Journal of Research Initiatives

Volume 8 | Issue 2 Article 8

12-31-2023

Disrupting Pedagogy: High School Students Making Sense of the Flipped Learning Instructional Videos

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About the Author(s)

Dr. Celeca A. Sukra is a high school teacher in the New York City Department of Education. Her dedication to teaching has spanned over two decades, during which she has become a model teacher leader. Dr. Sukra's commitment to helping pre-service teachers who aspire to become urban educators is a testament to her passion for teaching and her desire to make a difference in the lives of others.

Keywords

Active learning, constructivism, educational technology, flipped learning, flipped classroom, instructional videos, pedagogy, self-efficacy, technology

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Abstract

Technology has impacted every aspect of modern culture, including education. The influx of educational technology in schools presents opportunities to explore ways to engage students in the learning process fully. Although students may enjoy using technology in their daily lives, it is necessary to carefully consider how these students make sense of technology in the learning environment. Using the theoretical framework of constructivism, this Interpretative Phenomenological Analysis (IPA) aimed to understand and describe the lived experiences of three students using technology to learn in a flipped classroom at a New York City public charter high school. The significant findings reveal that flipped instructional videos can afford students an active learning experience, leading to increased awareness of responsibility for learning and self-efficacy. The students' lived experiences in this research help secondary school professionals interested in implementing flipped instructional videos understand students' thoughts and feelings toward using technology to learn. The research findings suggest that classroom teachers may utilize flipped instructional videos to transform students' learning experiences. The article concludes with practice recommendations to help teachers use technology to enhance their students' learning experiences.

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Introduction

Over the past four decades, national educational reforms and research in the United States have emphasized exploring ways to fully engage all students in cognitively challenging tasks such as listening, saying, doing, writing, and openly discussing (Solis, 2008). Educators are often encouraged to leverage cutting-edge and all-inclusive technological instructional strategies to foster an engaging and dynamic learning environment that caters to the diverse needs of students.

In March 2020, the COVID-19 pandemic increased the need for innovative and technological teaching strategies that disrupted traditional methods, bridging student interests and academic requirements (Christensen et al., 2011; Bjerke & Nolan, 2022). To this end, exploring more modern and personalized educational approaches, such as flipped learning, has become crucial. As per the Flipped Learning Network (2014), teachers can revolutionize traditional teaching methods by intentionally moving direct instruction from the classroom to individual learning, using instructional videos that allow students to develop their understanding of concepts and procedures at their own pace.

Technology has undoubtedly transformed our world and has the potential to significantly impact teaching practices in schools and positively affect students' learning. Integrating technology in education promises to create dynamic classrooms that provide new learning opportunities, novel educational experiences, and support mechanisms that help students develop as self-directed, critical thinkers. Therefore, educational institutions should embrace technology and harness its potential to create an equitable and inclusive learning environment that caters to diverse needs and learning styles.

Current Study

Currently educators may observe students of the 21st century using computer-based Wi-Fi accessible technologies for reasons other than learning. With the ever-increasing digital landscape, staying connected 24/7 is crucial for the younger generation to thrive. Consequently, the United States Department of Education, Office of Educational Technology (2010, 2015) and several scholars such as Christensen, Holcomb, Horn & Johnson (2011), Bergmann & Sams (2012), and November & Mull (2012) believe that integrating technology into education would transform classrooms into learning environments that are providing students with the support and encouragement they need to become self-directed, critical managers of their work. Teachers and administrators are increasingly adopting technology-based pedagogy to create engaging, relevant, and personalized learning experiences for all students. This approach mirrors students' daily lives and the reality of their future (Hofer & Swan, 2010; U.S Department of Education, Office of Educational Technology, 2010). Consequently, many K-12 educators adopt technology into their pedagogical practices without understanding students' views or abilities to use technology appropriately.

Although students may enjoy using technology in their daily personal lives, there is a need to carefully consider how these students feel about using technology to learn and study. Therefore, this Interpretative Phenomenological Analysis research aimed to understand students' perceptions regarding integrating technology, mainly pre-recorded instructional videos, to enrich their learning experience.

Through open-ended interview questions with three students, the following research question guided this study: How do high school students make sense of flipped learning instructional videos?

The Research Method: The Interpretive Phenomenological Approach

The research utilized the Interpretive Phenomenological Approach to examine the experiences of three high school students using a combination of phenomenology, hermeneutics, and idiography (Smith et al., 2009). Through reflection, the student participants sought to make sense of their experiences using instructional videos in the flipped learning classroom and identified the essential qualities of those experiences. Adhering to the hermeneutical cycle or dual goal of the IPA analysis, the researcher attempted to make sense of the students' experiences (Smith et al., 2009). The hermeneutical circle manifested as the researcher engaged in the time-intensive analysis of each transcript to make sense of what the students discussed. Next, the researcher combined the parts to form a concise statement that captured what was essential and distinct for each student participant. In keeping with the idiographic commitment, the researcher listened to the students' voices to bracket the ideas that emerged during the individual analysis. This action allowed the researcher to hear each student participant's voice to maintain the focus of making sense of their unique experience.

In-depth discussions with the researcher helped the students examine and reflect on the learning experiences they had previously taken for granted. Thus, the true essence of being a student in the flipped learning video for instruction classroom was revealed, along with the hidden learning experiences. The students discussed how they perceived themselves as learners and evaluated the effectiveness of using instructional videos to support their learning experiences.

Constructivism and Flipped Learning

The framework of this research study comes from a constructivist foundation that seeks to explain how humans acquire knowledge (Attan, 2012). Moreover, constructivists hold that students' learning is based on personal experiences and interactions with the environment (Cobern, 2013). Within this study, the researcher engaged the constructivist lens to make sense of the unique learning experience of three high school students and their interactions with instructional videos in the flipped learning classroom. The focus was on creating knowledge students acquired through active engagement with the technology in their social context. Active engagement refers to the video for instruction strategy that engages the students in the flipped learning environment. Active learning included completing assignments and direct learning from the videos for instruction that students completed during and outside the classroom. The students' unique experiences help them understand how using instructional video to learn content in the flipped learning classroom works. Using the constructivist approach, the research findings suggest that students should have "active and alert, not passive and receptive" learning opportunities.

Results

Traditional Pedagogy: Learning Before Flipped Instructional Videos

Before introducing instructional videos, the students suggested that the passive learning regular classroom environment was the quintessential teacher-directed structure with the teacher at the front of the room 'explaining' the content and guiding the critical thinking process. In contrast, students passively sat quietly in straight rows, occasionally taking a risk by raising their hands to ask a question or to seek clarification. Without exception, students concurred that learning happened in the regular classroom. However, there needed to be more satisfaction with the restrictive environment that adhered to the teacher's established norms and the traditional learning strategies. At this school, the students expressed that learning the content by rote memorization in preparation for tests was common practice. Additionally, the established norms in their 'regular classrooms' involved teacher-to-student transfer of information with little emphasis on student-centered instruction. This finding supports Kohn's (2000) view that teachers no longer invite students on an intellectual adventure that helps them acquire knowledge thoughtfully.

These students suggested that there were more appropriate ways to learn the content than the passive instructional strategies in the regular classroom. A common issue among students was boredom and disengagement in traditional learning environments. Pedagogy in the regular classroom did not revolve around best practices; instead, the students experienced a back-to-basics approach to learning. The vital element within these students' classrooms was the delivery of the content and forward movement of the curriculum. These practices eliminated excitement about learning as the students' interests were sacrificed. This finding supports Reese (2001), who argued that a shared experience within many American classrooms was an atmosphere of lifelessness.

The students suggested they did not enjoy learning in the regular classroom because of the one-dimensional, 'one size fits all' approach, which only sometimes supported their learning needs. The "one size fits all" strategy appears to be a vague endeavor to hold teachers accountable to the curriculum's requirements and the lessons' pacing needs. Furthermore, the students observed that the teacher expected all students to grasp the content via lecture within the same allotted time. All students were expected to process the content at the same pace. There needed to be more room for multiple entry points or differentiation. This approach was challenging for students and the teacher because it was evident that not all students learned the same way. The students consistently spoke of the demanding nature of the regular classroom.

Within the traditional classroom, the students spoke about the limitations of relying on the teacher for knowledge. Specifically, the students spoke about the limited time to listen to the teacher and process and comprehend the assigned content. One student said, "Some teachers show you something once and expect you to know it immediately." The teacher needed more time to meet individual students' needs. The students were expected to keep up with the teacher's pace and expectations. Students spoke about their fear of missing information if their attention needed to be improved.

Disrupting Traditional Pedagogy – Using Flipped Learning Instruction Videos

The flipped learning instructional video lessons moved traditional lectures onto an asynchronous video format, which widened students' time to engage in the content. Although students were accustomed to a passive, teacher-directed learning environment, they readily accepted the shift to video for instruction. All students were comfortable when the learning

environment was altered to include technology. Students concurred that learning in the video for instruction classroom was a different experience that promoted learning by creating a safe space that allotted ample think-time, increasing content comprehension. Moreover, the students shared that flexibility to think and process the content at their own pace and promoted a "can do" independent mindset. Here is one student's perception of the convenience and flexibility of the video for instruction lessons:

> *With the videos, I could do the work anytime. I feel free. You cannot do that in other classes. So, that will always be easier than being in the regular class. Let us say you go to the bathroom when the teacher says something which is essential. You may miss it. With the videos, you can take a break, go to the bathroom, and return; it will still be there. You can pause it and play it. It is always going to be there."*

These insights are consistent with the findings in the research by Sams and Bergmann (2013) that students were receptive to learning that used technology to create flexible, self-paced learning systems. All the students spoke about the benefits of self-paced, individualized learning that was a central aspect of the video for instruction.

Using instructional video moved students to the center of learning by providing opportunities to think about the content. The students concurred that the video-for-instructional method immediately transferred much of the responsibility for learning to the students. The time necessary to process the content was customized by the student, who took control of their learning pace. Students were self-regulators who had the daily option to work independently. The individualized pacing allowed students to watch the video during class, where they could ask clarifying questions immediately. This finding supports the work of researchers such as Christensen, Holcomb, Hone & Johnson (2011) and November & Mull (2012), who suggested that integrating technology into education would transform classrooms into learning environments that provide students with the support and encouragement they need to become self-directed, critical managers of their work. Students did not relate video for instruction to listening to a lecture in the regular classroom. Instead, they found the technology-rich video for the instruction learning environment enjoyable. Students concurred that listening to the video for instruction was more leisurely than listening in the regular classroom. Students suggested

listening and understanding the content was more accessible than the traditional classroom lecture.

The students proposed that video instruction fosters hands-on learning, feedback, support, and knowledge building. This finding concurred with Ayas (2006), who posits that technology can facilitate unique learning environments to make traditional learning more powerful and effective. Integrating technology into the traditional lecture established an active learning experience for the three students accustomed to passively receiving content information for memorization. The learning was driven by accountability that challenged students to cognitively engage in tasks such as listening, saying, doing, writing, and openly discussing (Solis, 2008). The video for instruction altered the kind of instruction standard in the student's educational landscape.

The students experienced an increased understanding of the content and completed the task, increasing their self-efficacy. However, the students reported that mastering the learning process was not automatic and required various strategies due to technology integration. Students shared that the video for instruction was an effective way of learning the content because it was easier to control the flow of information. The ability to engage repetition as a strategy to make the learning "stick like glue" allotted multiple opportunities to engage the concept. The ability to control the instructional pacing was an essential component that encouraged students to work harder and persevere longer. The video for instruction allowed students to slow down or speed up the video's pace to support their specific needs. The students who required extra time to process aspects of the lesson were able to accommodate their learning needs. Using video for instruction, the students could pause, rewind, fast forward, or watch multiple times to think profoundly and fully consolidate an understanding of the content. One student said:

> *"If you have a video of the teacher teaching, you will always just watch the video again. It takes me more time to learn, and by doing anything more than once, I will soak it up better. Some teachers just show you something, and they expect you to know it, but I need to know why something works, not just that it works. A learning video is better, just being able to rewind it, pause it, and listen to it again, no matter what, it might make more sense to you. Yeah, that is the upside of a video."*

Students believed instructional videos were beneficial to their ability to persist longer to learn the material and understand the concepts. The findings of this research study concurred with Green's (2013) suggestions that in the high school setting, the flipped model leads to greater student engagement and higher motivation.

Within the flipped video for instruction classroom, students experienced an increased awareness of responsibility. The finding concurred with the work presented by (Fairey et al., 2000), who maintain that technology use in the classroom boosts student motivation by empowering students to take ownership of their learning. One central observation was that the responsibility for learning the concepts was transferred from the teacher to the students. The learning process shifted from 'one size fits all' to an individualized self-paced format. As such, students spoke about the various ways in which they readjusted their approach to learning. One of the students expressed, "We have to do what we have to do to learn." The finding supports some researchers (Yaeger & Morris, 1995; Fairey et al., 2000) who have shown that technology can be a productive tool for developing skills such as deductive thinking, problem-solving, investigation, creative thinking, and interpretation. Since video for instruction engaged visual and auditory learning, the students were no longer passive in the learning process.

Limitations of the Study

This qualitative study had a three-sample size, representing students who met the criteria of experiencing the flipped video for instruction in an urban high school. All students attended the same high school and had the same teacher. While this created a homogenous sample for the current study, it may only represent some of the students at the high school who experienced video-for-instruction in the flipped learning classroom. Additionally, the study had a small sample size to make the findings more generalizable to the population. The primary reason for the small sample size was the students' resistance to participating in a research study. Furthermore, many students hesitated to speak with an "outsider" regarding the practices in their classrooms.

Conclusion

More than ever, instructional technology is becoming essential in today's classrooms. This research addressed how high school students make sense of their experiences in the flipped video for instruction classroom. The key findings presented in this research shed light on how

students in this context participated and made sense of their experience using instructional video in the flipped learning classroom.

The research findings demonstrated the unique experiences of each student as well as a connection to literature within educational technology. The findings spoke to the student's experience in the traditional learning environment before video integration for instruction. The students explained that the regular classroom did not allow them to take responsibility for their learning. Furthermore, curriculum advancement was a central concern for classroom teachers. The students shared that the lessons progressed regardless of their understanding, mastery, or both. Within the regular classroom, the emphasis was on the teacher's delivery of the instruction, not the students' engagement in the learning process. This finding illuminated the need for classroom teachers to refrain from dominating the learning process with lecture-style instruction. Students should have most of the responsibility in the learning process. These findings resonated with previous research that stated students learn best when they are involved in participatory learning activities rather than passive recipients of a body of knowledge (Prince, 2004). A recommendation for teachers who employ the traditional approach to pedagogy within the classroom is to design lessons that reduce teacher talk and increase student talk. This format would allow teachers in the regular classroom to briefly explain the critical learning skills and expectations and then release the students to engage in the learning process. This format would allow students in the regular classroom to learn the skill, process, and reflect on newly acquired knowledge while collaborating with their peers.

Recommendations for Practice

The unique context of this research has provided an opportunity to improve the flipped video-for-instruction program at this school. Technology can change the experiences of students in today’s classrooms. However, there is a need to better guide students in using technology to enhance their learning experiences. Incorporating video into instruction is a beneficial practice for teachers. However, to improve the effectiveness of this approach, it is crucial to personalize the flipped learning experience according to individual students’ interests and needs. By doing so, teachers can achieve a more meaningful and engaging learning experience for their students. Therefore, educators should modify their teaching strategies to accommodate diverse student needs with a personalized approach.

Design an Integration Plan

The implementation of video for instruction should transform classrooms into learning environments that support students in becoming self-directed learners. Thus, a critical recommendation for high school teachers seeking to integrate technology using the flipped video for instruction is to consider the classroom population and carefully design an appropriate integration plan. The scanned learning integration plans must meet the students where they are and challenge them to reach higher. The centerpiece of learning in the video for instruction classroom is the careful planning of coherent instruction that meets the individual needs of all students. The shifting of learning from the regular classroom format to the video-for-instruction format requires the thoughtful planning of quality lessons that seamlessly deliver precise and accurate content knowledge that advances the understanding of all students. Therefore, educators must ensure the concepts and content produced on the video for instruction platform are explained clearly and accurately, more so than in the regular classroom.

Differentiate & Scaffold Implementation

Educators interested in creating flipped videos for instruction must adapt and be willing to use multiple access points across the curriculum. Educators must know the needs of the population in their classrooms. In a learning environment where knowledge is power, educators must recognize the brilliance of all students and provide instructional opportunities that demand critical thinking while at the same time assuring that all students gain access to "basic skills" that are the conventions and strategies essential to success in the 21st-century society. Furthermore, recognize that each learner is different. In today's classroom, the educator needs to find the best way of encouraging learning that allows all students to access the content uniquely. The flipped video for instruction is an opportunity to differentiate learning to advance those high-achieving students who demonstrate the readiness to grow beyond the teacher. At the same time, flipped video for instruction can be foundational support for those students with significant gaps in their learning. Based on the findings in this research, it is evident that planning the video for instruction curriculum must be approached using guidelines different from regular instruction. Classroom teachers should establish protocols to help students transition from teacher-directed learning to video-for-instruction. Teachers can adjust instruction based on simple checks for understanding during regular classroom instruction. The video for instruction method needs to

provide teachers an immediate opportunity to check for understanding. Therefore, if the video-for-instruction method attempts to create a high-quality academic opportunity for all students, the execution and content delivery must make high-level learning.

In a traditional classroom setting, the teacher delivers lessons and imparts skills to the entire group of students. Usually, the skills students need to succeed are often demonstrated for the first time. The lessons might be differentiated to support the learning needs of a percentage of the students. The students who understand the teacher's directions can participate in the learning task. On the other hand, 50 percent of the students who needed to internalize the teacher's direction might need to be more consistent with the material and learning environment. These students might have the willingness and desire to participate in the lesson; however, the skills they need to be successful did not immediately transfer from the teacher. The use of the video for instruction provides these students the opportunity to revisit the teacher's directions (content or skills) at their own pace — the video functions as a strategy to support the learning needs of all students. Once the students acquire the prior knowledge required to complete the task, he or she is more likely to show positive behavioral and emotional involvement in the learning activities.

Overall, teachers must ensure students learn using video for instruction. When students can learn using video for instruction, the curriculum could be differentiated to meet students' learning needs: pace versus complexity. The higher-level students who require rigorous content and rapid advancement in pace can progress through the curriculum. At the same time, students requiring support could slow the pace down to better understand the material in a way that makes sense.

Progress Monitor

It is the responsibility of educators to monitor and assess student needs closely. Therefore, students should not simply listen or watch videos – students must "do" an activity to demonstrate comprehension. To ensure students engage with the learning experience, teachers must establish non-negotiables: watching videos and completing check-for-understanding assignments. After watching the video, students should be able to acquire a specific skill or articulate meaningful thoughts and ideas about its content. Then, teachers can create rich learning experiences emphasizing higher-order thinking skills and application. After the activity, the teacher should assess it and factor it into the student's final grade. To effectively support their students' learning,

teachers should be deliberate and focused when selecting videos to incorporate into their curriculum. The video assignments need to align with specific learning objectives and serve a clear purpose in the overall lesson plan. By doing so, teachers can ensure that the videos are practical tools for enhancing their students' understanding and comprehension of the subject matter.

Recommendations for Further Study

Based on the findings of this study, future research should investigate the effectiveness of flipped instruction for promoting academic achievement in a specific content area. This study focused only on the experiences of the high school participants in the video for an instruction learning environment. Researchers should investigate whether flipped learning educational technology can improve student academic achievement or readiness. Future studies with the flipped learning classroom might explore the intersection of intellectual abilities and technology, specifically, how English Language Learners or students with learning disabilities experience learning using video for instruction.

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