

WHITEPAPER

Best Practices for Ensuring Your Assessments are Effective Over Time



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Introduction

Technical skills assessments, such as coding tests and technical screening interviews, are one of the most [valid](#) and [effective](#) methods used by innovative and growth-oriented companies to hire [technical talent faster than the competition](#). Launching a technical skills assessment is a monumental milestone for hiring teams, as this signifies the culmination of the work that went into designing, validating, and ensuring that the assessment is the right fit for the job. More importantly, once all the prep work is done, recruiters and hiring managers can start scaling their hiring processes and expanding their candidate pools.

However, what happens when many candidates drop out of the process before completing the assessment? Or when candidates leak the questions and solutions on public forums? Such situations can incentivize plagiarism, reduce the accuracy and validity of candidate signals captured by assessments, and provide an unfair advantage for some candidates. Ultimately, these issues interfere with the hiring team's ability to achieve their hiring goals.

To keep them effective while scaling hiring, assessments must be actively monitored and maintained. In this paper, we will discuss the key challenges with maintaining technical skills assessments once they're launched. Then, we will identify best practices to mitigate these challenges, such as developing a monitoring plan, creating question variations, and refreshing assessment content. At the end of the guide, we highlight practical strategies that can be implemented to **effectively maintain technical skills assessments at scale**.

Key Challenges

To keep assessments effective while scaling hiring processes and remaining competitive, hiring teams need to proactively prepare for the following challenges: unexpectedly high candidate dropout, unexpected candidate performance, and content leaks and plagiarism.

In this section:

- Unexpectedly High Candidate Dropout
- Unexpected Candidate Performance or Pass Rate
- Content Leaks & Plagiarism



Unexpectedly High Candidate Dropout

Despite the rigor it takes to develop effective technical skills assessments, they can't function as intended if candidates are not motivated to engage with them. A key challenge in implementing assessments is candidates dropping out before completing or even attempting the questions. Of course, some dropout is expected, as candidates may self-select out of the hiring process for a myriad of reasons (e.g., realized the role would be a poor fit, found they didn't have the skills required for the role, accepted an offer for another job). However, when the dropout rate is unexpectedly high at the assessment stage, it could mean the assessment is decreasing candidates' motivation to engage in the hiring process. **Some reasons for this are that candidates:**

1. Feel blindsided when they're required to complete an assessment as part of the application process.
2. Perceive the assessment to be excessively long and/or unfairly difficult.
3. Consider the assessment to be irrelevant to the job and believe that it does not offer them a fair opportunity to demonstrate their skills.
4. Believe the company is trying to get them to do work for free by disguising current problems as assessment questions.

Regardless of why candidates drop off, an unexpectedly high dropout rate is a clear indicator that the assessment is not working as intended. If left unchecked, this could significantly diminish the effectiveness of the assessment for identifying top talent, as it becomes a measure of motivation to engage with the hiring process instead of a measure of technical skills.

Unexpected Candidate Performance or Pass Rate

Imagine doing all the hard work of developing and implementing a technical skills assessment, only for most candidates to solve all questions effortlessly. This results in the assessment being almost useless in identifying top talent, while adding a burdensome step to the selection process for candidates. On the other hand, if most candidates are struggling to solve anything on the assessment, you may miss out on potential talent and create a frustrating candidate experience that doesn't reflect the actual requirements of the job and results in inaccurate assumptions (e.g., "the job will be too difficult" or "the company treats people unfairly").

Both of the above situations generally indicate that the difficulty level of the assessment is not calibrated appropriately, making it challenging to use assessment results to inform hiring decisions. This is why actively monitoring candidate performance and pass rates is critical to identifying whether assessments are effectively differentiating between candidates based on their skills.

Content Leaks & Plagiarism

Content leaks occur when past or current candidates discuss questions with prospective candidates or post questions on public forums. In fact, because technical skills assessments are an integral part of the hiring process for many tech jobs, candidates tend to have a substantial appetite for information on such assessments. This is reflected by the rise in platforms specializing in preparing candidates for technical skill assessments, such as [LeetCode](#), which further proliferates incentives for candidates to leak questions. Given that engineers often spend weeks creating assessment questions, leaks can quickly become a costly challenge.

Candidates may not have malicious intent when leaking content. Many genuinely want to learn how to solve a difficult problem, and others hope to be a helpful resource for others. Regardless of intentions, leaked content results in some candidates gaining an unfair advantage over others by obtaining knowledge of questions and potential solutions prior to the assessment. In the worst case scenario, leaks allow many candidates to receive undue credit by plagiarizing solutions, allowing them to move ahead in the hiring process without demonstrating relevant skills. As such, leaks render thoughtfully designed assessment questions useless, as candidate performance may reflect their ability to find the leaked content rather than their technical skills. All in all, leaks are detrimental to an assessment's ability to measure candidate skills accurately, making them a key challenge to maintaining the effectiveness of technical skills assessments.

Best Practices

The following practices can help hiring teams overcome the challenges they face after launching technical skill assessments, allowing them to maintain assessment effectiveness while scaling their hiring processes.

In this section:

- Develop a Monitoring Plan
- Create Question Variations
- Set Content Lifespan and Refresh Content



Develop a Monitoring Plan

It may sound obvious, but a surprisingly large number of hiring teams fail to implement one of the most important processes for maintaining assessments: monitoring and planning for the challenges described above. Setting up a plan to monitor for problematic indicators of candidate dropout, performance or pass rate, and content leaks is an essential step to scale hiring while maintaining assessment effectiveness. These challenges go beyond simple metrics, such as candidate volume and completion rates, and require hiring teams to evaluate assessment effectiveness in a multifaceted manner. **Ideally, monitoring plans should address the following considerations:**

1. What are the expected and actual dropout and pass rates?
2. What should the distribution of candidate scores look like?
3. How can we evaluate and improve candidate experience on the assessment?
4. How often can we expect content to be leaked?
5. How will we detect and evaluate the impact of leaks and plagiarism?
6. How often should content be updated to mitigate the impact of leaks and plagiarism?
7. When should the assessment be revised or updated?

Ultimately, developing a multifaceted monitoring plan to account for various contingencies is critical to ensuring success when implementing technical skills assessments.

Create Question Variations

As leaks allow for plagiarism and pre-knowledge of assessment content, the best method for mitigating the impact of leaks is to create variations: questions that look and feel different from the original, but are of similar difficulty and require the same underlying knowledge or skills to solve. For example, when designing data structure questions for a coding assessment, one variation can require candidates to write code to manipulate string arrays, while another variation can require code that manipulates numeric arrays. As long as both variations are similar in difficulty and ability to differentiate between candidates' coding skills, either one can be substituted for the other to assess skills.

Creating variations of questions allows hiring teams to effectively mitigate the impact of leaks on assessment validity and effectiveness. However, creating variations for technical skills assessments can be a resource-intensive process, as ensuring consistency across variations requires considerable time and expertise. This is often a driving factor in companies' decisions to leverage validated frameworks, which are guidelines that clearly outline all assessment specifications (e.g., [CodeSignal's Skills Evaluation Frameworks](#)), to effectively develop question variations. To maximize consistency in variations, assessment specifications should include the number of questions, assessment duration, topics (i.e., required knowledge and skills) covered by all questions, difficulty of questions, and how scores are computed. This way, content creators can easily develop question variations.

Set Content Lifespan and Refresh Content

Given the variety of reasons for content leaks, the likelihood of leaks depends on the rate of exposure. The more candidates are assigned the same set of questions, the more likely these questions will be posted somewhere that's easily accessible for other candidates. Thus, setting lifespan (i.e., an expiration threshold for content) and regularly refreshing content with appropriate variations are critical to maintaining the effectiveness of technical skills assessments.

Since recruiting timelines and hiring cycles will usually [experience ebb and flow throughout the year](#), the most important factor for determining the lifespan of assessment content should be the number of candidates exposed to the content. For example, a set of questions can be retired from the live assessment after being assigned to 500 candidates, as the chance of leaks increases with each candidate exposed to the questions. Sometimes, it may take a hiring team a month to source 500 candidates, and other times, it may take the team a day to source 500 candidates (e.g., during peak campus recruitment season). This is why the lifespan of assessment content should be based on the amount of candidate exposure, rather than time.

Of course, expired content must be replaced by appropriate variations to ensure that the assessment still functions as intended. Thus, another important factor in determining the cadence of content refreshes would depend on resources allotted to creating question variations. Because creating content for technical skill assessments requires technical expertise, hiring teams often struggle to create question variations at a pace that effectively mitigates leaks and plagiarism. For example, [developing a single coding question can take an engineering team anywhere from 2 to 6 hours](#), depending on the complexity of the question. Thus, hiring teams in forward-thinking companies employ full-time content developers to scale and maintain their in-house assessments or partner with vendors who specialize in large scale technical skills assessments.

Conclusion

In this paper, we identify 3 major challenges hiring teams may face after launching their technical skills assessments:

1. **Unexpectedly high candidate dropout rate** that suggests the assessment is diminishing the candidate pool, losing qualified candidates, and measuring motivation to engage with the hiring process rather than technical skills.
2. **Unexpected candidate performance** where many candidates fall into a narrow range of scores, making it challenging to differentiate between candidates based on their technical skills and select candidates to move forward in the hiring process.
3. **Content leaks and plagiarism** that give some candidates an unfair advantage and render the assessment ineffective in capturing true technical skills.

All of these challenges can hinder the effectiveness of these assessments, ultimately impeding the goal of hiring technical talent more efficiently and effectively than the competition. To address these challenges and help hiring teams maintain the effectiveness of their assessments while scaling their hiring processes, we highlight three best practices:

1. **Develop a monitoring plan** to understand the effectiveness of live assessments in a multifaceted way.
2. **Create question variations** with similar difficulty and ability to differentiate between candidates and allow leaked content to be easily replaced.
3. **Set content lifespan and refresh content** within the live assessment on a regular basis, ideally depending on the amount of candidate exposure.

Ultimately, well-designed technical skills assessments can only help hiring teams achieve their goal of scaling their hiring process and hiring technical talent faster than the competition if they are effectively maintained. If maintained with care, such assessments help companies invested in innovation and growth to hire top tech talent efficiently and fairly.



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