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Impact of Simplified Instructional Language on Task Performance Accuracy

Hira Zafar Siddiqui

Assistant Professor, Dadabhoy Institute of Higher Education

Abstract

Instructional language is a central component of task performance across educational, workplace, and training environments. As tasks become increasingly digital and self-directed, the clarity and cognitive accessibility of instructions strongly influence user success. Simplified instructional language—characterized by reduced syntactic complexity, minimized jargon, explicit sequencing, and straightforward vocabulary—has become widely adopted to improve usability. This article examines how simplified instructional language affects task performance accuracy. Drawing on theories from cognitive psychology, linguistics, and instructional design, the discussion highlights how linguistic simplification reduces cognitive load, increases comprehension, and facilitates error-free execution. The article argues that simplified language is beneficial for diverse users, including novices, multilingual participants, and individuals operating in time-constrained or high-stress environments. It concludes by outlining implications for instructional design and future research on language optimization in complex task settings.

Keywords: *simplified language, instructional design, task accuracy, cognitive load, comprehension, usability, communication clarity*

1. Introduction

Instructional language plays a foundational role in shaping how effectively individuals complete tasks across numerous domains, including education, manufacturing, customer support, software use, and organizational workflows. Clear instructions promote accurate task execution, whereas ambiguous or overly complex instructions often result in mistakes, delays, or frustration. As workplaces and learning environments become increasingly digital and self-guided, users must interpret written instructions without real-time support, elevating the importance of clarity in language.

The movement toward simplified instructional language reflects broader principles in cognitive processing and communication design. Research grounded in cognitive load theory, influenced by scholars such as **John Sweller**, demonstrates that extraneous cognitive effort—such as deciphering complex sentences—interferes with task understanding and execution. When instructions are simpler, working memory resources are freed for task-related reasoning rather than linguistic interpretation.

This article reviews the impact of simplified instructional language on task performance accuracy. It synthesizes theoretical foundations, summarizes findings from related research, and discusses how simplification supports user comprehension, reduces errors, and enhances efficiency.

2. Related Work

Scholarly work on communication clarity and task performance spans linguistics, psychology, instructional design, and human–computer interaction (HCI).

2.1 Linguistic Simplicity and Comprehension

Research in applied linguistics indicates that syntactic complexity, rare vocabulary, abstract phrasing, and dense nominalizations often impede comprehension. Scholars such as **George Miller** have emphasized working-memory limitations in language processing. When instructions minimize unnecessary linguistic complexity, readers more readily form accurate mental models of the task steps.

2.2 Cognitive Load and Instruction Design

Cognitive load theory explains how instructional complexity constrains performance, particularly during learning or unfamiliar tasks. Simplified language reduces extraneous load, allowing users to focus on intrinsic task demands. Studies consistently show that instructions presented in shorter sentences, clear stages, and familiar vocabulary lead to higher accuracy and lower error frequency.

2.3 HCI and Usability Research

Usability research within HCI finds strong links between simplified interface text and user performance. Clear microcopy, step-by-step guidance, and unambiguous directives consistently increase success rates in software navigation and troubleshooting. These findings apply not only to digital instruction but also to manuals, onboarding guides, and workplace training.

2.4 Workplace Training and Human Factors

Human-factors research demonstrates that task errors frequently arise not from negligence but from misunderstanding. Simplified language—especially in safety instructions, medical tasks, and technical procedures—reduces misinterpretation and improves compliance accuracy.

3. Discussion

3.1 Reduced Cognitive Load Enhances Accuracy

Simplified language directly reduces cognitive load by minimizing the mental effort required to decode instructions. Users can allocate cognitive resources to task execution rather than linguistic interpretation. For example, instructions that replace complex conditional structures with straightforward sequential phrasing (“First…, then…”) significantly reduce confusion. This effect is especially important in high-pressure environments, where individuals may have limited cognitive bandwidth.

3.2 Improved Comprehension Leads to Fewer Errors

Comprehension is a key mediator between language and performance. Simplified instructions improve comprehension by clarifying intent, eliminating ambiguous terms, and reducing syntactic density. When users understand a task fully, they execute steps more precisely and avoid errors such as skipping steps, reversing steps, or misinterpreting requirements. This is particularly valuable in technical and procedural contexts such as laboratory tasks, manufacturing assembly, or emergency response protocols.

3.3 Simplified Language Supports Novices and Non-Experts

Novice users and individuals unfamiliar with terminology benefit disproportionately from simplified instructions. While experts may comprehend complex language with ease, non-experts rely on clear vocabulary and explicit sequencing to reduce interpretation effort. Simplification also supports multilingual teams, reducing barriers associated with second-language processing. Research in workplace communication shows that linguistic simplification improves performance and reduces anxiety for international or linguistically diverse workforces.

3.4 Explicit Sequencing Enhances Procedural Accuracy

Task performance improves when instructions are structured in explicit steps rather than embedded in narrative or descriptive text. Simplified instructional language often includes:

- numbered or clearly segmented steps,
- explicit time or order indicators,
- unambiguous action verbs.

These features guide users through tasks in the intended sequence, minimizing deviation.

3.5 Reduced Ambiguity Strengthens Decision-Making

Ambiguity is a common source of errors. Simplified language reduces ambiguity by minimizing vague terms (“appropriate,” “adequate,” “as needed”) and clarifying expectations. Users are more confident in their actions when linguistic cues clearly specify the required behaviors or outcomes. Clear instructions facilitate faster problem-solving and reduce the likelihood of conflicting interpretations among team members.

3.6 Emotional and Motivational Effects

Simplified language can also affect users’ emotional experience. Complex, overly formal, or dense instructions may intimidate users or reduce motivation, especially in self-paced learning environments. Simplified instructional phrasing fosters a sense of accessibility and reduces stress. Positive emotional states, in turn, enhance accuracy by promoting sustained attention and reducing avoidance behaviors.

3.7 Digital Learning Systems Benefit from Linguistic Simplicity

Digital learning platforms increasingly use automated instructional text or AI-generated feedback. Simplified language enhances user engagement and reduces dropout rates. Platforms adopting plain-language principles report improved task outcomes in simulations,

quizzes, and procedural learning modules. Clear instructions ensure that learners correctly interpret system prompts, navigate tasks, and apply knowledge in subsequent steps.

3.8 Potential Limitations of Over-Simplification

While simplification generally improves accuracy, over-simplification may remove critical nuance. In highly technical fields, reducing specialized terminology may lead to incomplete instructions or misinterpretation. Thus, the challenge is to balance simplicity with precision—ensuring users understand tasks without losing essential detail.

4. Conclusion

Simplified instructional language is a powerful determinant of task performance accuracy. By reducing cognitive load, enhancing comprehension, supporting novice users, clarifying procedural steps, and minimizing ambiguity, simplified language consistently leads to fewer errors and more efficient task execution. Its benefits span educational environments, digital learning platforms, workplace training, and high-stakes technical contexts.

The evidence suggests that organizations and educators should adopt plain-language principles when designing instructional materials, while ensuring that simplification does not diminish essential information. Future research should investigate domain-specific thresholds for simplification, explore how AI-generated instructions can be optimized linguistically, and analyze cross-cultural differences in the perception of simplified language.

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