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Secondary Mathematics Teacher Decision-Making and Their Selection of Digital Materials

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ABSTRACT As online spaces for mathematics content and lesson plans become more accessible, teachers are exploring these websites to make decisions about instructional materials for their courses. These resources then have an impact on what is enacted in the classroom and what opportunities students have to learn mathematics. One of the most popular online spaces teachers frequent is Teachers Pay Teachers (TpT). Using the Remillard and Heck's model on curriculum enactment, this study investigates secondary mathematics teachers' decision-making process and the heuristics they rely on when choosing mathematics content from online spaces, namely TpT due to its extensive use by educators. Findings suggest that these participants exhibit reliance on the availability, representativeness, anchoring and adjustment, and groupthink heuristics.

KEYWORDS *mathematics teacher education, digital curriculum resources, heuristics, TeachersPay Teachers (TpT), secondary mathematics instruction*

Introduction

Teachers across the United States are increasingly using resources from the internet as they plan their lessons, despite the fact that many states, districts, and schools have policies in place listing approved or mandated curricular materials, such as textbooks, prescriptive curricula, and district-level materials (Gewertz, 2015; Pittard, 2017; Timberlake et al., 2017). A 2019 RAND Corporation *American Instructional Resources Survey* (AIRS) of a nationally-representative sample of teachers showed that 88% of the survey's respondents consult online sources as they plan for instruction, including Google, Pinterest, Facebook, and Teachers Pay Teachers (Tosh et al., 2020). In another survey, 56% of mathematics teacher respondents specifically referenced Teachers Pay Teachers (TpT) for digital materials on a weekly basis (Doan et al., 2020). These resources have an impact on what is enacted in the classroom and what opportunities students have to learn mathematics.

Teachers point to a host of benefits from online resources, including improved content knowledge and pedagogical content knowledge, increased self-efficacy, greater understanding of social justice and equity issues, and relationships with educators outside of their schools and districts (Carpenter et al., 2020; Shelton & Archambault, 2018). Yet, researchers have found evidence that unofficial resources from online spaces may not be standards-aligned, developmentally appropriate, culturally relevant, or even accurate (Gallagher et al., 2019; Greene, 2016). For instance, Sawyer and colleagues (2019) found that within the 500 most popular elementary mathematics "pins" on Pinterest, 98% were of low cognitive demand and focused on classroom aesthetics. This implies that teachers need to be vigilant about the quality and alignment of unofficial materials they find on online spaces, so that students are not exposed to inaccurate or inappropriate curricular materials.

Teachers make many decisions throughout their lesson planning process based on their content and

pedagogical content knowledge to determine which curricular resources to use in their classrooms. There is still much to understand about the ways in which teachers make these decisions using online spaces. This paper aims to investigate teachers' decision-making processes and the heuristics (i.e., mental shortcuts) they rely on to identify suitable materials to use with their students from online lesson plan sharing websites (Doan et al., 2020; Kaufman et al., 2020; Sawyer et al., 2019; Shapiro et al., 2019).

Background

As online spaces for mathematics content and lesson plans become more prevalent, teachers are exploring these websites to make decisions about instructional materials for their courses (Greene, 2016; Pittard, 2017; Tosh et al., 2020). These online spaces may include state-sponsored websites like EngageNY or third-party sites such as Pinterest, Instagram, Facebook, Twitter, and TpT (Sundrani, 2021). The types of content teachers search for range from downloadable scavenger hunts to complete year-long curricula with notes, activities, homework, and assessments. The sources mathematics educators reference may vary based on need, leading them to use a variety of spaces as indicated by Prado Tuma and colleagues (2020; see Table 1).

One of the most popular online spaces teachers frequent for lesson plans is Teachers Pay Teachers. TpT is a platform that allows teachers to share their original content on the website for other educators to view and download, either for free or for a listed price. The materials posted range from single worksheets to an entire year's worth of units and assessments for the subject area. Teachers search key terms to identify what they are looking for, read a description for the listing once clicking on it, view snippets of the content through the "preview" feature, and then buy the material they feel matches their aims. TpT allows teachers to create and share original content that they feel may be more appropriate for their students than those disseminated by their district or school. Currently, the site does not vet the lessons that are posted for purchase or free download, so all ratings, downloads, and reviews are wholly based on teachers' experiences with the materials (Gallagher et al., 2019; Greene, 2016). However, this also means teachers are unable to truly identify the depth at which these items cover the concepts they hope to teach, nor is there any verification of alignment to their state standards (Polikoff & Dean, 2019). Unfortunately, teachers may not know this until they have already chosen to purchase these curricular materials or may not have the content or pedagogical knowledge to assess the quality of the materials selected. Time constraints can also complicate teachers' decisions to download certain materials (Gallagher et al., 2019). Despite these issues, TpT has gained more visibility over the past decade as they report that "more than 2 out of 3 U.S. teachers" use their platform (About Us | Teachers Pay Teachers, n.d.).

Table 1

Mathematics Educators Most Used Digital Planning Sources in the 2018-2019 Academic School Year (N=2,015)

Online Space	Relative Frequency
Teachers Pay Teachers	56%
Search Engine (e.g., Google)	35%
Pinterest	23%
Common Core State Standards Initiative	22%
Kuta Software	18%
State Department of Education Websites	14%

Theoretical Framework

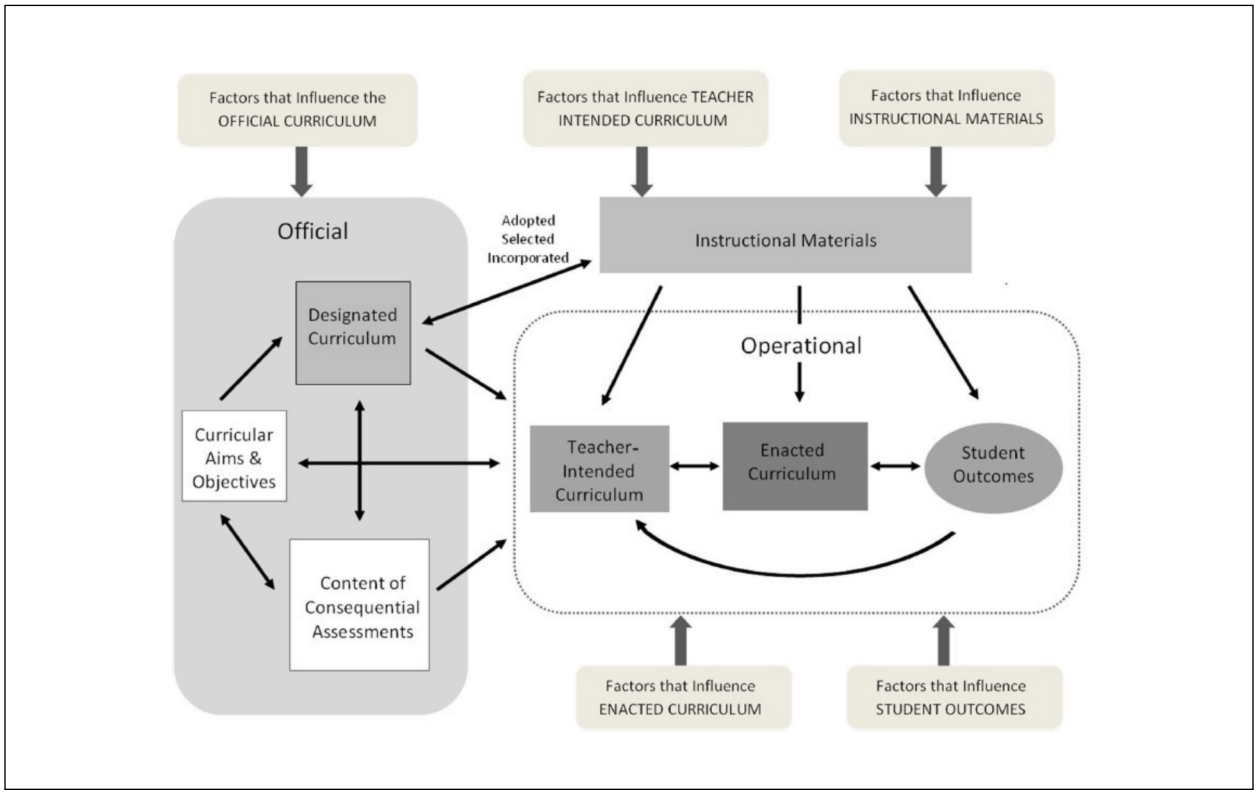
This study draws from the theoretical framework of teacher decision-making to investigate how teachers choose and use online curricula. Remillard and Heck's (2014) model of the curriculum enactment process provides further insight into which factors may guide teachers' decision-making when using their selected materials.

Teacher Decision-Making

Teachers are constantly making decisions related to their curriculum and instruction (Herbst et al., 2016; Holstein & Keene, 2013; Schoenfeld, 2015; Shavelson & Stern, 1981; Smith et al., 2018). During the planning phase of the curriculum enactment process, teachers' decisions focus on balancing activity flow, predictability during the lesson, choice of content, student needs, and instructional style, all while taking into account external pressures from state and local policies, administrators, or other educators (Shavelson & Stern, 1981). According to Remillard and Heck (2014), these external pressures represent the official curriculum; each has a direct or indirect effect on what materials the teacher uses in their classroom. The operational curriculum is where teachers are able to engage in cognitive processes and factors that are influenced by their beliefs, content knowledge,

Figure 1

Model of Curriculum Enactment Process (Remillard & Heck, 2014)



pedagogical content knowledge, and judgement (Shavelson & Stern, 1981). The complexity of official and operational curricula are represented in Remillard and Heck's (2014) model on the curriculum enactment process (see Figure 1). This paper focuses on the factors that influence the teacher-intended curriculum that feed into the operational curriculum within this model. Teacher-intended curriculum focuses on the planning phase of curriculum enactment where teachers take any components of the official curriculum and align them with their curricular materials and pedagogical goals.

Mathematics Educators Decision-Making

Mathematical decisions are "those decisions that influence students' opportunity to learn mathematics, and teachers' reasoning for those decisions" (Dingman et al., 2019, p. 44). Researchers have explored what decisions mathematics teachers make during the planning and enactment of lessons and the drivers of these decisions, including mathematics content knowledge, pedagogical content knowledge, and teacher beliefs (Bush, 1986; Choppin, 2011; Dingman et al., 2019). However, external factors can have an impact on mathematics teachers' decision-making in planning and implementation of lessons. For instance, teachers may be encouraged by other teachers or administrators to focus on basic skills to improve standardized test scores (Lu et al., 2021), or teachers may have difficulty planning for mathematics instruction that balances the various content objectives with the amount of time they have with their students (Leong & Chick, 2011).

Potential Obstacles to Teacher Decision-Making

Educators are expected to make a multitude of decisions throughout the curriculum planning process. Unfortunately, teachers often are not provided adequate planning time and resources (Tichenor & Tichenor, 2019), which may lead them to rely on heuristics including availability, representativeness, anchoring and adjustment, and groupthink when making decisions (Jaeger, 2020; Tversky & Kahneman, 1974). Pulled from the field of cognitive psychology, these heuristics can be applied to teachers' lesson planning processes. See Table 2 for a definition of each decision-making heuristic.

The availability heuristic places importance on the perceived frequency of an event or stimulus, which may lead individuals to incorrectly predict an outcome of an event based on previous experiences, salient memories, or other readily available examples (Greening et al., 1996). This heuristic has been used in a variety of

Table 2

Definitions of Decision-Making Heuristics

Heuristic	Definition
Availability	Individual places importance on the perceived frequency of an event based on recent experiences or salient memories
Representativeness	Individual links the occurrence and characteristics of an event to another based on existing prototypes or stereotypes
Anchoring and Adjustment	Individual begins with an initial value or assumption and adjusts that value to get to a final answer or result
Groupthink	Individual forms a unified approach due to external pressures, such as other peoples' actions or beliefs.

studies about decision-making such as financial analysis (Kliger & Kudryavtsev, 2010; Lee et al., 2008), recall and prediction of events (Greening et al., 1996; Kamiya & Yanase, 2019), and politicians' judgements (Vis, 2019). For instance, Eisenman's (1993) study revealed that although the rate of drug usage in the United States since 1972 was decreasing, college students believed that this rate was actually increasing because of other messaging. In the context of education, this heuristic may lead teachers to use lessons with contexts they are familiar with through teaching strategies and sources they have been exposed to recently, such as teaching slope through the analogy of two runners in a race showing up in multiple teacher-created materials.

The representativeness heuristic links the occurrence and characteristics of an event to another. In a social context, the representativeness heuristic leads individuals to compare individuals or events to a prototype or stereotype (Jones, 1995). Anglada-Tort (2019) asserts that musicians may make evaluative claims about certain compositions based on their preconceived notions about musical genres, as opposed to the composition's merit. Using this heuristic, a teacher may be drawn to the strategy of "drill-and-kill" because they were exposed to that type of environment throughout their schooling. This belief could lead to a reproduction of a behaviorist approach to teaching mathematics.

The anchoring and adjustment heuristic involves adjusting an initial value to get to the final answer (Parmigiani, 2012; Tversky & Kahneman, 1974). If the anchor is based on weak evidence or a faulty assumption, the adjustment will result in an incorrect answer (Fortune & Goodie, 2012). For example, Siddiqi (2018) references the top three information technology firms in the S&P 500 index, the most successful of which is Apple. He asserts that "a typical investor may start from Apple and then attempt to make appropriate adjustments to form judgments about the other two firms" (Siddiqi, 2018, p. 250). Because of the large gap between the earnings of Apple versus the other two firms, these adjustments fall short of appropriately understanding the earning potential of these other two companies. An educator could enact this heuristic by making faulty assumptions about students' ability levels and planning a lesson that does not meet the students' needs.

It is well-documented that teachers have been shortchanged on common planning opportunities (Ross, 1993; Tichenor & Tichenor, 2019). Therefore, teachers may hasten their decision-making process in collaborative spaces by using "groupthink" – the individual's desire to form a unified approach due to external pressures (Jaeger, 2020). Clark (2013) found that while preservice social studies teachers were able to articulate sound pedagogical reasons for using graphic novels to engage their students in conversations about social issues, they admitted that they would likely not utilize them out of fear of rejection by teachers and parents. This desire to conform was so pronounced that the preservice teachers did not even consider the idea of using graphic novels, despite no indication of who their future colleagues and parents would be.

Technology serves as an additional dimension within decision-making, as teachers may connect with individuals in online spaces when accessing digital curricular resources. Given the complex nature of the curriculum enactment process and decision-making that must occur prior to instruction, applying the four aforementioned heuristics to decision-making in online spaces may assist researchers in understanding teachers' rationale for choosing instructional materials.

The purpose of this study is to understand secondary mathematics teachers' decision-making process when choosing mathematics content from online spaces. This study will focus on TpT due to its extensive use by educators. The following research questions guided this exploration.

1) How do secondary mathematics teachers choose what online materials to use to teach and/or supplement their curriculum?
2) How do secondary mathematics teachers rely on heuristics to guide their decision-making process when choosing online materials from Teachers Pay Teachers for their instruction?

Methods

To answer the research questions, this study employed a multiple case study method (Yin, 2009) with three participants. The TpT platform was chosen as the focus of each participant's heuristic use in this study as its use is most prevalent amongst mathematics educators (Tosh et al., 2020). Recruited participants self-reported using TpT at least once per instructional unit.

Table 3

Participant Details

Participant	Details
Patrick	Secondary Geometry and Algebra II teacher at a public school in Texas
	White male under the age of 40 and holds a secondary mathematics teaching certificate and bachelor's degree
	School district provides teachers with mathematics curriculum but does not require educators to use them
	Uses Teachers Pay Teachers because he believes it is a time saver and can fill in any gaps he has in instruction, such as providing additional practice for students or mathematics-related games
Nancy	Secondary mathematics teacher at a public K-12 school in Illinois, where she teaches a number of grades 6-12 mathematics subjects including Algebra I and Statistics
	White female under the age of 40 and holds a secondary mathematics teaching certificate and a master's degree
	School uses a teacher-selected set of textbooks and accompanying online modules that she helped choose, so she uses this set for most of her mathematics curriculum
	Uses Teachers Pay Teachers because she believes it is a safe and reliable site to find supplementary materials
Jack	Secondary Algebra I teacher at a public high school in Nevada
	White male over the age of 40 and holds a secondary mathematics teaching certificate and a master's degree
	School provides a textbook and the district maintains a website that houses curricular materials, but teachers are not required to use any of these materials
	Uses Teachers Pay Teachers because of the types of activities that are sold on the website that he cannot find through his district and school-provided content

Participants

Three in-service secondary mathematics teachers (see Table 3) were selected to take part in a semi-structured interview through voluntary participation. Participants for the study were solicited through Facebook Groups including "Secondary Math Teachers" and "Algebra Teachers" and through snowball sampling. All names are pseudonyms.

Data Analysis

To answer the posed research questions, participants were asked about instructional resources provided by their school or district, how they use the internet to plan for instruction, and how they use TpT to plan for instruction. The interview transcripts were then open coded at the response level to find instances related to decisions made in online spaces and within the TpT platform to plan for instruction (Saldaña, 2013). Responses were then categorized to identify which online spaces the participants used, the specific types of materials selected, and their process for selecting these materials. In a second round of coding, excerpts were labeled using the a priori codes of availability, representativeness, anchoring and adjustment, and groupthink based on the heuristic definitions provided in Table 2. The operationalizations of these codes were guided by the literature and participant responses.

Decision-Making Heuristics in Education

Because availability, representativeness, anchoring and adjustment, and groupthink have been traditionally used in the field of cognitive psychology, the following operationalizations for the field of education determined by the literature and respondent excerpts are provided (see Table 4). The availability heuristic consists of responses that associate certain types of activities and lessons with other educators or recent examples, whereas the representativeness is operationalized as quality of materials in reference to or alignment with instructional objectives. The anchoring and adjustment heuristic is presented as additional contextual characteristics not directly associated with pedagogy that may impact a teacher's decision to download certain digital materials or not. Lastly, groupthink is operationalized as any reference to other individuals and their knowledge or insights when selecting digital materials to purchase and use.

Table 4

Operationalization of Online Decision-Making Heuristics

Heuristic	Observable Descriptions
Availability	I like to use scavenger hunts from Teachers Pay Teachers because I've seen they get students up and moving.
	I was looking for a specific lesson I've seen another teacher use before.
Representativeness	I was looking for worksheets with a lot of problems, so the students could practice how to solve multi-steps equations.
	The listing's description stated that the assignment focused on the standard I was getting ready to teach.
Anchoring and Adjustment	I had a feeling my students were going to be tired after taking a standardized test, so I was looking for a fun activity to do with them.
	My department chair told me that the students in my class were at risk for failure, so I wanted a lesson at a lower level.
Groupthink	The lesson I was looking at had a lot of really great reviews saying things like they were glad they purchased it.

Results

In the following sections, I will present results related to each teacher's use of online spaces overall and highlight the ways the participants exhibited each of the four decision-making heuristics.

Teachers' Use of Online Spaces

Aside from TpT, the only other online spaces the participants identified as planning resources were Google, Facebook, and Desmos. When using Google, Patrick indicated that he used simple searches and clicked on results that he found interesting. On Facebook, Jack is a part of educator groups that discuss curriculum and instruction. When members of these group write posts, they appear on Jack's Facebook Timeline. When posts with materials attached or linked appear on his timeline, he downloads those resources. On Desmos, Jack uses the search bar and filters to look for lessons that align with his topic.

However, on TpT, the teachers have more control in their searches. Patrick and Jack stated they begin with a topic and sometimes select an activity type filter. Then, they filter their selections by topic alignment and view individual item listings. Patrick uses the preview provided for the listing to see if the item looks organized and appropriate for his classroom. Finally, Patrick references reviews on the listing. Nancy identified TpT as the only online space she frequents to find supplementary materials for her classroom. When asked about her reasons for using TpT, Nancy stated that she believes that TpT is a safe and reliable website. She elaborated by giving the example of a YouTube video that might align with her objectives for the first two to three minutes, but then "something in your classroom pops up, and it's unacceptable." While Nancy did not elaborate, it was apparent that she felt there she did not have enough control over what would be presented to students through YouTube. Nancy also pointed to the multiple filters on TpT that allow her to look for resources based on subject area and standard.

Teachers' Use of Decision-Making Heuristics

Each of the teachers in this study approached their selection of digital materials from TpT in unique ways and therefore exhibited the four decision-making heuristics in distinct ways and to varying degrees. In the sections below, I detail how each teacher relied on these heuristics based on their pedagogical goals.

Availability

During his interview, Patrick exhibited traits of the availability heuristic in two ways. The first way was that Patrick pointed to specific types of resources that he looked for on TpT, including mathematics mazes and scavenger hunts. He associates these types of activities and other games with opportunities for students to practice certain skills. Patrick also often selected lessons from the "All Things Algebra" TpT page, as that seller is often at the forefront of his mind, showing up as one of the top results in his TpT searches; he specifically mentioned this profile twice during the interview but did not point to any other sellers on TpT. One of the most salient ways Nancy exhibited the availability heuristic was through her desire to find resources that could be used online, especially Google Forms. Because her required curriculum has an online component, she is drawn to supplementary materials that use the same modality. Lastly, Nancy uses the "favorite" button on TpT to mark items that she has purchased and enjoyed using, so she can return to those sellers to find additional materials for use in her classroom; in this way, she prioritizes sellers based on previous materials and associates them with high quality materials. Throughout his interview, it was apparent that much of Jack's

decision-making process relied on the availability heuristic. Most of his focus when using online lesson plan sharing websites was the availability of activities – scavenger hunts, gallery walks, and games. He believes that activities like these are more interesting, as well as "a little different and [give] a little freedom." He also uses TpT to purchase test banks for ExamView, as using these test banks have saved him time while creating assessments for his students.

Representativeness

During his interview, Patrick stated outright that the most important aspect of searching for curricular materials from online spaces such as TpT is alignment to instructional goals. From there, he looks for resources that he likes and believes will "fill a hole" in his lesson based on previews of items. Patrick admits that, "I probably have passed on good resources because the preview is garbage, but if I can't tell what it is, I'm not spending money on it." If he perceives a resource to not be representative of his conception of a good quality material (e.g., aligned to standards, building on existing lessons and assignments), he does not purchase the item. Nancy also places importance on the representativeness heuristic, as she focuses her attention on TpT lessons that are aligned to her standards. Therefore, any resources she chooses are representative of appropriate content for her students. Additionally, she methodically reviews the description and preview of any listing from her search results as she makes the decision to purchase the item. She believes that the preview gives her a more realistic view of what she is purchasing, and it is this information that is the most important on a TpT listing. Lastly, Nancy believes the ability to provide instantaneous scores and feedback is representative of a timely and efficient resource, which Google Forms allow her to do. This way, she can provide additional help to her students and allow them to redo the assignment to improve their content understanding. While the representativeness heuristic was not a major guiding factor in Jack's decision-making process, Jack mentioned difficulty levels of problems multiple times throughout the interview as a proxy for high-quality instructional materials, signaling that his perception of the rigor of an activity is representative of a high-quality activity.

Anchoring and Adjustment

The primary way Patrick relies on the anchoring and adjustment heuristic is his concern for appearance of TpT items. Based on the listing's preview, Patrick assesses the activity's flow, pedagogical approach, logic, and readability. Patrick does admit that he may still end up choosing a digital resource on TpT that is not aligned with his pedagogical goals. However, TpT is the first website Patrick visits during his lesson planning process, indicating that his perception of high-quality materials is set based on the types of curricular resources offered on the TpT platform. As stated earlier, Nancy follows sellers on TpT based on her experiences with previous materials she has purchased and enacted in her classroom. If she sees these sellers in subsequent searches, she is more likely to purchase materials from them because of her past interactions with them. Therefore, Nancy considers these sellers to be producers of high-quality resources and returns to their profiles for future materials instead of starting entirely new searches. Interestingly, in this way, Nancy relies on both the availability and anchoring and adjustment heuristics simultaneously when selecting TpT content based on seller profiles. Jack did not show significant signs of using the anchoring and adjustment heuristic during his interview.

Groupthink

During his interview, Patrick referred to himself as a novice teacher and points to materials on TpT as "leveraging like other people's experience and knowledge that you just don't have yet." Patrick is drawn to TpT because it is a website solely devoted to "good teachers who have been doing it [creating instructional resources], helping out those who need the support." This view of TpT suggests that Patrick uses the website as a way to connect with more experienced educators and to borrow their instructional materials and methods. He also believes that other teachers have already vetted these materials, so he is more likely to find what works based on other people's reviews. Furthermore, Patrick does not rely on star ratings that TpT includes on their website because he prefers to preview the materials and read about other teachers' experiences using the resources instead of un-contextualized star ratings. While Nancy did not mention anything related to the groupthink heuristic, Jack made many statements that support his use of the groupthink heuristic when making decisions to use curricular materials from TpT. He mentioned on several occasions that he uses ratings and reviews to make quick decisions to download materials. He stated that there have been a few times when he has not liked using materials he purchased, but a majority of the time believes he has found high-quality materials. When asked to elaborate on how he uses ratings and reviews, Jack said that as long as the activity is aligned

with his topic and has a rating of four stars or higher, he will purchase the item. If the rating is below four stars, then he will read reviews to understand why and make his final decision to download an item listing or not. This, coupled with his attraction to using the same sellers' content, shows that Jack places most of his trust on other teachers' opinions.

Discussion

Overall, much of the participants' selection process using lesson plan sharing websites differed by the affordances and constraints of each type of website. For instance, Google, while a helpful tool to search for information, was seen as leading to an overwhelming number of results. Desmos can also provide interactive and rigorous lessons, but the search tool on the website did not always include all pertinent results. Part of the appeal of Teachers Pay Teachers may stem from its user-friendly interface. Compared to other lesson plan sharing websites, the TpT user experience was seen as more customizable and streamlined, aimed at leading teachers to their desired instructional material.

In all three interviews, the participants, reflecting the availability heuristic, voiced a desire to find certain types of activities to use in their classrooms because of a perceived benefit based on previous experiences. In addition, all three participants referenced returning to certain sellers to purchase more materials from their storefronts because they had positive experiences using those sellers' resources in the past.

The representativeness heuristic most often appeared as an implicit or explicit alignment to learning objectives or standards. Additionally, in Patrick and Jack's interviews, both participants stated that they look at item previews to ascertain the rigor level of the resources and whether the problems included are representative of their students' ability levels. Interestingly, each respondent has very specific, albeit different, goals associated with the types of activities they searched for on TpT: Patrick generally looks for activities that will provide additional practice for his students; Nancy prioritizes activities that provide instantaneous feedback, while Jack places importance on when, during a specific unit, the activity will be used (e.g., on the second day of practice with a skill).

The anchoring and adjustment heuristic was initially operationalized to include statements that focus on the use of certain materials based on anchor item previews or descriptions. While this was true in Patrick's case, this initial operationalization did not fully capture how Nancy and Jack exhibited this heuristic. These two participants anchor themselves to specific sellers on TpT and then often adjust their searches based on who they follow and place more trust in their resources over those of other sellers.

Although Nancy did not show a reliance on the groupthink heuristic beyond returning to specific sellers' profiles, Patrick and Jack mentioned in their interviews that they do look at other teachers' ratings of sellers' materials. Patrick places more importance on reviews, while Jack is more attracted to overall ratings of items. Ultimately, each of the participants exhibited this heuristic in different ways. Additional research may be needed to fully understand the social dynamics of online lesson plan sharing websites so that teachers can become more critical consumers of the content they find in these spaces.

It is also important to note that interview responses indicated each heuristic is not mutually exclusive. For instance, Patrick named types of activities he looks for from TpT and also gave insight into how he believes scavenger hunts are representative of high-quality materials in the same statement. Future research may delve deeper into a teacher's rationale for using specific types of activities from online spaces to understand which heuristic(s) are at play.

Conclusion

Many mathematics teachers use the internet to assist them in planning for instruction, often when their current curricular resources do not provide enough content to fully cover the topic at hand. When used appropriately, the internet can help teachers make decisions on how to engage students in content, plan and enact culturally responsive lessons, and implement meaningful assessments. This study adds to the research base that teachers may find certain online spaces more appealing than others due to their user interface. In addition, secondary mathematics teachers may rely on heuristics when choosing content from online lesson plan sharing websites but could do so to differing degrees. Future research should continue to explore the evolving landscape of lesson plan sharing websites, the ways secondary mathematics educators use these spaces to prepare and enact lessons, and the decision-making processes teachers use when selecting materials from online spaces, so that mathematics teacher educators and teacher leaders can prepare pre-service and in-service teachers to be critical consumers of content found in these spaces.

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