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Ted Nelson's "10-Minute Rule" and Its Relevance to Contemporary Usability Design: A Positional Paper

ABSTRACT

This paper is an opinion with discussion and suggestive points that re-visit and speculate the 10-Minute Rule by Ted Nelson, which was published in *Dream Machines* (1974) (Nelson 1974), and its relevance to the present day usability and interface design. This opinion paper claims that the principle concept of Ted Nelson still remains applicable, especially in consumer-facing digital applications. In such cases, the effort required to understand the interface at first instance of usage by users, the ease of further learning by users, and an user engagement which deems intuitive are the determining factors for the adoption and engagement levels of the users. However, this opinion paper also discusses that the 10 minute rule of thumb may not suffice in the case of interfaces that deal with complex professional applications, technical engineering like CAD softwares, and systems that need prerequisite expertise. Such application interfaces may demand higher involvement of users due to more complex functionalities, a higher cognitive load demand, and a steeper learning curve especially for the first time users. To further support this argument, the paper relates the proposal by Nelson to some of the existing concepts of usability such as minimal design, progressive disclosure and reduced cognitive load - namely Hicks Law, Jacob Neilsen 10 usability principles and progressive learning. The rule can be applied in the current software, and it provides examples of the industry. This paper reinterprets Ted Nelson's 10-Minute Rule as a layered usability model, where usability progresses from initial comprehensibility to guided expansion and expert mastery. This reframing positions the rule not as a fixed temporal benchmark, but as part of a broader usability continuum applicable to contemporary interface systems.

Keywords - Usability design, Human-computer interaction (HCI), User interface design, Learnability, Progressive disclosure

1. Introduction

This Usability was an early and provocative Usability benchmarking. The 10-Minute Rule of (Nelson 1974) suggested an early and provocative standard that a user should be able to initiate meaningful interaction with a system in a brief short span of time of maximum 10 minutes.

The relevance of this rule in contemporary systems requires closer examination, particularly across varying levels of system complexity. The further relevance of this rule is a subject of closer consideration in the contemporary design landscape where users are exposed to a broad array of systems, starting with a very simple consumer application and going all the way to the most complex professional platform.

This paper argues that Nelson's principle remains applicable in systems prioritising rapid adoption, while requiring reinterpretation for complex, professional environments. Nevertheless, that rule does not really slice across all types of systems, particularly those ones that have stratified workflows, additional cognitive load, and gradual learning. That is common in professional software, professional-level tools, and the new AI-assisted and immersive environments we are currently experiencing. When that is the case, then you cannot simply gauge usability based on what a user can do within the initial few minutes. Such a method is too superficial and lacks the entire learning process. This paper reinterprets Nelson's idea by proposing a layered usability framework in which initial interaction, progressive learning, and long-term mastery are understood as distinct but connected phases of usability.

1.1 Background of the "10 Minute Rule"

One of the first practitioners of user-centered design (UCD) in human-computer interaction (HCI) was Ted Nelson with his vision of interfaces that were designed to be easy to use in the first place. According to Nelson, a 10 minutes rule, a user should master the key features of a system in ten minutes (Nelson 1974). This rule was composed by Nelson at a time when computers were extremely hard to operate. Text commands such as early DOS or UNIX were used in computers at that time. They were difficult to comprehend, took a lot of thought, and presented insufficient information. Even such basic interfaces as Apple or Windows produced by Microsoft also never existed at the time. The vision of Nelson is still respected today. His thoughts were well before his era and particularly when we consider the modern issues of simplifying computer data to users. Most computer systems used in the 1970s needed technical knowledge, extensive training and specialized skill. In the case of hypertext itself - Nelson's introduction to hypertext technology was itself a huge leap and a successful progress to make the digital solutions more navigation friendly. This also reflects the importance and value of Nelson's work in the world of digital technology. He emphasized intuitive design as a precursor of later usability movements in graphical user interfaces (GUIs) and current UX/UI development. Although his rule of 10 minutes in user interface systems is still very influential, it seems that its boundary is reached when dealing with complex, professional grade software.

2. Established Laws, Principles and Heuristic Frameworks That Resonate and align with Ted Nelson's '10 Minute Rule'

Does Jakob Nielsen's minimal design principle (Jakob Nielsen 2020), Hicks law, and progressive exposure have relation or resonance (align) with Ted Nelson's 10 minute rule? Indeed, Ted Nelson's 10 minute rule is related to and follows Jakob Nielsen's minimal design principles (Dowding and Merrill 2018), Hick's Law, and progressive exposure in that they all lead to less user interaction and better usability.

The principle of a minimalist design, as explained by Jakob Nielsen in his 10 usability principles, simply states that to make something easy to understand by the user, we may eliminate all the information elements that may not actually be needed at that point of time within the user journey. This would support the approach to decrease the overload on the user's brain (Virzi 1990). It is quite similar to the 10-minute rule mentioned by Ted Nelson: is a person cannot complete a meaningful task within 10 minutes, then something is wrong and it means that the system fails to prove as a good user interface design. Both of those concepts have everything to do with a smoother and more efficient user experience. Of course, Hick Law (which states that the time it takes to decide increases logarithmically with the number of choices available at the given point of time to the user) is related

naturally to the 10 minute rule, where again designers are encouraged to maintain a small list of options so that decisions do not take an eternity to be made (Pearson and Van Schaik 2003). This rule surely simplifies it to provide some guidance to the users and at the same time allow them to complete tasks during such a limited 10 minutes. The fact that progressive exposure supports the 10-minute rule, which informs you that you only introduce users to more complex features when they feel comfortable with a system. Modern interaction design increasingly relies on staged exposure of functionality in order to balance learnability with interface complexity (Google 2025). The reason behind its effectiveness is that individuals are capable of doing a basic operation fast as long as the UI presents that which is required and then progressively add more features as they grow more accustomed to it (Pearson and Van Schaik 2003). All these notions combined do bring out the nitty-gritty of making design simple, efficient, and user-friendly as you are constructing interfaces. With these ideas in place a designer can wind up with products that are insanely easy to use when you first get them into your hands and even after you introduce the more complex stuff still has a smooth learning curve.

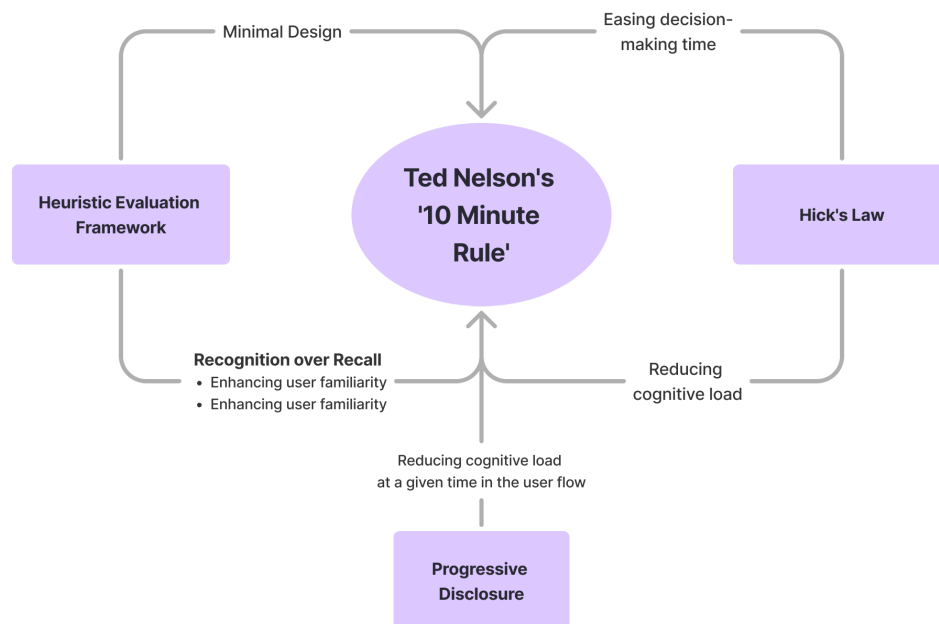


Fig. 1. Conceptual relationship between Hick's Law, Jakob Nielsen's usability principles, progressive disclosure, and Ted Nelson's 10-Minute Rule.

Fig.1. conceptually illustrates the paper's central argument: the relevance of the 10-minute rule depends on the relationship between initial ease of use, required learning effort, and the value a system offers over time. In simple consumer-facing systems, usability is often expected to be immediately accessible. In contrast, expert and professional systems may demand a steeper learning curve, but can still be considered usable if they enable progressively higher value through deeper engagement.

3. Analysis: When The "10-Minute Rule" Actually Works?

In cases where ease of learning makes all the difference in user take up, Ted Nelson's principle is highly relevant. According to some of the available usability rules, user interfaces are supposed to be

easy to learn, simple, and as intuitive as possible. An analysis on mobile learning portals also provided ten important rules of usability that include decision making by the users, their interpretation, interaction and interface design since mobile devices change frequently (Seong 2006). The principles of ease of learning are also applied in these rules since the goal is to develop extremely effective and convenient interfaces. Nevertheless, as other studies have indicated, adherence to usability principles may in fact complicate user decision-making in an interface (Tsopra et al. 2014). It is ironical and also very critical that designers should remember when making their decisions. An example is the study conducted by Tsopra which determined the level of confidence and perceived usability of the system. The paper has examined two interface types in clinical decision support systems. It concluded that the interfaces with the principles of usability helped doctors feel more confident and believe that the system was more friendly (Tsopra et al. 2014). Therefore, simplicity and ease of usage should be prioritised in terms of interfaces since they may raise the number of individuals who use the system and the level of satisfaction they experience.

3.1 Consumer Applications and Mainstream Software

The Convincing examples where the 10-Minute Rule is prolific and successfully applied is in several leading business to consumer applications and softwares. Operating systems (e.g., Apple iOS, Google's Android) affording on minimal onboarding time, as its thoughtfully designed to allow new users to navigate the interface with absolute ease. Several features of the design like natural gestures which are very human-intuitive, guide tours at the start, and useful tooltips, - they make sure that first-time users adapt soon to the their interface.

Examples :

Google material design system principles are focused on usability, predictability, and clarity that aligns well with the usability ideals of Nelson (Google 2025).

Google's Material Design system (Google 2025).emphasises clarity, predictability, and ease of interaction, which supports rapid user onboarding. This aligns with the first layer of the proposed usability model, where immediate comprehension and low cognitive load enable users to begin meaningful interaction within a short time.

Apple's iOS design principles similarly prioritise intuitive interaction and consistency, enabling users to navigate core functions with minimal learning effort. This reflects the applicability of Nelson's principle in systems designed for immediate accessibility.

Examples such as Google Docs, Spotify, and Instagram demonstrate how interfaces can enable users to quickly access core functions with minimal effort. These systems prioritise initial comprehensibility, supporting the first layer of usability where rapid task initiation is critical for adoption.

Example: Google Doc vs. Microsoft Word. Google Docs exemplifies the applicability of the 10-Minute Rule by allowing users to begin writing immediately within a minimal interface environment. In contrast, Microsoft Word presents a broader feature set that increases initial cognitive load and requires prior familiarity. This comparison illustrates the trade-off between rapid onboarding (Layer 1) and long-term functional depth (Layer 3) within the proposed usability model.

4. Limitations of the 10-Minute Rule

Although Nelson rule can be applied in consumer friendly applications, it faces severe constraints in situations where the complexity of the software is required.

4.1 Professional and Technical Software

The 10-minute barrier is unrealistic because many professional-level applications have a steep learning curve. Such disciplines as graphic design, engineering, data science, and programming demand software that is both powerful and complex in nature.

Examples: Adobe Photoshop and Blender. Adobe Photoshop demonstrates the limitations of the 10-Minute Rule in complex systems. While basic functions may be accessible, the full capabilities of the software require extended learning and practice. This aligns with the higher layers of the usability model, where usability is defined not by immediate ease, but by the system's capacity to support progressive learning and expert performance.

Likewise, 'Blender' presents a similar case, where a steep learning curve is necessary due to the complexity of tasks supported. In such systems, usability is better evaluated in terms of long-term capability and efficiency rather than initial accessibility, reinforcing the need for a layered understanding of usability (Nielsen 1994).

4.2 Programming and Development Environments

Coding languages such as Visual Studio Code, MATLAB and Jupyter Notebook of Python have software development environments that require users to be familiar with the principles of coding, and thus, the 10-minute rule is not feasible. Modern platforms however incorporate learning aids to reduce the learning curve.

4.3 Python vs. Assembly Language

Python illustrates partial alignment with Nelson's principle, as its syntax allows beginners to write simple programs quickly. However, deeper programming competence requires conceptual understanding and problem-solving skills that extend beyond initial interaction, highlighting the limitations of a strictly time-based usability measure.

4.4 Counterpoint: Progressive Learning Models

Many systems have been designed to use a progressive learning model, where users can learn the basics quickly, but acquire more advanced skills as time goes on, instead of trying to learn everything in ten minutes. This adaptation embodies the spirit of the reign of Nelson and real world complications.

5. Speculative discussion: the future of usability and the 10-minute rule.

With the changing technology, what do we say about the rule of Nelson in the contemporary world?

5.1. AI-Driven Interfaces and Automation

The emergence of AI-based interfaces (e.g., ChatGPT, Google Bard, GitHub Copilot) puts the conventional principles of usability to the test. The fact that AI is able to process natural language input means that users do not have to learn complex commands manually. Conventional principles of

usability are broken using AI interfaces such as ChatGPT, Google Bard, and GitHub Copilot. The current users do not have to memorise a difficult syntax of commands, the models learn natural language and can take independent actions. This allows its users to accomplish multiple tasks within ten minutes using features such as DeepSeek or ChatGPT, which would otherwise be difficult due to the absence of AI. Consequently, the ten-minute rule comes in handy in AI environments. New aspects of usability are introduced by Virtual Reality (VR) and Augmented Reality (AR). Spatial interfaces are created by hand-tracking and immersive learning and are usually out of time with Nelson. This gap is still being bridged by more intuitive onboarding by developers such as guided VR tutorials.

Example: ChatGPT as a Low-Barrier Interface

The AI-based interfaces such as ChatGPT reduce barriers to entry by allowing users to perform complex tasks through natural language interaction. Research in human–AI interaction suggests that conversational systems can significantly lower usability barriers by translating complex computational processes into natural language workflows (Amershi et al. 2019). This effectively strengthens Layer 1 (initial comprehensibility), while simultaneously enabling access to advanced functionality, thereby compressing multiple layers of usability into a shorter interaction span.

This suggests that AI-assisted systems may extend the applicability of the 10-Minute Rule by lowering initial cognitive barriers. The growing integration of generative AI into consumer and professional systems demonstrates how intelligent assistance mechanisms can compress learning effort while still enabling advanced functionality (OpenAI 2024; Xu et al. 2023). However, they do not eliminate the need for deeper understanding in complex tasks, reinforcing the layered nature of usability.

5.2 Critique: Where the “10-Minute Rule” Falls Short

Nelson’s rule is well aligned for consumer friendly applications where the user goals are less complex and here, we observe a progressive disclosure approach (i.e. information elements are introduced step wise like a wizard design pattern instead of all information elements shown to user within an interface at the same point of time), However, when it comes to applications where higher complexity is needed, this 10 minute rule may not work well. Heuristics developed for specific domain points that the traditional heuristics (such as Nielsen’s) do not sufficiently assess relevant features of particular applications. (Quiñones and Rusu 2017).

Case Example: Technical and Professional Business Software

In systems requiring intricate and multi-layered functionality, usability cannot be adequately assessed through initial interaction alone. Instead, these systems demonstrate that usability must be evaluated across multiple stages of engagement, supporting the layered model proposed in this paper. The 10-minute rule of Nelson is not easily possible in such a case. Some of the examples are surface-modeling software in industrial design, graphic design software, CAD modeling software, engineering analysis software, programming environments, and data mining and analytics software.

Case Example: AutoCAD, Blender and Adobe Photoshop

Adobe has published a great number of beginner guides and tutorials in recent years.

Advanced skills in the use of these applications cannot be learned without professional training and practice. Likewise, AutoCAD (a 2-D drafting software) and Blender (a 3-D modeling software) are

both extremely difficult to learn, especially as a beginner, attempting to complete even simple functions. But this difficulty is frequently necessary in order to do professional work, and it may aid the work in also accelerating it. The usability should be able to balance between a high functionality and an elegant look.

Progressive learning: Progressive learning is currently employed by many platforms. The initial ten minutes are dedicated to establishing a base, which allows learners to understand the simplest concepts and then proceed to the more complex ones. This approach considers the rule of Nelson and puts it in context of real-life constraints.

6. Proposed Revised Usability Rule

Rather than treating the 10-Minute Rule as a strict temporal constraint, this paper proposes a layered usability model that conceptualises usability as a progression across multiple levels of user engagement.

Proposed Layered Usability Model

Layer 1: Initial Comprehensibility

Within the first 10 minutes, users should be able to understand the purpose of the system and perform at least one meaningful task.

Layer 2: Guided Expansion

As interaction continues, systems should introduce additional functionality through progressive disclosure, tutorials, and contextual guidance. Contemporary usability research continues to emphasise that reducing cognitive effort and simplifying interaction pathways remain central to effective interface learnability (Shneiderman 2022).

Layer 3: Expert Mastery

Over extended use, the system should support efficiency, depth, and customisation for advanced users.

Synthesis: This layered model reframes the 10-Minute Rule as a usability continuum rather than a fixed pass–fail condition.

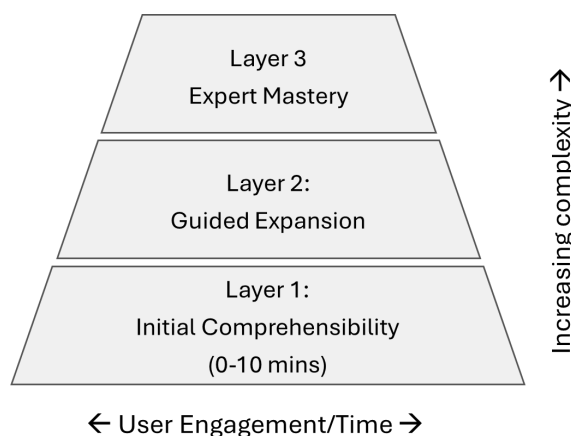


Fig. 2. Layered usability model based on reinterpretation of Nelson’s 10-Minute Rule, showing progression from initial comprehensibility to expert mastery.

Table 1 further elaborates the layered usability model by mapping each layer to user capability, design strategies, and representative systems.

Table 1. Layered usability model showing progression of user capability, design strategies, and example systems

Layer	Timeframe	User Capability	Design Strategy	Example Systems
Layer 1: Initial Comprehensibility	0–10 minutes	Users understand system purpose and perform basic meaningful tasks	Minimal interface, clarity, intuitive controls, low cognitive load	Google Docs, Instagram, basic mobile apps
Layer 2: Guided Expansion	Short-term interaction (hours to days)	Users explore additional features and expand functionality	Progressive disclosure, tooltips, onboarding tutorials, guided workflows	Adobe Photoshop (beginner mode), Figma, mobile OS onboarding
Layer 3: Expert Mastery	Long-term use (weeks to months)	Users achieve efficiency, customization, and advanced performance	Shortcuts, customization, advanced features, automation	AutoCAD, Blender, MATLAB, professional IDEs

7. Influence on interface design practice

The layered usability model proposed in this paper has direct implications for interface design practice. It suggests that usability must be evaluated across multiple stages of interaction rather than at a single moment of first use.

To begin with, designers are advised to remain on track and make design decisions that enable users to get the key point in a short period particularly when the user is dealing with a product that they engage directly with. The speed of mastering the fundamentals by users is a critical test in usability research and designers and researchers rely on it as a powerful benchmark.

Complex systems should be evaluated based on their ability to support progression from initial comprehension to deeper capability, rather than solely on immediate task completion.

Hence, for a complex interface system, rather than expecting the same quick learning adaptability by users, designers may consider to design interfaces in such a way that they can be learned progressively with simple tasks being available early and complex features being introduced as one learns through interaction and exploration. The third aspect is that the usability expectations could be further transformed by new technologies like artificial intelligence features and immersive environments that do both – they reduce barriers at entry level, as well as they expand the capabilities, functional features of the system and also ease cognitive load for first time or regular users as per case. Under these conditions, ease of usability in 10 minutes may not be considered as a temporal empirical standard but as a spectrum between the initial accessibility and the gradual mastery.

8. Conclusion

The 10-Minute Rule is Reconsidered in Modern Interface Design. This thumb rule proposed by Ted Nelson is a highly debated but still persisting tenet in the discipline of usability that has held up its relevance for a number of decades from its origination. The principle represents an essential hope in interaction design - that people will be able to have a meaningful interaction within a short period of time, obviating the need for extensive training or exploration. Such an assumption finds considerable resonance across the vast majority of contemporary consumer-facing artifacts - mobile applications, streaming platforms, and everyday productivity tools - all of which witness the adoption of users tightly coupled with streamlined onboarding and immediate operability of the product.

The main argument presented in this paper, however, states that this rule cannot be considered a general axiom that can be applied to all digital systems. It behooves us to look at the matter from a more nuanced and contextual perspective. Professional grade and expert centric software systems such as design frameworks, engineering suites, and advanced analysis systems are pre-disposed to have layered functional strata, therefore they are inherently more complex to master. In these contexts, usability cannot be measured in terms of short-term accessibility metrics but instead needs to be measured in terms of the system's ability to support richer, longer-term interactions and support progressive productivity over longer periods of time.

This paper suggests utilization and redefinition of Nelson in the contemporary design practice rather than casting it off as an old concept. This paper extends Nelson's insight by framing usability as a layered progression from initial comprehension to expert mastery, thereby repositioning the 10-Minute Rule within a broader and more flexible usability framework. In that regard, usability should therefore be understood not as a single moment of interaction, but as a structured progression across multiple levels of user engagement. As digital systems continue to evolve, as AI-assisted interfaces and immersive interaction environments are created, designers are no longer expected to make system immediately usable, but to create learning paths that allow users to gradually move between basic interaction to more advanced interaction. Current discourse in human-centred computing increasingly frames usability as an adaptive relationship between users, intelligent systems, and contextual assistance mechanisms (Shneiderman 2022; Brdnik, Heričko, and Šumak 2022). This concept of Nelson can therefore be seen to apply to the modern day not as a time imperative but as a principle benchmarking of what good design must avoid when it comes to the first time a user encounters a system.

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