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Navigating costs: Undergraduate students' perceptions of incorporating the APA guidelines into their assignments

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Abstract

The publication manual of the American Psychological Association (APA) is widely used by undergraduate students across the country for academic writing. While instructors provide guidance on how to correctly implement the guidelines within the manual, many students continue to struggle with this task, often making significant errors in their writing. To explore the challenges students face in applying these guidelines, we adopted a motivational approach, examining the issue through the lens of Situated Expectancy-Value Theory (SEVT), with a particular focus on the perception of cost (i.e., why students may be reluctant to complete the task). One hundred and fifty undergraduate students completed our online survey. Through mixed-method analyses, we explored the multidimensional components of cost, as well as its contributions as a predictor of student burnout. Our results are discussed in terms of recommendations for supporting students' use of APA guidelines, along with limitations and directions for future research.

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Introduction

The American Psychological Association's (APA) publication manual is widely used in academic writing, particularly in the social sciences (e.g., psychology, sociology; American Psychological Association [APA], 2020). While instructors emphasize to their undergraduate students that the manual's guidelines should be implemented correctly (Connors, 1999; Mendeley, 2023; Schultz, 2019), many postsecondary undergraduate students continue to struggle with this task and perceive it as burdensome and tedious (Neubauer & Hernaiz-Sánchez, 2025; Van Note Chism & Weerakoon, 2012). As a result, students frequently make significant errors when incorporating these guidelines into their written assignments (e.g., Clark & Murphy, 2021; Landrum, 2013). These errors can include issues with citation formatting, reference list organization, and in-text citations. Support is made available to undergraduate students through various means, such as workshops (Jorgensen & Marek, 2013), online resources (Mandernach et al., 2016), and checklists (Franz & Spritzer, 2006), yet errors persist at significant rates (Onwuegbuzie et al., 2009; Yap, 2020).

To address this issue, some researchers have examined the types of errors students make, hoping to determine where the challenges lie, and from there, inform the development of more targeted supports (e.g., Iqbal et al., 2024; Zafonte & Parks-Stamm, 2016). Alternatively, we have chosen to take a motivational approach to examine undergraduate students' use of the APA guidelines by incorporating a Situated Expectancy-Value Theory lens. In particular, we explored the costs component (i.e., why students do not want to complete the task; Eccles & Wigfield, 2023) to investigate why students continue to make errors when incorporating the APA guidelines into their written work. To begin, we provide a review of the publication manual to provide context for why students continue to make errors when incorporating these guidelines.

The American Psychological Association Publication Manual

At the time of this research study, the Publication Manual produced by the American Psychological Association (APA) was in its seventh edition (American Psychological Association [APA], 2020). The manual is intended to provide authors with guidelines for preparing manuscripts for publication, as well as for students completing written assignments for their courses (APA, 2020; Hughes et al., 2023). It offers comprehensive instructions on formatting various paper elements, adhering to journal article reporting standards for quantitative, qualitative, and mixed methods research, writing style and grammar, bias-free language, formatting tables and figures, and referencing sources (APA, 2020).

For the purposes of our study, we focused specifically on the guidelines related to referencing sources, both in-text citations and reference lists included at the end of student assignments. This section of the guidelines was chosen because students often make significant errors when attempting to apply these citation guidelines (Freysteinson

et al., 2015; Iqbal et al., 2024), likely due to the numerous rules that must be followed (Hughes et al., 2023; Zafonte & Parks-Stamm, 2016). Indeed, Mandernach et al. (2016) found that when instructors were asked about students' writing that required APA formatting, the most commonly cited challenge was correctly formatting in-text citations and reference pages.

Moreover, as new editions of the manual are released, existing rules are updated, and new information is introduced. For example, the seventh edition includes guidelines on incorporating bias-free language (APA, 2020). Referencing rules have also changed; among these updates, the publisher location is no longer required in references, and in-text citations for sources with three or more authors now use the first author's name followed by "et al." even on the first citation (Streefkerk, 2024). Complicating matters further, the APA publication manual is only one of several referencing styles students may be required to learn, each with its own rules and conventions, such as the Modern Language Association style (Modern Language Association of America [MLA], 2021), the Chicago Manual of Style (University of Chicago Press, 2024), and the Harvard system (Pears & Shields, 2019).

Incorrectly citing sources can have significant consequences for students, including instances of academic dishonesty such as plagiarism (Zafonte & Parks-Stamm, 2016). Moreover, the frequency in which students are producing errors in their citations is very high. For example, research by Yap (2020) examined 20 master's theses in open institutional repositories and explored the referencing errors. Errors were found across all submissions. This aligns with findings by Lee and Lin (2013), who analyzed 3,564 references across 125 master's theses and reported an average citation error rate of 22.8%, with individual theses showing error rates ranging from 4% to 81.5%. These student-level findings mirror patterns observed at the journal submission level. In fact, Onwuegbuzie et al. (2013) report that citation errors appeared in between 88.6% and 91.8% of manuscripts submitted to the *Journal of Research in the Schools*. Extending beyond individual student work or single disciplinary contexts, Santos et al. (2023) conducted a large-scale analysis across scholarly disciplines and found that citation and referencing inconsistencies are widespread, reflecting entrenched challenges in bibliographic practice. Taken together, these results demonstrate that APA citation errors are not isolated incidents but pervasive across academic writing contexts.

In response, researchers have examined various strategies for teaching citation guidelines, including the use of templates, checklists (Franz & Spritzer, 2006), and gamified learning approaches (Clark & Murphy, 2021), as well as different instructional modalities such as online and in-person formats (Zafonte & Parks-Stamm, 2016). Despite these efforts, persistent errors in students' use of APA guidelines continue to be reported (Gaber & Ali, 2022; Iqbal et al., 2024; Yap, 2020). While previous research has taken a primarily pragmatic approach to addressing these challenges, little has been done to address why these errors are occurring from a motivational perspective. As such, our study aims to extend the current literature by incorporating

a motivational framework, specifically, Situated Expectancy-Value Theory (SEVT; Eccles & Wigfield, 2020), to explore students' errors in APA referencing.

Theoretical framework

Situated Expectancy-Value Theory (SEVT) explores how an individual's beliefs about their capabilities and the perceived value of a task influence their choices, persistence, and performance (Eccles & Wigfield, 2023). For the purposes of this paper, the situation of interest is students' correct use of the APA guidelines for citations and referencing in classroom assignments. Within this context, motivation is driven by two core subjective beliefs that a student holds: expectancy and value. Expectancy refers to a student's belief in their likelihood of success on a task (Eccles & Wigfield, 2020). Expectancy is multifaceted, including *ability beliefs*, wherein one considers their abilities to complete the current task or *expectancy beliefs*, wherein one considers their abilities to complete a future task (Barron & Hulleman, 2015). Previous research which explores pragmatic ways to support students in learning the APA guidelines is aimed at increasing students' expectancy in their ability to complete this task by exploring ways of teaching these guidelines as reviewed above.

Value, the second subjective belief, refers to the overall importance a student attributes to a task (Eccles & Wigfield, 2023). According to SEVT, if students do not perceive value in applying APA citation guidelines, they are less likely to do so. Value is also multifaceted, encompassing intrinsic value, engaging in the task because it is enjoyable, utility value, which involves recognizing the task's practical benefits, and attainment value, where completing the task fulfills a personal need (Barron & Hulleman, 2015). In the context of APA referencing, students may perceive utility value in wanting to ensure their work follows academic rules or attainment value in aiming for high grades, which necessitates correct citation and referencing.

Another important consideration within SEVT is cost. When students engage with a task, they weigh the perceived costs associated with its completion (Eccles & Wigfield, 2023). These costs can also be multifaceted. For instance, the *effort* required to successfully complete a task may not be seen as worthwhile. If completing the task demands significant effort, students may feel they have less time for other preferred activities and, as a result, would have to forgo those preferred activities to complete the task; this is known as *opportunity cost* (Jiang et al., 2018). Costs can also include *ego costs*, in which students are concerned about how others might perceive them if they perform poorly, and *emotional costs*, referring to the negative emotions experienced while completing a task they do not enjoy (Jiang et al., 2018).

In the context of APA referencing, students may perceive costs in several ways. The sheer number of rules involved in correctly formatting references can create a belief of high effort required, which may be viewed as disproportionate to the perceived benefit. Students might feel that time spent on creating the citations for their assignment takes away from more enjoyable activities (i.e., opportunity

cost). Additionally, mistakes in APA formatting that lead to academic misconduct could be perceived as an ego cost. Finally, the attention required to follow every guideline may evoke frustration, anxiety, or other negative emotions, highlighting the emotional cost of the task.

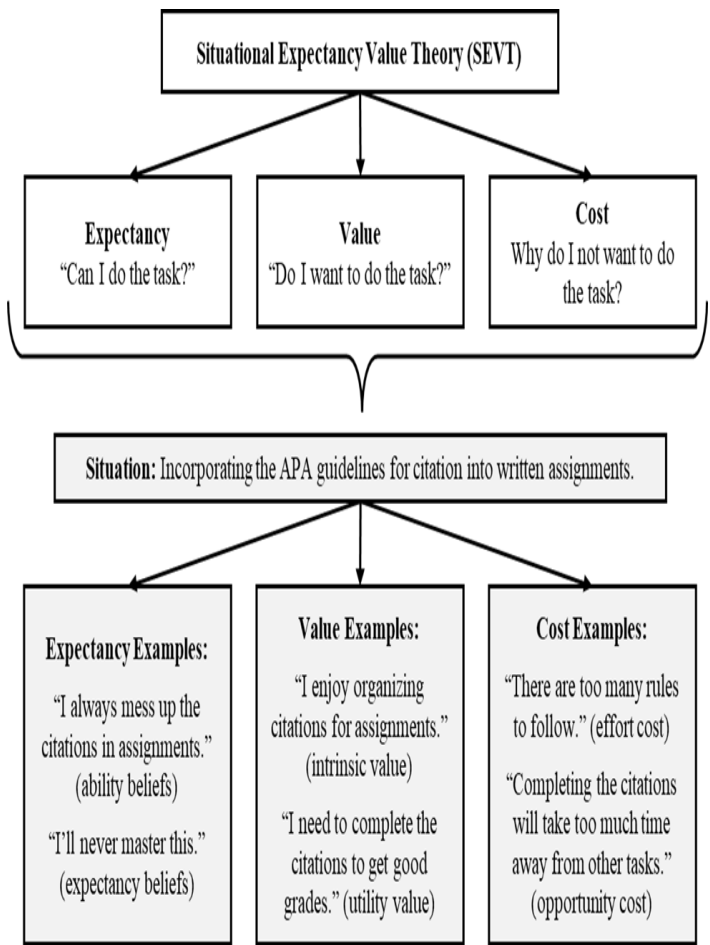


Figure 1: Theoretical framework linking situated-expectancy-value-cost dimensions in the context of incorporating the APA guidelines for citations.

SEVT and the APA Guidelines

We were only able to locate one study that specifically examined the APA citation and referencing guidelines through the lens of SEVT. In this study, Roberts and Goegan (2024) explored undergraduate students' perceptions of expectancy, value, and cost prior to engaging in an APA citation activity. Before completing the activity, students reported high levels of expectancy and value, along with moderate levels of cost. However, following the activity, both expectancy and value decreased significantly. Moreover, when students were asked to self-rate their perceptions of expectancy, value, and cost on a scale from 1 (not at all) to 10 (very much so) and then provide a rationale for their score, students identified a range of contributing factors. These included the effort required, attention to detail, time investment, desire to achieve good grades, use of other citation formats, reliance on external resources, and prior experience with citation guidelines.

To build on this previous research, we aimed to explore the SEVT component of cost more explicitly. Indeed, the approaches to addressing students' errors in applying APA

guidelines have largely focused on the expectancy and value components. For example, studies exploring new teaching strategies to support student learning (Franz & Spritzer, 2006; Zafonte & Parks-Stamm, 2016) primarily target ability beliefs or expectancy beliefs. Similarly, the incorporation of game-based elements into the learning process (Clark & Murphy, 2021; Neubauer & Hernaiz-Sánchez, 2025) is designed to enhance intrinsic value. However, much less is known about the role of cost when it comes to students' motivation to correctly apply the APA guidelines for citations and referencing. As errors continue to be reported in undergraduate students' citation and referencing practices (Yap, 2020), the purpose of the current research was to explore the perceived costs associated with incorporating APA guidelines, with the goal of extending the current literature and informing future instructional approaches.

Moreover, due to the continue errors students make when it comes to incorporating the APA citation guidelines into their writing, we wanted to further our investigation to also examine burnout. Burnout is a state of physical and psychological fatigue and exhaustion that individuals attribute to specific life domains, such as personal circumstances, work responsibilities, or client-related demands (Kristensen et al., 2005). While exhaustion is central to the concept, what distinguishes burnout from general fatigue is the individual's perceived connection between their exhaustion and a sustained, emotionally demanding context, whether academic, professional, or interpersonal. It has been found that 55% of college students experience some degree of academic burnout (Jacobs-Pinson, 2024), making it an important variable to consider.

The current study

To gain a better understanding of the perceived costs associated with integrating the APA guidelines into undergraduate students' written assignments, we investigated how students rate different types of costs and what they perceive as the most challenging elements of adhering to the APA guidelines. Our quantitative research questions were as follows: (a) How do undergraduate students rate various types of costs (i.e., effort, opportunity, ego, and emotional costs) associated with incorporating the APA guidelines into their assignments? (b) How are the cost subscales related to one another? and (c) How do these cost subscales predict academic burnout for undergraduate students? Our qualitative question was: What do undergraduate students identify as the most challenging aspect of incorporating the APA guidelines into their writing at the postsecondary level? Lastly, our mixed-methods research question was: How do the results from the quantitative and qualitative data intersect?

Method

The current study explores student experiences with implementing APA guidelines for citations and referencing, in terms of the perceived costs and associated burnout. We incorporate a mixed-method approach as outlined below.

Procedure

To answer our research questions, we recruited 150 undergraduate students from Canada through the online platform Prolific (<https://www.prolific.com>). This platform connects researchers seeking participants for their studies with eligible participants who are willing to complete them. Moreover, Prolific allows researchers to target their desired audience, and we limited eligibility to undergraduate students in Canada. Information about the study was provided on the Prolific website, and those interested in participating were able to sign up. Then, participants were given a link to the online survey and consent was established by completion of the survey. The survey itself was hosted on SurveyMonkey© and required approximately 30 minutes to complete. Once participants completed the survey, they were compensated for their time based on the guidelines provided by Prolific (2024). This study was approved by the Research Ethics Board at the researchers' university.

Measures

Demographic measures.

The participants responded to three demographic items that were used to describe the participants in the sample: age, gender, and year of studies. Moreover, these variables were included in Step 1 of our hierarchical regression to account for demographic factors before examining the impact of the cost subscales on burnout.

Quantitative measures.

We adapted the cost subscales of effort, opportunity, ego, and emotion developed by Jiang et al. (2018). Previous use of this measure has indicated a reliability coefficient of .89 (Jiang et al., 2018). We adjusted these items to be specific to the use of the APA guidelines. For example, one of the original items was "doing well in math requires more effort than I want to put into it" was adapted to "implementing the citation guidelines requires more effort than I want to put into it" (italics added for emphasis). Consistent with the original measure, there were three items of each of the three subscales, and participants responded on a scale from 1 (strongly disagree) to 6 (strongly agree). Participants' responses to the three items per subscale were summed and averaged with higher scores indicating greater cost.

We adapted the work-related burnout subscale from the Copenhagen Burnout Inventory, developed by Kristensen and colleagues (2005), to assess burnout related to academic work. Burnout has traditionally been assessed using the Maslach Burnout Inventory (MBI) (Schaufeli & Greenglass, 2001; Schaufeli et al., 2002); however, the Copenhagen Burnout Inventory (CBI) offers a broader and more context-sensitive approach by measuring personal, work-related, and client-related burnout, which have been found to have very high internal reliability ranging from .85 to .87 (Kristensen et al., 2005). Moreover, the CBI has been found to have high predictive validity as well as high convergent and divergent validity. For the purposes of this

study, burnout is conceptualized using the framework of the Copenhagen Burnout Inventory (Kristensen et al., 2005), which operationalizes exhaustion as a core symptom across personal and academic domains, making it particularly suitable for student populations. For example, the item "Do you feel worn out at the end of the working day?" became "Do you feel worn out at the end of the *school day*?" (italics added for emphasis). We also removed the item "Do you have enough energy for family and friends during leisure time?" because it is intended to be inversely scored, and researchers have raised concerns with reverse-scored items, in favor of straightforward questions (e.g., Geiger & Brewster, 2018; Rodebaugh et al., 2011). Students responded to the items on a 5-point scale, using the response options from "a very high degree" to "a very low degree" or from "always" to "never/almost never" based on the parameters of the original scale. Participants' responses to these items were summed and averaged, with higher scores indicating greater burnout.

To ensure the adapted instruments measured the intended constructs in the context of APA guideline use, we examined both validity and reliability evidence. Validity was established through careful adaptation of previously validated scales to the present academic setting (e.g., modifying "doing well in math requires more effort" to "implementing the citation guidelines requires more effort"). The adapted items retained the conceptual meaning of the original measures while aligning with the APA referencing context. We also examined the internal reliability of each of our adapted instruments before conducting our main analyses.

Qualitative measures.

The participants also completed one open-ended question. Participants responded to the prompt "What is the hardest thing about using the APA guidelines correctly?"

Rationale for the analysis

We conducted our analyses in five steps. First, we ran descriptive statistics on the quantitative measures to determine the range, mean, standard deviation, skew, and kurtosis for the study variables. This allowed us to answer our first research question: how do undergraduate students rate the various types of costs? Second, we ran a repeated-measures one-way ANOVA to compare the means between the different types of cost, addressing our second research question: how are the cost subscales related to one another? Third, to answer our next research question, we conducted a hierarchical regression to predict burnout. We hypothesized that higher levels of cost would significantly, positively predict higher levels of burnout, when controlling for demographic variables. Demographic variables were entered into Block 1, while the cost subscales were entered into Block 2. Fourth, we conducted a word cloud analysis to examine the most frequently used words students wrote when answering the question: "What is the hardest thing about using the APA guidelines correctly?" This allowed us to answer our qualitative research question: What do undergraduate students identify as the most challenging

aspect of incorporating APA guidelines into their writing at the postsecondary level? Lastly, to answer our mixed-method research question, how do the results from the quantitative and qualitative data intersect?, we inductively coded the participants' responses to the open-ended question above. Then, using the subscales of costs, create a joint display of the costs students associate with incorporating the APA guidelines into their assignments.

Results

Quantitative analyses

Means, standard deviations, skew, and kurtosis for all study variables are presented in Table 1, while the correlations are presented in Table 2.

Table 1: Descriptive statistics for study variables.

Subscales	# of items	A	Range	M	SD	Skew	Kurtosis
1. Gender	1	--	-	1.47	.61	--	--
2. Age	1	--	18-40	22.10	3.55	2.09	6.44
3. Year	1	--	1-5	2.94	1.32	-.13	-1.21
4. Effort	3	.92	1-6	3.29	1.43	.23	-.97
5. Opportunity	3	.94	1-6	2.40	1.33	.81	-.20
6. Ego	3	.93	1-6	3.24	1.47	.13	-.85
7. Emotional	3	.76	1-6	3.10	1.29	.28	-.57
8. Burnout	6	.88	1-5	3.85	.82	-.54	-.23

Table 2: Correlations for study variables.

Subscales	1	2	3	4	5	6	7	8
1. Gender	--							
2. Age	.04	--						
3. Year	-.02	.30***	--					
4. Effort	-.10	.07	-.18*	--				
5. Opportunity	.02	.07	-.16*	.68***	--			
6. Ego	.01	-.01	-.05	.06	.26**	--		
7. Emotional	-.17*	-.01	-.26**	.57***	.58***	.40***	--	
8. Burnout	-.27***	-.20*	-.12	.21**	.22**	.28***	.38***	--

Notes: * $p < .05$, ** $p < .01$ and *** $p < .001$

A repeated-measure one-way ANOVA with four within-subject factors was conducted to examine the differences between the types of costs. This analysis determined that there was a significant difference between the means of the subscales of cost $F(3, 462) = 23.39, p < .001$. Pairwise comparisons concluded that the subscale of opportunity cost was significantly lower ($M = 2.40$) than effort cost ($M = 3.29$), ego cost ($M = 3.24$) and emotional cost ($M = 3.10$). No other significant differences were found.

Next, we ran a hierarchical regression to examine the predictors of burnout. In the first model, gender and age were significant predictors of burnout, $F(3, 146) = 6.54, p < .001$, accounting for 10% of the variance in burnout. Students who were younger and/or female identified more burnout. Year in program was not a significant predictor.

Table 4: *What is the hardest thing about using the APA guidelines correctly?*

Word	Response Rate	Example Response
Format	41 (27.15%)	Proper formatting and when using multiple different sources as format can be different.
Remember	40 (26.49%)	Remembering the specific little details (i.e., what is in italics, how to format a specific entry).
Different	21 (13.91%)	For me, one of the hardest things about using APA guidelines correctly is remembering all the specific formatting rules and details , especially when it comes to citing different types of sources like books, journal articles, and websites.
Citation	18 (11.92%)	Not mixing up which parts of the citation to italicize with other citation formats such as MLA or Chicago [Turabian].
Information	18 (11.92%)	Making sure that you have all the sections of the citation (the information required).
Rule	18 (11.92%)	Following all the small rules (like where there is a comma instead of a period).
Thing	17 (11.26%)	The hardest thing is ensuing [sic] the correct use of punctuation.
Use	17 (11.26%)	It's difficult to remember the guidelines since I also needed to use MLA in my other classes.
Correct	17 (11.26%)	APA style evolves over time, and new editions or updates may introduce changes to formatting or citation rules . Keeping abreast of these changes and implementing them correctly can be a continuous learning process.
Make	17 (11.26%)	While online generators are allowed in most courses, some of them don't work the greatest so you end up making manual citations and a lot of effort goes into making them.
Detail	16 (10.59%)	Trying to remember all the super specific details and having to worry and obsess over all the little rules .
Order	16 (10.59%)	Remembering each thing that's included in what order .

Note: Target word identified in bold, other high-frequency words identified in grey/bold.

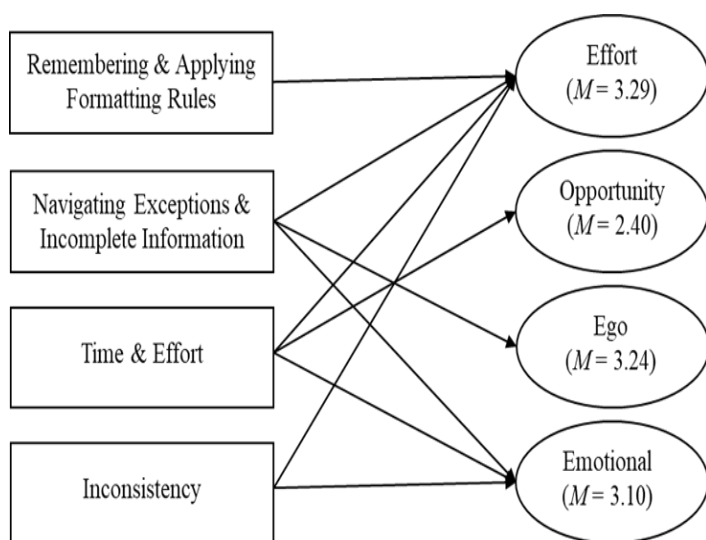


Figure 3: Joint display of sub-themes and cost subscales.

The first theme that emerged from the participants' responses was *remembering and applying formatting rules*, which aligns with the two most commonly used words by participants. This theme refers to the challenge of recalling and correctly applying the numerous elements of the APA guidelines, such as where to place commas and periods, what to italicize or bold, how to capitalize titles, and how to order citation elements. Participants shared comments such

as: "remembering the placements of commas and the order of the citations," "remembering the specific little details (i.e., what is in italics, how to format a specific entry)," and "remembering all the specific formatting rules and details, especially when it comes to citing different types of sources like books, journal articles, and websites." From a cost perspective, this theme clearly reflects the effort sub-theme, as participants must exert considerable cognitive resources to remember and apply the APA rules correctly.

The second theme that emerged from the participants' responses was *navigating exceptions and incomplete information*. This theme builds on the previous one by introducing elements of ambiguity and uncertainty, for example, when citation information is missing or when a source does not clearly fit existing APA citation or referencing guidelines. Participants expressed concern about making judgment calls in these situations: "when information is missing, I am never really sure if I am doing it correctly," "weird references... I had to reference a social media post... I was honestly unsure if I did it correctly," and "figuring out what to do with sources that are not journal articles." From a cost perspective, this theme also relates to the sub-theme of effort, but there are also elements of ego and emotional costs. Participants worry about incorporating the APA guidelines incorrectly, reflecting concerns about competence (ego), and wanting to ensure they are making the correct judgement on how to proceed. This can also lead the participants to negative emotions of uncertainty and doubt (emotional).

The third theme that emerged from the participants' responses was *time and effort*. The comments from participants that fit within this theme largely highlight the monotonous and time-consuming nature of creating the citations with the APA guidelines: "It's a time-consuming, tedious thing," "Writing out all the authors is somewhat annoying, especially when some articles have 15+ authors," and "Just the monotonous work of it." This theme primarily reflects effort, but also introduces an opportunity cost, when time spent on APA formatting reduces time available for other tasks. Additionally, it touches on emotional costs, as participants frequently expressed frustration and annoyance with the time demands of the task.

The fourth theme was *inconsistency*. This theme captures the confusion that arises from inconsistent expectations across courses and professors, conflicting formatting styles (e.g., APA vs. MLA), and changes in the APA guidelines over time. Participant comments included: "Each prof wants a different way of citing, so it gets confusing," "Each professor has their own preferences in the version they want," "In different classes, a different format is used, and it gets mixed up in my head," and "It's difficult to remember the guidelines since I also needed to use MLA in my other classes." Participants also acknowledged changes in the guidelines over time, stating, "APA style evolves over time, and new editions or updates may introduce changes to formatting or citation rules," and the hardest part is implementing the guidelines correctly is "when the APA has a new edition." This theme indirectly reflects effort, as students must stay up to date on evolving rules, but it also represents emotional costs, particularly confusion and frustration stemming from

contradictory expectations and changing standards.

Discussion

The current study explored the SEVT cost subscales of effort, opportunity, ego, and emotional in relation to undergraduate student use of APA guidelines for citing and referencing. We incorporated a mixed-method design to understand how these costs are experienced and expressed by students, and the integration of quantitative and qualitative analyses offers a multidimensional perspective on the challenges students face when applying the APA citation guidelines. In this discussion, we examine: (a) the multifaceted nature of cost, and (c) offer suggestions for how instructors might alleviate some of these costs to support students in incorporating the APA guidelines into their written work. In closing, we discuss the limitations of our study and provide some recommendations for future research.

The multifaceted nature of cost

The findings from our research questions highlight that cost is multifaceted, as evidenced by the significant, positive correlations between each of the sub-scales, yet not so correlated as to suggest multicollinearity (Shrestha, 2020). Moreover, the sub-themes in our qualitative analyses showed multiple connections to the cost subscales, and participants often highlighted more than one cost associated with integrating the APA citation guidelines into their written work. This aligns with other components of SEVT, wherein expectancy and value have been identified as involving multiple components yet are often considered subtle in their differences and treated as a single dimension of SEVT (e.g., Eccles & Wigfield, 2020). Therefore, our findings here are consistent with the broader theoretical framework of SEVT, which can be taken to suggest that SEVT is an important theoretical framework for examining the incorporation of APA guidelines into students' writing for future research.

Nevertheless, when these subscales are explored separately, opportunity cost was rated significantly lower than effort, ego, and emotional costs. This could suggest that students do not view incorporating APA citation guidelines correctly as a major imposition that prevents them from engaging in other meaningful tasks. Perhaps, they accept that incorporating APA guidelines into their writing is part of the time already allocated to working on their assignments. Alternatively, the participants perceived the effort cost required to complete the task as higher than the other cost subscales. This is consistent with previous research indicating that students found incorporating APA citation guidelines into their writing to be burdensome and tedious (Neubauer & Hernaiz-Sánchez, 2025; Van Note Chism & Weerakoon, 2012).

The repeated measures ANOVA demonstrates that not all cost subscales are equal when it comes to predicting burnout. Most notably, while effort cost was rated the highest of the four subscales, its presence in the regression did not account for unique variance in predicting burnout. In contrast, ego and emotional costs, though lower in mean

ratings, significantly predicted burnout. This suggests that while students may report that incorporating the APA citation guidelines is effortful, this effort alone does not lead to exhaustion or burnout. Conceivably, students expect some effort to be involved with APA formatting, but when this effort is paired with concerns about implementing the guidelines correctly (ego cost) and feelings of frustration or annoyance (emotional cost), it becomes more psychologically taxing, and these components become predictive of burnout. This suggests that the affective component of cost is particularly important when considering student well-being and burnout. Indeed, Edú-Valsania and colleagues (2022) identify the three dimensions of burnout as emotional exhaustion, cynicism or depersonalization, and reduced personal achievement.

It is important to note that while our model accounted for 22% of the variance in burnout, other factors beyond those measured in the current study explain the remaining 78%. This indicates that the present model does not fully capture the complexity of student burnout and underscores the need for future research to consider additional situated and contextual variables. Nonetheless, even with only approximately a quarter of the variance explained, this represents a meaningful finding, as the cost subscales were specific to the implementation of APA citation guidelines, whereas the indicator for burnout reflected students' broader school experience. It would be unreasonable to expect that incorporating citation guidelines alone should account for a larger proportion of variance, given the many other aspects of university life students must navigate, such as studying, applying for scholarships, completing group projects, and seeking employment. Indeed, Pham Thi and Duong (2024) suggest that academic workload is a significant contributor to academic burnout for college students. Thus, in the broader context of school, the 22% explained variance is substantive. Future research may wish to consider aligning the specificity of these two measures. For instance, rather than examining burnout broadly, scholars could investigate burnout specifically associated with completing assignments and then examine the extent to which incorporating APA guidelines into writing contributes to that burnout.

Extending our discussion to the qualitative findings and the mixed-method triangulation, we see that each of the identified subthemes from the participants' responses reflects different cost dimensions, primarily effort, emotional, and ego costs. *Remembering and applying the formatting rules* most closely aligns with effort costs, highlighting the cognitive demand required for students to memorize and apply the citation guidelines. However, the remaining subthemes emphasize the emotional component, wherein students must navigate uncertainty in applying the rules, requiring additional time and effort, and possibly facing inconsistencies to overcome. Moreover, while opportunity cost had the lowest mean score, it remains relevant, particularly when students acknowledge the significant time and effort required to complete the task of incorporating the APA guidelines into their work, in terms of being "monotonous" and "annoying." Therefore, cost is not only multifaceted but also interactive. Students' descriptions of the hardest aspects of using APA guidelines correctly reflect an interconnection between the dimensions of costs.

Indeed, students not only identified themes that fit multiple cost subscales and often mentioned more than one theme in their responses, but these different themes and subscales are individual components of the larger construct (i.e., cost). Thus, the various subscales of cost are interrelated with one another as students navigate incorporating APA guidelines into their written work. As such, future research and student support initiatives should address all subscales of cost, rather than focusing solely on reducing effort or increasing efficiency, which has been the predominant approach to date. Moreover, an interview-style approach to exploring cost may uncover additional elements not identified through our open-ended responses, which could provide valuable insights and potentially account for additional variance in student burnout.

Recommendations for instructors for reducing perceived costs

The current study found that *effort cost* was the most frequently endorsed challenge, especially in remembering and applying detailed APA rules. Given the higher effort and emotional costs students associate with mastering APA guidelines, instructors can alleviate these burdens by providing clear, accessible, and consistent support. To reduce effort costs, instructors might create step-by-step citation guides tailored to the specific assignments, such as a one-page checklist showing how to format journal articles or website references correctly (Franz & Spritzer, 2006). Instructors could also develop or utilize short tutorial videos demonstrating how to build references or share annotated samples of properly formatted reference lists (Jorgensen & Marek, 2013; Mandernach et al., 2016). Breaking down citation tasks into more manageable, scaffolded steps, such as requiring citations for one source type at a time, may allow the process to feel less overwhelming (Svinicki & McKeachie, 2014).

To minimize *opportunity costs*, instructors may utilize brief in-class activities, such as peer-review sessions where students check each other's references for APA compliance. Through a peer-review assessment approach, students reduce the time they need to spend independently struggling with formatting, encouraging collaboration with others, and developing citation skills alongside content knowledge (Topping, 2009). Publicly normalizing mistakes through a sharing of common citation errors seen in previous classes can also reassure students that struggles are typical and part of the learning process (Dweck, 2006). Instructors can respond to this again by embedding citation practice into authentic academic classwork, such as guided referencing exercises during research days, live peer-feedback sessions, or integrating citation assignments with research projects (Nilson, 2016).

Ego costs, including students' fear of making mistakes or appearing incompetent, can be eased by creating a low-stakes learning environment. For example, instructors could assign formative APA quizzes or drafts where feedback focuses on improvement rather than penalizing errors (Hattie & Timperley, 2007; Ormrod, 2020; Zafonte & Parks-Stamm, 2016). This process could also support normalizing

errors in these early drafts. To address ego and emotional costs, particularly students' anxiety about doing things "wrong," instructors can incorporate low-stakes assessments, such as ungraded APA quizzes or optional self-checklists (Csikszentmihalyi, 2008).

To address *emotional costs* stemming from confusion and frustration due to inconsistent citation expectations, instructors can provide clear communication about which APA edition is required and explain any deviations in citation style expectations for their courses. A pragmatic step could be maintaining a centralized citation handout guide addressing common questions and updates, accessible to students throughout the term. Additionally, encouraging students to ask questions during office hours or creating online discussion forums facilitates a supportive atmosphere where confusion is addressed promptly and reduces anxiety (Karabenick & Newman, 2013). These concrete strategies can help reduce the perceived costs of using APA guidelines, thereby improving students' motivation, confidence, and overall academic experience.

Limitations and future research directions

The current study offers important insights into student experiences with implementing APA guidelines for citations and referencing, as well as the various associated perceived costs. Nevertheless, three limitations should be acknowledged. First, the undergraduate participants were recruited through the online platform Prolific. While this is not a traditional method of participant recruitment, Prolific has established protocols for vetting participants and ensuring the accuracy of participant accounts (Prolific, 2025). Online subject pools are becoming increasingly popular in research (Palan & Schitter, 2018), and Prolific is considered superior to many other available options (Douglas et al., 2023; Peer et al., 2022). The advantages of using online platforms include the ability to pre-screen participants, increased efficiency, and flexibility in survey design, making this method a valuable option for participant recruitment. As such, the advantages here outweigh potential disadvantages. Moreover, since Prolific operates in many countries, future research could extend our findings, which are currently limited to the Canadian context, to other regions. This would allow for an examination of whether the present findings are representative of students' experiences internationally. Additional demographic considerations could also be explored at that time, as our study was limited to gender, age, and year in program.

Second, while our study focused specifically on APA citation guidelines, it would be valuable to investigate whether similar costs arise when students engage with other forms of academic writing conventions, such as thesis statements, argumentation structures, or literature reviews. Comparative studies between APA and other citation styles (e.g., MLA, Chicago) may also inform style-specific challenges and whether some formats elicit more pronounced cost perceptions. The APA manual is often seen as a rulebook (Inoue, 2015; Sword, 2012), but future research might benefit from treating it as a site of struggle where students' identities, emotional responses, and perceptions of academic

legitimacy intersect. Building on our findings that ego and emotional costs are most strongly linked to burnout, future studies could explore how these costs relate to broader themes like academic identity formation or imposter syndrome. For example, does mastering APA offer a sense of belonging or achievement for some students, while for others, it could become a symbol of academic gatekeeping. Moreover, exploring the dimensions of burnout, such as emotional exhaustion, cynicism or depersonalization, and reduced personal achievement (Edú-Valsania et al., 2022) could extend our finding here.

Third, we incorporated a cross-sectional design, which prevents us from drawing causal conclusions or examining how costs evolve over time, particularly as students progress through their academic careers. Longitudinal studies could help determine if perceived costs decrease with familiarity or whether they shift in nature (e.g., from emotional to opportunity). Indeed, while we found significant and positive correlations between year in program and opportunity and emotional cost, future research could explore these connections more fully. Moreover, while open-ended responses offered valuable insights and were conducive to our online recruitment approach, additional qualitative methods (e.g., interviews, focus groups) could provide deeper understandings of these costs and how they are perceived by students. Lastly, future research might also explore cost perceptions among different student subgroups, including neurodiverse students (e.g., those with learning disabilities or ADHD) or students who do not identify English as their first language, as these students may face unique challenges in interpreting and applying APA guidelines.

Conclusion

In conclusion, while this study sheds light on the nuanced and multifaceted nature of perceived costs associated with implementing the APA citation guidelines, it also opens several avenues for future inquiry. By identifying the emotional and ego sub-scales of cost as positive predictors in relation to burnout, we underscore the importance of addressing not just the technical or procedural aspects of academic writing and the effort required therein but also the affective experiences of students. As academic institutions continue to emphasize writing proficiency and adherence to formal guidelines, it is essential that support systems evolve to recognize and mitigate these costs.

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Appendix: APA guidelines specific items from the survey

Cost subscale items¹

On a scale from 1 (strongly disagree) to 6 (strongly agree) please respond to the following items.

1. Effort cost

Implementing the APA guidelines requires more effort than I want to put into it.

It requires too much effort to implement the APA guidelines to get a good grade.

It takes too much effort for me to implement the APA guidelines well.

2. Opportunity cost

I have to give up other activities that I like to implement the APA guidelines well.

I have to sacrifice a lot of free time to be good at implementing the APA guidelines.

To implement the APA guidelines, requires me to give up other activities I enjoy.

3. Ego cost

Others would think worse of me if I failed to implement the APA guidelines correctly.

Others would think I am incompetent if I can't implement the APA guidelines correctly.

Others would be disappointed in me if I implemented the APA guidelines incorrectly.

4. Emotional cost

Having to implement the APA guidelines correctly scares me.

Having to implement the APA guidelines correctly stresses me out.

Having to implement the APA guidelines correctly makes me annoyed.

¹ Adapted from Jiang et al. (2018).

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