



THE ROLE OF SYNTAX IN HUMAN AND AI FEEDBACK: A COMPARATIVE APPROACH

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ABSTRACT

The syntactic characteristics of AI feedback and human feedback in academic writing are examined in this paper. We analyzed 200 feedback samples in terms of sentence construction, use of clauses, cohesion, and politeness. The results indicate that human feedback tends to consist of complex, compound-complex sentences and the use of hedging, along with modal verbs with more linguistic diversity. AI feedback instead prefers shorter, concise structures that emphasize understanding and minimize the number of errors.

These distinctions indicate that AI can deliver efficiency and consistency, whereas human feedback can deliver adaptability and cultural subtlety.

The research finds that integrating the two feedback sources can offer a more holistic and appropriate way of helping language learners.

1. Introduction

For a long time, feedback has been acknowledged as a significant element in second language learning and in the development of academic writing skills. Scholars like Hyland (2019) and Ellis (2009) insist that good feedback is not just a matter of correcting mistakes; it also leads learners towards more syntactic or rhetorical competence.

The origin of feedback is traditionally the teacher: our teachers' comments are not a standard resource but rather an expression of their personal experience, pedagogical goals, and societal norms. Following the rapid advances in artificial intelligence (AI) tools like ChatGPT, students now receive not only human but also machine feedback. AI feedback offers speed, consistency, and scalability; there are, however, still doubts about its linguistic features, in particular how closely the structures of feedback (both what and how it says) are to those produced by humans.

In this question, the syntactic then becomes crucial. The complexity and variety of an individual student's writing are tied closely to the way he will perceive, digest, and apply comments made about it—whether they come from human sympathy or not. Most human

feedback uses very 'mild' syntactic forms. Such forms include hedged suggestions, complex subordinate clauses, and past attempts. AI feedback, on the other hand, tends to favor clarity at the expense of elegance: it occurs chiefly in simple sentences.

The purpose of this study is to conduct a comparative syntactic analysis of human and AI feedback. It addresses the following research questions:

How do syntactic structures differ between human and AI-generated feedback?

What are the implications of these differences for language learning and applied linguistics?

2. Literature Review

2.1 Feedback in Language Learning

Second language development is a process where feedback plays a critical role (Ellis, 2009). Ellis (2009) separates corrective feedback from formative feedback: both rely on linguistic expression.

Hyland (2019) points out that it is not a good technique for teachers to use long or complex sentences, both because they won't be conscientious about the feedback component and if modality is used throughout in this indirect manner then teachers can overload students with printed instructions, overcome incorrect handedness, and mask assignments for future contests.

2.2 Syntax and Communication

The syntax—words into meaningful form and order—if words are spoken aloud as they should be read on paper, then little can go wrong either way (Chomsky, 1995). According to Chomsky (1995), for example, syntax and afigs (Halliday's 1985) model encompass grammatical structures and social control conceptions—indeed, these very gences. Halliday's (2004) approach to systemic functional linguistic theory is essentially spontaneous. The performer points out that Systemic Functional Linguistics has no need for syntactic instruction

2.3 AI Feedback in Education

According to Bai and Stede's (2021) study, as well as Li et al.'s (2023) work, AI tools cannot achieve stylistic variation. Though at surface level they are fully right most of the time, they are cumbersome and monotonous to read. Artificial feedback increasingly inclines toward 'explicitness,' eliminating ambiguity but also giving minimal scope for you to encounter complex syntax.

When AI talks, we get consistency but also have a danger of losing subtlety in our language laws.

2.4 Gaps in Research

Although some research has been conducted on the accuracy and content of AI feedback, very little work has sought to compare linguistically human versus machine observation. All further analysis in this line takes up the grammar of feedback texts.

This study intends to fill that gap.

3. Methodology

3.1 Data Collection

Two different corpora came together here:

An array of human judgments included 100 examples collected from the written annotations instructors had made at home on their ESL students' essays.

An AI judgment corpus was assembled, this time from 100 examples of ChatGPT feedback generated on the same essays.

3.2 Analytical Framework

Feedback texts were drawn from their syntactic features over four dimensions:

The type of sentence – simple, compound, complex, or compound.

The manner in which clauses are used: subordination, coordination, relative clauses.

Types of cohesive devices (connectors: however, moreover, there).

Strategies for politeness (hedges: perhaps, consider; modal verbs: might, could).

3.3 Tools and Procedures

Corpus data was processed using AntConc for frequency analysis, with manual coding of syntactic structures. Statistical comparisons were made between human and AI corpora to identify patterns.

4. Results

4.1 Sentence Types

Human feedback displayed greater syntactic variety:

45% complex sentences

25% compound–complex

20% compound

10% simple

AI feedback showed a reverse trend:

55% simple sentences

30% compound

10% complex

5% compound–complex

4.2 Clause Usage

Human feedback frequently used subordinate clauses:

Example: “If you expand this section, your argument will be stronger.”

AI feedback preferred independent clauses:

Example: “Expand this section. It will make your argument stronger.”

4.3 Cohesive Devices

Human feedback made frequent use of advanced connectors (however, moreover, in contrast). AI relied more on basic connectors (also, because, so).

4.4 Politeness Strategies

Human feedback used modal verbs (could, might) and hedges (consider, perhaps), softening criticism. AI feedback tended to use direct imperatives (add, correct, revise).

5. Discussion

So it notes, the key differences in syntactic preference.

On the other hand, human feedback is colorful, one with naturalness—just look at that sentence over again carefully. This aspect of critique reflects differences in languages and cultures since people from each will thus use different standards in design and other areas if those choices are profitable too.

At the same time, AI feedback is inherently more concerned with achieving efficiency and clarity than making structures common. It is designed ultimately to suit a desired user profile—which does not include making anything fancy or complicated.

From the learner's point of view, these findings have pedagogical implications:

Human feedback exposes students to the style of academe in a natural way (Lyons, 1978) because it is tidier over time and gives them all role models from whom they can pick up bad writing habits. AI feedback also divides into neat units which are manageable for students consuming one chunk at a time; this makes readers able to understand more complex materials.

6. Conclusion

In this study, we show that syntax can play a significant part in distinguishing human from computer feedback. Human responses show a steer toward greater syntactic independence and richness, while PC response is characterized by directness and clarity. Both lines have their own merits: the human respondent is modeling the kind of language achieved by use of advanced methods of communication, but so are the machines which ensure accessibility. A mixed model potentially affords language-learning support equitably suited to the needs of all concerned parties.

Future studies should make use of larger corpora, investigate cross-cultural differences, and explore how learners perceive and respond to syntactic differences in feedback.

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