Ease of Access to Information Does Not Impact Curiosity

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Abstract

For some learning problems, information is readily available. For others, substantial time and effort is needed to acquire information. The present work tests whether this variation in "information accessibility" affects curiosity. In two experiments, we prompted adult participants to rate their curiosity about the answers to trivia questions. For each trivia question, participants were informed that information accessibility would be high—they would receive the answer with minimal time and effort—or low—they would receive the answer with substantial time and effort. We found that information accessibility affected decisions to seek information, but not self-reported curiosity. This suggests that curiosity is unhindered by the practical costs of information search.

Keywords: curiosity; learning progress; effort; information search; learning; exploration

Introduction

Learning problems vary widely in how much time and effort is needed to solve them. Understanding why the sky is blue only requires a quick internet search. Understanding the nature of dark matter requires years of intensive study and research in astrophysics. In fact, experts have worked on this problem for decades, and they have not yet fully solved it.

Does this variation in the difficulty of a learning problem—the time and effort needed to solve it—affect the phenomenological experience of curiosity? The present research addresses this question.

Answering this question will help shed light on why people feel curious about some things but not others—a question that has been under debate for decades (Berlyne, 1954; Liquin & Lombrozo, 2020; Loewenstein, 1994; Metcalfe et al., 2020; Poli et al., 2024; Sharot & Sunstein, 2020). Two accounts have a long history in the study of curiosity. First, certain properties of stimuli—like their complexity or novelty—might elicit curiosity (e.g., Berlyne, 1966). Second, metacognitive judgments of one's own knowledge might elicit curiosity (e.g., Loewenstein, 1994). Both accounts have received empirical support (see Kidd & Hayden, 2015).

More recent theories of curiosity, however, propose that the rate at which learning occurs—called "learning progress"—should dictate when people feel curious and explore (Gottlieb et al., 2013; Poli et al., 2024; Schmidhuber, 2009). That is, we should be more curious and therefore more willing to explore when our learning is progressing rapidly compared to when it is progressing slowly. This is because it is optimal to invest effort into information search when it will likely pay off quickly.

This account has received empirical support. For example, Poli et al. (2022) allowed participants to freely choose between three trial-and-error learning tasks. They found that participants preferentially engaged in learning tasks that had higher learning progress relative to other tasks—specifically, the tasks where participants' predictions improved most rapidly. Based on these results and others (Poli et al., 2020, 2025; Sayalı et al., 2023; Ten et al., 2021), Poli and colleagues (2024) recently argued that learning progress—the rate at which learning is progressing—could be an important motivator of curiosity.

While this account is compelling, it is unclear *how* learning progress affects curiosity and exploration. Importantly, there are two key factors that determine whether predictions improve rapidly: (1) the extent to which each piece of new information advances one's understanding, and (2) the extent to which information is easily available. While prior research has explored the former, there is very little research investigating how the latter—"information accessibility"—affects curiosity. Put another way, prior research has focused on how learning progress occurs in ways that are internal to a learning problem. However, external considerations can also affect the speed with which information is learned: whether information is difficult or easy to acquire determines the actual rate at which learning progresses. Thus, we can differentiate between *practical* learning progress—which takes into account external considerations, like the accessibility of the needed information—and *idealized* learning progress—which only considers the learning that would occur if and when information is received.

If curiosity is sensitive to practical learning progress, people should be less curious about information that is less accessible and more curious about information that is more accessible. For example, imagine that you become interested in a topic after reading a brief article on it. You judge that your learning progress from reading the article was high, so you expect further information search to similarly increase your knowledge rapidly. As a result, you decide to check out a related book from the library to learn more. But when you visit the library website, you are disappointed to see that the book is currently checked out—you will have to put it on hold and wait several weeks to read it. Of course, you still judge that learning progress will be high *when you receive the book*. However, the information you need to achieve that learning progress is not currently available. If curiosity is sensitive to practical learning progress, this lack of information accessibility should reduce your curiosity about the topic.

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However, there are also reasons to think that information accessibility might not affect curiosity—suggesting that curiosity might only be sensitive to idealized learning progress. For example, Noordewier and van Dijk (2016) found no difference in the magnitude of participants' curiosity about a video that they expected to watch in 30 minutes versus 1 minute, suggesting that less accessible information (i.e., longer expected time before gaining information) may not affect curiosity. In addition, some have suggested that when information is *too* easy to access, curiosity may decrease. For example, it has been suggested that ease of access to information via the internet might reduce curiosity in children (Danovitch, 2019). Thus, it is unclear whether information accessibility affects curiosity.

The Present Research

In the present research, we test whether information accessibility affects the subjective experience of curiosity. Answering this question will shed new light on the learning progress account (e.g., Poli et al., 2024). This also has practical implications: if we can understand what elicits curiosity, we may be able to induce learners' curiosity when it would be desirable (e.g., in the classroom). Curiosity has many benefits—for example, curiosity motivates information search and enhances memory (Gruber et al., 2014; Kang et al., 2009). As a result, it is critical to understand what motivates curiosity itself.

To test whether information accessibility affects curiosity, we use a common paradigm in studies of curiosity (e.g., Gruber et al., 2014; Kang et al., 2009; Metcalfe et al., 2021; Wade & Kidd, 2019): we prompt participants to report their curiosity about trivia questions. To manipulate information accessibility, we inform participants that they will have to use substantial time and effort to reveal the answer to a given question (e.g., press the "K" key 60 times) or a smaller amount of time and effort to reveal the answer (e.g., press the "K" key 15 times). We test whether this manipulation of information accessibility impacts participants' reported curiosity about the question.

In Experiment 1, we conduct an initial test of whether information accessibility affects curiosity. In Experiment 2, we modify the methods to emphasize the *process* of learning. Rather than revealing the entire answer to each question, participants exert varying levels of time and effort to see each letter of the answer. Thus, there is incremental progress towards learning—more characteristic of real-world learning tasks. This also gives participants real experience with the accessibility of information before rating curiosity. Lastly, Experiment 2 tests how information accessibility affects people's decisions to seek information, which helps validate the efficacy of our manipulation.

To preview our results, we find evidence that people are more likely to seek information when it is more easily accessible, compared to when it is less accessible. However, information accessibility does not affect curiosity. Thus, if curiosity stems from learning progress, it is likely to be idealized learning progress—not practical learning progress.

Experiment 1

In Experiment 1, we conducted an initial test of whether information accessibility affects curiosity. Experiment 1 was preregistered at https://aspredicted.org/z525-3njf.pdf.

Methods

Participants We recruited 82 participants from a student participant pool at the University of New Hampshire. All participants completed the study online. An additional 18 participants were excluded for failing to pass three attention checks (described below).

Our sample ranged from 18-24 years of age ($M = 19$). 74% of participants identified as women, 24% as men, and 1% as non-binary or genderqueer (1 participant unspecified). Most participants (94%) were White and Non-Hispanic/Latinx.

Materials The materials were 40 general knowledge trivia questions from Metcalfe et al. (2021). These questions were originally from the Nelson and Narens' norms (Nelson & Narens, 1980) and were modified by Bloom et al. (2018). All trivia questions had one-word answers and were presented in a random order for each participant.

Procedure All participants completed 40 trivia trials. On each trial, participants saw a single trivia question, with an associated information accessibility condition (manipulated within-subjects). In the high accessibility condition (20 questions), participants were informed that they would need to press the "K" key on their keyboard 15 times to see the answer. In the low accessibility condition (20 questions), participants were informed that they would need to press the "K" key 60 times to see the answer. We randomly assigned information accessibility conditions to each question independently for each participant, meaning each question was seen by some participants as a low accessibility question and other participants as a high accessibility question.

After participants viewed the question and the associated information accessibility condition, they were prompted to rate curiosity ("How curious are you about the answer to this question?" 1=Not at all curious, 7=Very curious) and confidence ("How confident are you that you know the answer to this question?" 1=Not at all confident, 7=Very confident). The order of these questions was randomized for each participant (but remained consistent across the 40 trials).

After these responses, participants pressed the "K" key the required number of times, then were shown the answer. Upon receiving the answer, they rated answer satisfaction ("How satisfied are you by the answer?" 1=Not at all satisfied, 7=Very satisfied). This measure was exploratory and is not analyzed in the present research.

After completing all trials, participants completed an attention check: they saw the same curiosity and confidence ratings but were prompted to respond with a particular value (6). Finally, participants reported demographic information and completed a final attention check (typing a specified word in a textbox).

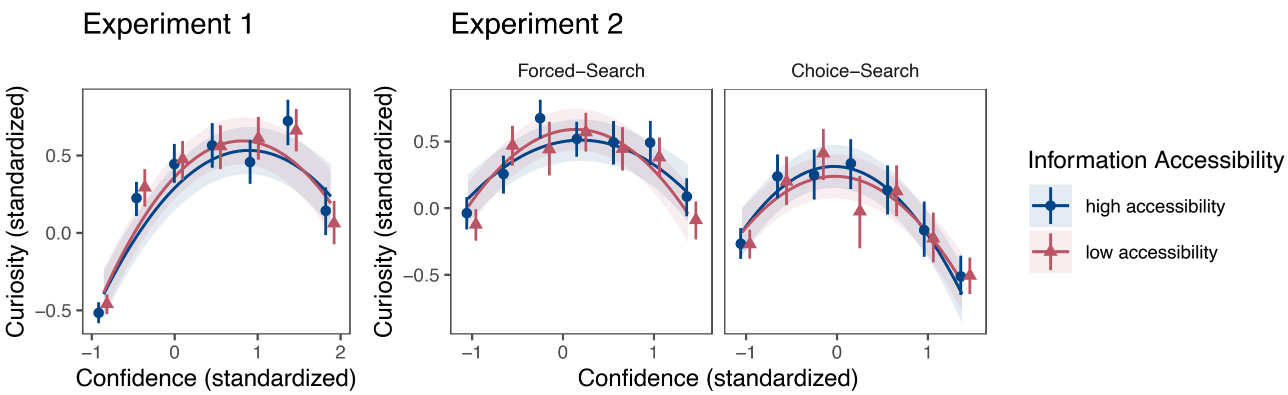

Figure 1: Association between confidence and curiosity, as a function of information accessibility. Left: Experiment 1. Right: Experiment 2, forced-search condition (left panel) and choice-search condition (right panel). Points indicate mean curiosity at each level of confidence, error bars indicate 95% CIs. Lines (with 95% CIs) display experiment-specific model predictions.

Results

Prior to all analyses, we z-scored curiosity and confidence. Information accessibility was contrast coded, with the low accessibility condition coded as -0.5 (reference group) and the high accessibility condition coded as 0.5.

We found that curiosity was not affected by information accessibility (see Fig. 1). We fit a mixed-effects regression model[1] predicting curiosity, with information accessibility as a fixed effect, by-participant random slopes and intercepts, and by-trivia-question random intercepts. We tested the significance of the information accessibility effect using a likelihood ratio test. There was no evidence for an effect of information accessibility on curiosity, β = -0.02, 95% CI [-0.08, 0.04], $\chi^2(1) = 0.26$, $p = .61$. Thus, participants' curiosity did not appear to vary as a function of how quickly and easily they could receive the answer.

To further support this conclusion, we conducted an exploratory Bayesian version of the above analysis.[2] We estimated the Bayes Factor in favor of a null model that included a fixed intercept, by-participant and by-trivia-question random intercepts, and a by-participant random slope for information accessibility, compared to a full model that additionally included a fixed effect of information accessibility. This comparison tests for a population-level effect of information accessibility, while accounting for individual variation in the effect. The Bayes Factor provided strong evidence for the null model (BF = 133). This suggests that information accessibility does not influence curiosity.

We preregistered that we would test whether confidence mediates the effect of information accessibility on curiosity. Since we did not find an effect of information accessibility on curiosity, this analysis was not conducted. Instead, replicating prior work (e.g., Kang et al., 2009), we found that curiosity was associated with confidence—with the highest levels of curiosity at moderate levels of confidence (see Fig. 1). We fit a mixed-effects regression model predicting curiosity, with fixed effects for the linear and quadratic effects of confidence, by-participant and by-trivia question random intercepts, and by-participant slopes for linear and quadratic confidence. There was evidence for both a linear effect of confidence, β = 0.56, 95% CI [0.46, 0.65], $\chi^2(1)$ = 81.14, $p < .001$, and a quadratic effect of confidence, β = -0.33, 95% CI [-0.38, -0.27], $\chi^2(1) = 85.84$, $p < .001$. Curiosity was highest at moderate-to-high levels of confidence.

Importantly, there was no evidence that information accessibility interacted with the linear or quadratic effect of confidence. As an exploratory analysis, we added information accessibility to the model above as a fixed effect (in interaction with linear/quadratic confidence) and a by-participant random slope. We did not include random slopes for the interaction between information accessibility and linear/quadratic confidence, as this model resulted in a singular fit. There was no evidence for an interaction between information accessibility and the linear effect of confidence, β = -0.03, 95% CI [-0.10, 0.04], $\chi^2(1) = 0.63$, $p = .43$, or between information accessibility and the quadratic effect of confidence, β = 0.05, 95% CI [-0.02, 0.12], $\chi^2(1) = 1.91$, p = .17. Thus, there was no evidence that the effect of information accessibility on curiosity varied across levels of confidence.

Discussion

In Experiment 1, participants rated their curiosity about trivia questions, knowing that they were about to spend only a little time and effort (high information accessibility) or a lot of time and effort (low information accessibility) to receive the answer. We found that the time and effort needed to gain information had no effect on people's curiosity. This speaks against the hypothesis that curiosity is affected by information accessibility. Instead, replicating prior work (Kang et al., 2009; Ten et al., 2024), we found robust evidence that curiosity was related to confidence, with the

[1] Mixed-effects models used the lme4 package (Bates et al., 2015) for R Statistical Software (4.3.2; R Core Team, 2023).

[2] We used the rstanarm R package (Goodrich et al., 2020), with default weakly informative priors as set by the stan_glmer function.

highest levels of curiosity when participants were moderately confident they knew the answer to the question.

While these results suggest that information accessibility does not affect curiosity, our task has some peculiarities compared to real-world information search. For example, participants were told directly how accessible the information was on each trial. In contrast, in real-world learning problems, we often infer information accessibility through experience: we try to seek information, then we find it to be either easy or difficult. In other words, information accessibility is often *experienced* rather than *expected*. We address this in Experiment 2.

Experiment 2

In Experiment 2, we test whether information accessibility affects curiosity in situations where information gain is gradual—more akin to real-world learning. Specifically, we manipulate the number of keypresses required to reveal each *letter* of the answer to a trivia question, and we prompt participants to rate curiosity about the answer after they have exerted time and effort to reveal the first letter. As a result, they have already experienced the accessibility of information at the time curiosity is assessed.

Experiment 2 also investigates how information accessibility affects information search. The variations in information accessibility tested in the present research were relatively small. In Experiment 1, participants spent about 8 seconds longer seeking information in the low accessibility condition compared to the high accessibility condition. It is possible that information accessibility did not affect curiosity in Experiment 1 because the manipulation of information accessibility was too subtle for participants to notice it. One way of ruling out this possibility is to show that the manipulation affects information search. To do so, we introduce a new task condition, where participants can choose whether to seek information on each trial. In the forced-search condition (like Experiment 1), participants always exert time/effort to see each answer. In the choice-search condition (new), participants can choose whether to exert time/effort to see each answer. Like prior research (e.g., Dubey & Griffiths, 2020; Kang et al., 2009; Spitzer et al., 2024), information search is operationalized by participants' willingness to spend time or exert effort to gain information in the choice-search condition.

Finally, we conduct this study using a new population of participants. Experiment 1 used a university participant pool and was therefore limited in diversity of age, gender, and race/ethnicity. To increase the generalizability of our results, we reach a broader sample of participants using Prolific.

Experiment 2 was preregistered at https://aspredicted.org/bb6v-xdh7.pdf.

Methods

Participants We recruited 174 participants from Prolific, filtering recruitment for participants in the United States who had completed at least 50 tasks on Prolific with a minimum 95% approval rate. All participants completed the study online. An additional 21 participants were excluded for failing to pass three attention checks (as described in Experiment 1). We also excluded 5 participants who provided the same curiosity and/or confidence rating on every trial.

Participants were randomly assigned to one of two task conditions: the forced-search task condition (n = 88) or the choice-search task condition (n = 86).

Our target sample size was 150. Based on power analysis, a sample of 75 participants in the forced-search condition would provide at least 80% power to detect a small effect (β = 0.15) of information accessibility condition on curiosity.

Our sample ranged from 21-74 years of age (M = 41). 52% of participants identified as women, 44% as men, and 1% as non-binary or genderqueer (2% not specified). Participants' race/ethnicity were as follows: 71% White, 13% African American/African/Black, 6% Asian/Asian American, 4% Hispanic/Latinx/Spanish Origin, 4% multiracial or multiethnic, 1% Middle Eastern/North African, 1% Pacific Islander/Native Hawaiian (1 not specified).

Materials The materials were 20 general knowledge trivia questions from Metcalfe et al. (2021), most of which were distinct from those used in Experiment 1. In this experiment (unlike Experiment 1), we required that all trivia answers were five letters long. Since the answers were revealed one letter at a time, using a fixed answer length guaranteed that all "high accessibility" answers required 15 keypresses to obtain (3 per letter), and all "low accessibility" answers required 60 keypresses to obtain (12 per letter). Most trivia questions from Experiment 1 did not have five-letter answers, so we selected a new set of questions for this experiment.

Procedure The procedure was similar to Experiment 1. In this case, participants were informed that they would need to press the "K" key a certain number of times to reveal each *letter* of the answer to each question. Participants completed 20 trials. In the high accessibility condition (10 questions), participants were informed that they would need to press the "K" key 3 times to see each letter. In the low accessibility condition (10 questions), participants were informed that they would need to press the "K" key 12 times to see each letter.

On each trial, participants saw a single trivia question, with an associated information accessibility condition (how many keypresses would be required for each letter). Then, they were prompted to press the "K" key the specified number of times to reveal *only the first letter* of the answer. After the first letter was revealed, participants rated curiosity and confidence (as in Experiment 1).

Then, participants in the forced-search task condition continued to press the "K" key until the entire answer was revealed. Participants in the choice-search task condition were given the option to either continue pressing the "K" key to see the rest of the answer, or skip to the next question. In the Results, we refer to choosing to continue pressing the "K" key as "information search."

Finally, participants completed the same attention checks and demographic questions as Experiment 1.

Results

As in Experiment 1, we z-scored curiosity and confidence prior to analyses. Information accessibility was contrast coded, with the low accessibility condition coded as -0.5 (reference group) and the high accessibility condition coded as 0.5. Task condition was also contrast coded, with the forced-search condition coded as -0.5 (reference group) and the choice-search condition coded as 0.5.

As preregistered, we first analyzed how information accessibility affected curiosity in the forced-search task condition, replicating Experiment 1. Then, we tested whether having the option to pursue information search (forced-search condition vs. choice-search condition) moderates the effect of information accessibility on curiosity. Finally, we tested how information accessibility affects information search in the choice-search condition.

Information Accessibility and Curiosity We again found that curiosity was not affected by information accessibility in the forced-search condition (see Fig. 1), $\beta = 0.07$, 95% CI [-0.005, 0.14], $\chi^2(1) = 3.33$, $p = .07$. To further support this claim, we conducted a non-preregistered Bayesian analysis. As in Experiment 1, we estimated the Bayes Factor in favor of the null model. The Bayes Factor provided strong evidence for the null model (BF = 29). Thus, participants' curiosity did not appear to vary as a function of how readily available the answer was, even when participants had first-hand experience with the degree of information accessibility for each question.

Replicating Experiment 1 and prior work, we found that curiosity was related to confidence, with high curiosity at moderate levels of confidence (see Fig. 1). There was evidence for both a linear effect of confidence, $\beta = 0.10$, 95% CI [0.01, 0.19], $\chi^2(1) = 4.36$, $p = .04$, and a quadratic effect of confidence, $\beta = -0.36$, 95% CI [-0.45, -0.27], $\chi^2(1) = 45.50$, $p < .001$. Thus, curiosity was highest at moderate-to-high levels of confidence.

As in Experiment 1, we conducted an exploratory analysis investigating whether information accessibility interacted with confidence (in the forced-search condition). Unlike Experiment 1, we did not include by-participant random slopes for information accessibility in this analysis due to model convergence issues. We found evidence for an interaction between information accessibility and the quadratic effect of confidence, $\beta = 0.12$, 95% CI [0.02, 0.22], $\chi^2(1) = 5.94$, $p = .01$. Following up on this interaction, we calculated the estimated marginal mean contrast between the high accessibility condition and the low accessibility condition at three levels of confidence: the minimum, midpoint, and maximum of the seven-point rating scale.[3] The information accessibility contrast was only significant at the highest levels of confidence: when participants indicated that they were very confident that they knew the answer (7 out of 7), their curiosity was 0.15 standardized units higher in the high accessibility condition than the low accessibility condition, $t(1548) = 2.60$, $p = .01$. Thus, information accessibility only increased curiosity when participants were already highly confident they knew the answer.

Does Choice Over Information Search Matter? Next, we investigated whether the effect of information accessibility on curiosity varied across task conditions. First, we fit a mixed-effects regression model predicting curiosity, with task condition and information accessibility as fixed effects, by-participant random intercepts and slopes for information accessibility, and by-trivia-question random intercepts. There was no evidence for an interaction between information accessibility and task condition, $\beta = -0.03$, 95% CI [-0.13, 0.08], $\chi^2(1) = 0.31$, $p = .58$.

However, there was evidence for a three-way interaction between information accessibility, task condition, and the quadratic effect of confidence, $\beta = -0.21$, 95% CI [-0.36, -0.05], $\chi^2(1) = 6.70$, $p = .009$, in an exploratory analysis. As reported above, there was a two-way interaction between information accessibility and the quadratic effect of confidence in the forced-search condition. However, there was no evidence for an interaction between information accessibility and the quadratic effect of confidence in the choice-search condition, $\beta = -0.08$, 95% CI [-0.21, 0.04], $\chi^2(1) = 1.81$, $p = .18$. Thus, information accessibility increased curiosity at high levels of confidence, but only when participants had no choice but to pursue the answer.

Information Accessibility and Information Search Finally, we tested the effect of information accessibility on information search. Participants were more likely to seek information when information accessibility was higher (see Fig. 2). We fit a mixed-effects logistic regression model predicting information search, with information accessibility and curiosity as fixed effects, by-participant random intercepts, by-trivia-question random intercepts, and by-participant random slopes for information accessibility. There was evidence for a significant effect of information accessibility condition, *odds ratio (OR)* = 1.86, 95% CI [1.31, 2.65], $\chi^2(1) = 10.82$, $p = .001$, with higher odds of

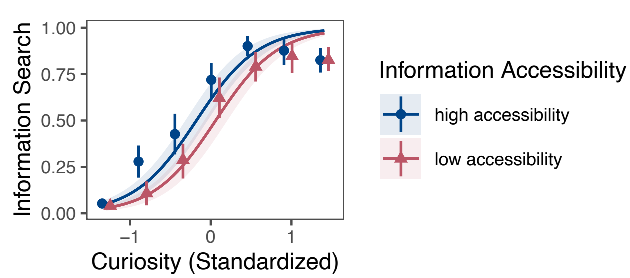

Figure 2: Association between curiosity and information search, as a function of information accessibility. Points indicate proportion of trials where participants chose to seek information at each level of curiosity, error bars indicate 95% CIs. Lines (with 95% CIs) display fitted model predictions.

[3] We used the emmeans R package (Lenth, 2023).

information search in the high accessibility condition compared to the low accessibility condition. There was also an effect of curiosity, *OR* = 13.85, 95% CI [10.46, 18.34], $\chi^2(1) = 849.79$, $p < .001$, with higher curiosity predicting greater odds of information search. Thus, curiosity and information accessibility both independently predicted decisions to seek information.

Discussion

Experiment 2 tested the effect of information accessibility on curiosity, when participants had the opportunity to experience the degree of information accessibility prior to rating curiosity. Largely, we replicated the Experiment 1 finding that information accessibility does not affect curiosity, with one exception: information accessibility increased curiosity when participants were already highly confident they knew the answer and had no choice but to search for it. In contrast, there was strong evidence for an effect of information accessibility on information search, showing that the manipulation of information accessibility was effective.

General Discussion

Does information accessibility—the relative ease with which information can be obtained—affect curiosity? The present work provided evidence that information accessibility does not impact people's self-reported curiosity. Regardless of how fast and easy it would be to gain the answer to a trivia question, people reported being similarly curious. This was the case both when participants were told the degree of information accessibility (Experiment 1), and when they had also experienced it first-hand (Experiment 2).

There was one exception to the above results. In Experiment 2, when people were highly confident that they already knew the answer—yet had no choice but to search for it—people were more curious about highly accessible information. This could reflect people's preference to seek information that will confirm their beliefs (Klayman & Ha, 1987). It is especially notable that this effect only arose in Experiment 2, where participants rated curiosity and confidence *after* revealing the first letter of the answer. High confidence ratings may have reflected that the participant's initial guess about the answer was confirmed by the first revealed letter, and thus participants may have been especially motivated to confirm their guess. Notably, this effect of information accessibility was small—and unlikely to arise in real-world situations, where people generally *can* choose whether to seek information. Thus, the effect of information accessibility on curiosity is highly limited.

This work provides new evidence concerning recent theories of human curiosity (Gottlieb et al., 2013; Poli et al., 2024), which have proposed that curiosity and exploration are tightly linked with how rapidly learning progresses. Learning progress can be slowed in two ways: because the learning problem is difficult, or because information search is time-consuming and effortful. Our results suggest that the latter set of considerations do not typically affect curiosity. Broadly, these findings suggest that curiosity is largely sensitive to idealized learning progress—how much learning progresses *when information is received*—rather than practical learning progress—the actual rate of information gain, including external considerations.

Notably, Experiment 2 revealed that information accessibility predicted decisions to seek information—as did curiosity. People were more likely to seek information when learning would occur quickly and with little effort, compared to when learning would require more time and effort. This suggests that our manipulation of information accessibility was effective. One possible alternative explanation is that participants wanted to finish the experiment as quickly as possible and thus chose only to pursue low-effort tasks. However, information search decisions were also predicted by participants' curiosity, replicating prior work (Kang et al., 2009; Spitzer et al., 2024). This suggests that participants were not indiscriminately avoiding time/effort in order to finish the experiment early.

The present research is limited in its reliance on artificial materials—trivia questions—as a way of inducing curiosity. This is typical of studies of curiosity (e.g., Gruber et al., 2014; Kang et al., 2009; Metcalfe et al., 2021; Wade & Kidd, 2019), but does not reflect real-world curiosity in several respects. For example, the questions people are curious about in everyday life are not supplied by an experimenter—people think of the questions themselves. In this sense, real-world learning is likely more meaningful—and information accessibility might therefore matter more. In addition, prior work on learning progress (e.g., Poli et al., 2022; Sayalı et al., 2023; see also Hsiung et al., 2023) has investigated curiosity and information search in dynamic, trial-and-error learning tasks, rather than in response to static trivia stimuli. Future work is needed to extend our findings to other learning tasks.

Different manipulations of information accessibility might also shed further light on how information accessibility affects curiosity. Here, we manipulated information accessibility using a task that was completely divorced from the learning process. Pressing the "K" key several times is quite different from real-world information search—which typically involves formulating questions (Rothe et al., 2018) and evaluating answers (Zemla et al., 2017). Future research might attempt to replicate these results with a more realistic information search task. Moreover, it would be beneficial to consider more dramatic manipulations of information accessibility, requiring higher levels of time and effort. That said, our results suggest that small-scale variations in information accessibility—when completely external to the learning process—do not affect curiosity.

In sum, this work provides new insight into what causes curiosity to be experienced under some circumstances but not others. People are more likely to pursue information search when information is easier and faster to obtain. However, though information accessibility affects information search, information accessibility does not affect the actual, subjective experience of curiosity. Thus, curiosity is unhindered by the practical costs of seeking information.

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