well as their intrinsic desire to have the approval of those in authority around them (Deci, Koestner, & Ryan, 2001).

Tangible Rewards

As another method of motivation, tangible rewards are offered to motivate students. Tangible rewards specifically are used to encourage students to do something that they wouldn't normally do (Deci, Koestner, & Ryan, 2001). Tangible rewards can range from stickers, food, class parties, and activities to special privileges, longer recess, and much more. These tangible rewards typically get results, if the reward is something that the student desires and is motivated by (Riley, 2016). It can be difficult at first to determine what tangible reward could motivate a student or to find a reward that equally motivates all students.

Teachers may use methods such as student interviews, student and or parent surveys, and simple observation to determine which methods of individual reinforcers are most effective. However, students perform better with guidelines, goals, and boundaries, and thus a tangible reward or goal can be effective for getting results. Yet the instant gratification of a tangible reward can lead to a decrease in intrinsic motivation (Deci, Koestner, & Ryan, 2001). It is common for people, and students specifically, to aim for a goal if one is set. The reward could cause a decrease in student motivation if the goal or reward is something that the student has already achieved or attained.

Types of Tangible Rewards

Within the category of tangible rewards there are three types of rewards. Expected tangible rewards can be based on various contingencies including task-contingent rewards, task-noncontingent rewards, and performance-contingent rewards (Deci, Koestner, & Ryan, 2001).

Task-noncontingent rewards are given not based on participation in the activity but for

impressive answer or performance, whereas task-contingent rewards are given based on

participation in the activity, such as participation in a class discussion (Deci, Koestner, & Ryan,

2001). Then performance-contingent rewards are given based on the level of excellence with

which a task is completed, such as earning a perfect score on a spelling test (Deci, Koestner, &

Ryan, 2001). Task-contingent rewards are less effective in promoting intrinsic motivation due to

the fact that they provide the incentive for what is being requested. Task-noncontingent rewards

are likely more effective because they can reward the student for a behavior that is outside the

initial target behavior. Performance-contingent rewards would be given if a student met a

standard or goal or performed better than other students (Sousa and Rocha, 2018). The beneficial

effects of performance-contingent rewards are greater than task-contingent rewards but can be

equivalent to task-noncontingent rewards due to the fact that task-contingent rewards are more

straightforward, and the student is aware of what they will be rewarded. Performance rewards do

require students to complete the task, but the intrinsic motivation occurs due to the fact that they

must surpass the goal (Potter, 2018). Another primary motivational factor of performance reward

is that students do not know in advance what is necessary to receive the reward. Yet it is

important to keep in mind that performance-contingent rewards are an authority in motivating

the student in this situation with a stronger focus on extrinsic motivation rather than intrinsic

motivation.

Studies in which tangible rewards are used have shown that tangible rewards can be

motivating factors; however, the way they are presented greatly impacts the effectiveness. In a

1994 study completed by Lepper, Greene, and Nesbitt, the effects of extrinsic motivators were

observed on a group of early education students and their free play (Riley, 2016). Students were

separated into three groups. A control group or "no reward group" that was presented with the opportunity to color during free play, then there was the "expected-award" group or a task-contingent reward as they were motivated with a "good-player" award if they colored a picture (Cameron and Pierce, 1994). Then there was an "unexpected reward" group, similar to the task-noncontingent reward, the groups are similar in the fashion that the students do not know that there is definitely a reward or what the reward will be for. The study showed that when the task was presented three times, with students remaining in the same group each time that students in the "expected-award" group or a task-contingent reward group did not color for as long as students in either of the other groups did. The students were aware of the goal and knew what they needed to do to accomplish that goal (Riley, 2016). Due to the fact that students knew specifically what they needed to do they had no reason to have a work ethic that has them strive to go above and beyond to reach the goal because the goal is already known. Students will work harder to do their best if they know the task but not the specific goal, so they will strive hard to not just do the minimum but go above and beyond.

The definite reward with an explicit goal limited and restricted the students' intrinsic motivation. The students realized that they were working for the reward, and they did not feel compelled or have any other reason to color well or for any period of time. Students who were in the "unexpected reward" group, or the task-noncontingent reward, were found to have colored for the longer than the "expected reward" group did initially, but then in the second and third session students in the "unexpected reward group" were found to have the students as a group consistently color longer than any other group. This was likely due to the fact that they understood that they could be rewarded for their work. Even after the students were initially given the reward, there was no factor that guaranteed that the students would receive a reward

each time they completed the task the same way. However, the unexpected reward served as a form of positive behavior reinforcement.

The students were trained and conditioned to understand what their desired behavior was and what could happen if the behavior was correctly displayed. This is found to be the most consistent type of reward. The control group consistently spent longer playing than the expected reward group; however, the students spent less time coloring than the unexpected reward group after they were initially given the reward (Koh and Kan, 2020). The control group is a good indicator of depending upon the situation and level of activity or interest how much time a child would spend coloring, or completing whichever activity was listed.

For a classroom teacher it is important to communicate what the goal is; however, it is also important that communication does not limit the goal. The teacher could communicate an expectation and students will only work to that goal, whether that means only working on an activity for a certain period of time, or if that means only doing a certain amount of work or only writing a certain number of words (Potter, 2018). In order to effectively motivate students, it is important to communicate clearly what the minimum is while also leaving the end product's design somewhat up to the students work ethic.

Verbal Rewards

Verbal rewards, like "good job, Johnny," or "I really like the way you clearly numbered the steps of the experiment," in comparison to tangible rewards are more likely to promote intrinsic motivation. Studies on verbal rewards specifically identify not merely the effect of verbal praise on progress, productivity, and improvement in skill, but also the effects of the motivation and work ethic and demeanor of the child (Trespalacios, 2017). Intrinsic motivation can be more difficult to measure; however, it is very common to note that intrinsic motivation

leads to overall better performance and academic growth (Trespalacios, 2017). When students have a vested self-interest and care about the activities that they are doing and the content and topics they are learning, they will typically improve their involvement and results (Trespalacios, 2017). It is unrealistic to believe that all students will have a self-motivated outlook, or for all students to have the same level of self-motivation; however, it is the teachers' responsibility to use reinforcement and rewards that improve the students' intrinsic motivation such as verbal praise. The role of verbal rewards begins at a very young age. Verbal praise is frequently used in the classroom to encourage students to continue or improve behaviors and or skills. Verbal praise is a tool of motivation that can greatly impact both extrinsic and intrinsic motivations (Riley, 2016). Verbal rewards do seem to have more influence with intrinsic motivation than tangible rewards.

In a study conducted by Shriver and Matheson (2005) the effects of teacher training were studied regarding the use of effective commands and verbal praise and the application of effective commands and verbal praise. Three teachers, two female teachers and one male teacher, were each paired with a student. There were two first-grade students, one with a male teacher, the other with a female teacher, and then there was one fourth-grade student paired with a female teacher (Matheson & Shriver, 2005). Both first graders were observed during math, and the fourth grader was observed during reading (Matheson & Shriver, 2005).

The three teachers participated individually in two different training sessions that dealt with feedback and praise. The first training session discussed the use of effective commands, and the second training explained the use of verbal praise (Matheson & Shriver, 2005). The teachers watched videos of their own teaching styles to see what phrases they used so that the teachers could see what they naturally apply. The teachers then were told to try to use the phrases

approximately ten times each during their instruction and interaction with the participating

student. The teachers then participated in three phases. The first phase was the baseline phase in

which they interacted normally with the student (Matheson & Shriver, 2005). Phase two utilized

effective commands: if students in the study did not reach 90% compliance with Phase 2 then the

study would continue to Phase 3 in which verbal praise continued until 90% compliance was

achieved throughout the remainder of the school year (Matheson & Shriver, 2005).

All three students showed variability in their increases throughout the study. Both of the

first-grade students saw a slight increase throughout the study in compliance with the teacher's

requests (Matheson & Shriver, 2005). While the fourth-grade student did not have the initial

increase the first-grade students did, overall increase was higher than the two second grade

students. The first first-grade student exhibited 38% compliance with effective commands and

positive enforcement, compared to his peers exhibiting approximately 75.5% compliance, the

other first-grade student exhibited 52% compliance compared to peers mean of 91% compliance

(Matheson & Shriver, 2005). The fourth-grade student exhibited 33% of compliance to peers

mean of 86%. 60% to 90% compliance is the norm for elementary aged students, the subjects'

numbers lower than 60% are considered significant; however, most importantly is that there was

improvement in the child's response to the teacher (Matheson & Shriver, 2005). Compliance can

be affected by both intrinsic and extrinsic motivation, although not the same the compliance is

driven by these two factors. The slight increase but still low level of compliance supports that

verbal praise is effective over time and can improve motivation; however, it does not

immediately or drastically change a student motivation, demonstrated with compliance over a

short period of time (Riley, 2016). While classroom teachers still can greatly impact students' the

impact of peers shows how in person interaction among students can greatly motivate students to do their work.

Comparison of Tangible and Verbal Rewards

Verbal praise, while known to improve intrinsic motivation, will not drastically or rapidly change results in the classroom. Tangible rewards may appear to work better to get results; however, it truly depends on the goal of increasing intrinsic motivation or external motivation. While intrinsic and extrinsic factors are frequently discussed as two entities that are mutually exclusive it is important to note that the two normally do work together in combination (Potter, 2018). As is discussed, it is more difficult to for teachers to spur intrinsic motivation. Teachers can frequently use rewards and extrinsic motivators to encourage students while it is harder to foster intrinsic motivation (Williams and Stockdale, 2004). Due to the fact that it is not possible to evaluate a student's motivational factors, whether they be intrinsic or extrinsic, in a way that is known to be fully accurate, it is important to remember that progress in motivation, both intrinsic and extrinsic, is the goal.

Motivation with Digital Learning

In order for a student's learning experience to be successful, it requires the student be motivated to some extent. Individuals have various levels of motivation to begin with and differing learning environment to various extents, whether the learning occurs digitally or in person. Typically, students with higher intrinsic motivation tend to prefer digital learning environments because they can work at their own pace and do not require the support or motivation provided by the teacher or classroom environment (McNair & Taylor, 2018). Yet students in and out of the physical classroom look to teachers to provide that motivation, encouragement, and support.

Both intrinsic and extrinsic motivation present some of the same challenges as both do in the classroom; however, time that in the classroom in transition is eliminated due to the lack of in person contact, thus it makes it more difficult for encouragement to occur digitally. When a teacher could have briefly had a side conversation with a student, helping and encouraging them, it now takes much more planning and forethought than it did to do simply pull the student aside and begin the conversation (Riley, 2016). In order for a side conversation or encouragement to occur, a teacher must type it out and send it, defeating the purpose of the in-person connection.

However, one-on-one video conference meetings are extremely helpful in providing support and remediation. If a teacher wished to give a child a piece of candy or a sticker, as a tangible reward, the teacher could send it digitally, and could go through the process of mailing a reward (Koh and Kan, 2020). Other motivational techniques such as one-on-ones that require more planning to a student which is highly unlikely due to the timing. Intrinsic motivation can be successfully implemented; it just requires more time and planning, such as creating a chart for students to keep track of their goals that they set personally and to check it off when the goal is achieved, in a digital format.

Extrinsic Motivation in the Digital Classroom

Teachers in a virtual classroom must reimagine the entire function and procedure of the classroom. The reinvention includes extrinsic motivation as well. Extrinsic motivation in a digital classroom requires the teacher to identify incentives and other ways to mimic the human interaction that students experience in the classroom. Students not only enjoy but are motivated by rewards. When a teacher is miles away, it can be more difficult to give students quality, differentiated instruction. Extrinsic motivators are typically most effective when a teacher utilizes items, ideas, and activities that excite the student (Matheson and Shriver, 2005).

Extrinsic motivation in the digital classroom includes choice in assignment type, schedule of school day, a class movie during normal school work time, and more (Riley, 2016).

Intrinsic Motivation in the Digital Classroom

Intrinsic motivation in a digital classroom is even more difficult to encourage and foster. True intrinsic motivation occurs when students are motivated by internal desires, causes, and self-betterment. While this may be an abstract idea for an elementary school student, it is not difficult to find sources of intrinsic motivation in children as they work hard on the block tower even when it seems too difficult (Potter, 2018). Another example would be if a student works hard to improve basketball skills without being directed or coached to do so, due to the fact the student wants to be the best basketball player he or she could be. In a virtual format conveying the importance of intrinsic motivation and finding an opportunity for it to be expressed is difficult (Koh and Kan, 2020) However, intrinsic motivation could be observed when a student spends a copious amount of time working on a PowerPoint or a digital poster for a class, or if a student puts extra time, work, preparation, and planning into a brief presentation for show and tell.

Methods of Motivating Students

Individualized Attention

A method to increase students' motivation, both intrinsic and extrinsic, is through individualized attention, which can range in length of time, dependent on a student's needs, from a few minutes to thirty minutes or more. Individualized attention is a common motivator for students of all grades, abilities, and classroom locations. Students, whether they are in kindergarten, thoroughly enjoyed having the attention and focus placed on them (Riley, 2016). Individualized attention allows students to feel as if they are seen as separate from their

classmates and are truly individuals. Students' individual and creative acknowledgment is important as they are establishing their own identity. Students will strive to do their best and will be most motivated when they understand that they are individuals and their independent work makes a difference. Another important note is that students have various levels of support and encouragement at home, so the support and encouragement in the classroom could be the only individualized attention that child receives that day (Potter, 2018). Students with various abilities also enjoy the one-on-one attention. Students that are struggling academically appreciate someone taking the time to help them learn the information and appreciate not being called upon in front of their classmates. Students that are excelling academically or socially appreciate the individualized attention because their educational abilities are recognized, and the interaction is geared towards what they can handle.

However, individualized attention is about boosting the motivation, personal connection between the teacher and student, as well as the self-esteem of the student, and thus it can be applied to activities that are not solely academic, such as a child's performance in a digital concert or drive by art exhibit. So, if a gifted student is bored in class the individualized attention will affirm to the student that there are still things to learn that foster gifted abilities (Potter, 2018). Due to the fact we know individualized attention for students is so important, it is not changed in its necessity by the virtual classroom (Bonanno, 2014). If anything, individualized attention is even more desired in the virtual classroom design because the students do not get the same type in person connection with the teacher as they do in a physical classroom setting.

If students are simply submitting assignments and reading emails individualized attention could appear in the form of a personal note for email or even a voice recorded message from their teacher. If students are taking part in synchronous learning through video chat or have

the capability to do so, it is also extremely motivating to either be acknowledged in front of the class in a personal but respectful manner (Koh and Kan, 2020). Or for the teacher to have one-on-one time with the student to discuss not only the student's education but life outside of school. One of the many ways that individualized attention can be incorporated into a virtual classroom is through the use of personalized messages.

When instruction occurs in class the teacher can deliver personalized attention through eye contact and personalized aside comments. On video chat or a virtual classroom, teachers are less able to effectively share deliver personalized feedback to the student, but they can send private messages, or even verbally acknowledge students on video chat in front of classmates to provide the same personal connection. Students' personal connection to the teacher displays that the teacher cares more about the students than just about their grades (Koh and Kan, 2020). The understanding that the teacher truly cares about the student gives the student an example of the teacher doing more than just the bare minimum. The students seeing the teachers model going the extra mile, can motivate the student to do so as well. A teacher can demonstrate going the extra mile by sharing personalized messages that let the student.

Individualized attention, whether the student realizes it or not, serves as an intrinsic and extrinsic motivation. Intrinsic motivation is applied when the teacher encourages the student, allowing the student to understand the student's identity as a learner as well as what goals they have personally (Riley, 2016). The individualized attention helps the student actualize and understand concepts even if the student might not use the same technical jargon (Koh and Kan, 2020). Extrinsic motivation can also be the product of individualized attention. Students strive to please their teacher and to be perceived a certain way among their class, with the recognition

serving as an extrinsic motivator in various forms such as compliments. Intrinsic and extrinsic

motivation can both be provided for through individualized attention.

Understanding of Improvement and Utilization of Knowledge

Students can also be motivated through the understanding of their improvement and

progress and also through an understanding of how to utilize the knowledge that they have. The

importance of understanding the improvement and progress made allows the student and the

teacher to understand why they are working in the classroom. It also allows the students to define

their goals as well as understand the learning goals of the teacher (Potter, 2018). A child

experiences extreme intrinsic motivation when the student can understand what has been

accomplished and how the student has improved in any subject area (Riley, 2016). For instance,

if students are learning to write the alphabet and they used to have minimal knowledge of how

to write letters and were only able to write the letters in their name. However, with teacher

directions, they can now write over half the letters in the alphabet correctly. The student is

encouraged by the accomplishment and works to achieve that again and to continue to learn.

However, an understanding of how to utilize knowledge can also serve as an extrinsic

motivator. When a student is aware of how to utilize the knowledge that the student has gained

the student then has a purpose for the work that the student is doing (Koh and Kan, 2020). For

example, if a child desires to later work as a meteorologist, the child's understanding of weather

and how it works would be an external motivator because it would allow the child to achieve the

goal of becoming a meteorologist. This motivation is external because it is impacted by other

fields and goals in order to incorporate this motivation into the classroom. Teachers should

continue to gather data and create reports on student success and achievement; they should then

share the reports not only with parents, but with students as well (Potter, 2018). Students could

also work with their teacher to create a digital portfolio that saves pieces of their work

throughout the year so that they can see the progress they have made. These are great options for

a digital learning format because these pieces of data provide evidence that can easily be logged

yet can be presented in a very professional way using digital formats. The student will not only

be motivated by progress but also by the impressive presentation that allows a professional

presentation of the student's accomplishments, with the grades serving as extrinsic motivators as

they are shared with the student's caregivers.

Meaningful and Intentional Incentives

Many classrooms utilize reward systems and incentives. Digital classrooms can

incorporate these incentives in the same way as in physical classrooms. In-person classrooms

may have incentives that can keep track of accomplishments and lead rewards that are among the

most common. Many teachers even use a form of paper currency in their classroom. Students can

use this currency to buy things for activities that they can have as rewards for their

accomplishments. Although teachers in a digital classroom may not be handing out paper

currency as they would in in person classrooms, they can still create reward incentives for

students. While the incentives maybe for different tasks in a digital classroom, this will provide

an extra motivational factor. The students are motivated by the desire of the reward or incentive

when they accomplish the task (Sousa and Rocha, 2018). Digital learning incentives can still

encompass a myriad of options. If a teacher has access to some sort of educational video game an

incentive might be to allow the teacher to unlock a new level of the game for the students.

Another incentive might be to allow students to have some say in what they choose to do for free

time or recreational activities for the week, this allows a student ownership of their education and

it motivates them to earn rewards (Riley, 2016). Other incentives include the ability of the

student to get to do something out of the ordinary during class time. This could be a free

homework pass, or the ability to share during show-and tell that occurs over a video chat

software.

Conclusion

Education, whether in a physical classroom or in a digital format, always requires

students to be motivated to learn. Digital learning has advantages and disadvantages; however, it

is important to note that regardless of the format the needs of the students must be met. Students

require intrinsic and extrinsic motivation to complete tasks and be motivated to learn the

information whether that be in a physical classroom or digital. While there are many ideas to

motivate students intrinsically and extrinsically while in the physical classroom, it can be much

more difficult to come up with motivational strategies for students in a digital classroom.

Teachers should use both intrinsic and extrinsic motivators to encourage students to complete

their work but more importantly to learn. While it is easy to assume that intrinsic and extrinsic

motivators are mutually exclusive, it is important to remember that they are not, and most work

together to promote student success. Cognitive Evaluation Theory and Social Determination

Theory determine that students will be impacted by their environment and begin to process it

internally, then assimilate their thought process to match.

Individualized attention, along with an understanding of progress in learning, and the

knowledge of utilization of skills are meaningful incentives help motivate students to learn and

participate in a virtual classroom. The more students feel like they are understood and

recognized, the more willing to complete necessary tasks and desired to do so as part of the

learning community. This can create intrinsic motivation factor as well as adding the desire to

interact with the teacher. In any digital format, individualized attention can appear in the myriad

of ways from one-on-one video chat conferences to personalized and specific comments on

assignments.

Students are also motivated by an understanding of the progress and improvement they

have made. Whether in or out of the physical classroom, students can achieve more when they

understand what they are striving to work for. Once students understand how far they have

progressed they are likely to have an intrinsic desire to achieve more. It is also important that a

student understand how the skills will be utilized in future coursework and outside of school.

Finally, motivating students using meaningful incentives is very important. Incentives are

commonly used in many aspects of life including physical classrooms. Digital classrooms are no

different, as students can be extrinsically motivated by the goal of working towards an incentive.

Incentives in classrooms are easier to implement because they are more obvious when

interactions are more than just on a screen. It is still possible to incorporate incentives for

students that are meaningful such as the opportunity for students to share something during

show-and-tell, the opportunity to have input into what activities the class chooses, or the

opportunity to participate in a class viewing party for a movie.

The need to motivate students intrinsically and extrinsically exists whether the students

are in a physical classroom or in digital classroom. Intrinsic motivation is the most effective and

should be a goal of teachers in digital learning. Cognitive Evaluation Theory emphasizes the

impact of a student's environment on their cognition. Then Social Determination Theory

explains the assimilation to student's motivating factors based upon their environment. Intrinsic

motivation in digital learning works to ensure a student is invested and will work hard to learn

especially since the student has less external accountability. Extrinsic motivation is equally

important and requires teachers to become creative with what is extrinsic as physical options are

not as readily available. The extrinsic motivation helps establish secondary goals apart from

learning that motivate the student; however, the student is driven by meeting the goals. Ideas to

motivate students in the digital format requires more effort and creativity. Intrinsic motivation is

more difficult to cultivate but intrinsic and extrinsic motivation are crucial to a successful

education, and even more so in digital learning due to the utilization of one medium, technology

for education to occur. However, students still deserve the full efforts of teachers to motivate

them as we strive to make them better digital learners for our digital world through class time or

FaceTime.

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