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THE IMMEDIATE IMPACT OF AN INTERACTIVE PASSIVE-VOICE PRACTICE TOOL ON UNIVERSITY EFL LEARNERS: A PILOT PRETEST–POSTTEST STUDY

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Abstract

The passive voice continues to pose significant grammatical challenges for university-level learners of English as a Foreign Language (EFL). Even though students usually know the rules for passive voice at a declarative level, they often have trouble using them correctly and consistently when they are writing. This difficulty is due in part to the fact that passive constructions are morphosyntactically complex and that there aren't enough chances to practice dense, structured production in class.

This pilot study investigated the immediate impacts of Passivgram, an interactive rotating-layer passive voice practice module created within the Grammatomica platform, utilized during a single offline university EFL lesson. Fifteen undergraduate EFL learners participated in a one-group pretest–posttest design, completing a 29-item mixed-format passive-voice assessment evaluated on a 40-point scale. The test had multiple-choice questions, tasks that required filling in gaps, form-change transformations, open-ended sentence construction, and a paragraph-writing section.

The lesson lasted 80 minutes and included 20 minutes of Passivgram practice for each student. The mean performance went up from 49% on the pretest to 70% on the posttest, which is a gain of 21 percentage points (about +8.4 points on a 40-

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point scale) and a normalized gain of 0.41. Also, the lowest score went up from the low-performance band to the medium band, which means that lower-performing students may have seen some benefits.

The study's small sample size, lack of a control group, and short-term measurement limit its findings. However, they offer initial evidence that brief, structure-focused digital micro-interventions integrated into offline instruction can facilitate immediate grammatical development in higher education EFL contexts. The study adds to the body of research on using technology to teach grammar by showing how targeted, production-oriented tools can help teach complex grammatical structures.

Keywords: EFL grammar instruction; passive voice; technology-enhanced learning.

Introduction

Grammatical accuracy is still a problem in university-level English as a Foreign Language (EFL) classes. Even when students can clearly explain the rules of grammar, they often have trouble staying accurate when they write, especially when they have to write a lot. The passive voice is still a structure that people find hard to understand. When using passive constructions, students have to coordinate choosing auxiliary verbs, marking tense, agreeing on the subject, making past participles, and adding optional complements like agent and instrument phrases. These requirements make passive forms more likely to be unstable during real-time production.

In college, teaching grammar often includes explaining the rules and giving students a little bit of controlled practice. Declarative knowledge, on the other hand, does not always lead to procedural control (DeKeyser, 2007). According to research on second language acquisition (SLA), stable grammatical development

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needs structured production, repeated retrieval, and focus on form during meaningful activity (Doughty & Williams, 1998; Swain, 1985).

Technology-enhanced language learning (TELL) environments make it possible to get more practice in a shorter amount of time in the classroom (Chapelle, 2001). But a lot of digital tools focus on quizzes that test general grammar or recognition instead of focused, production-oriented work on one structure. Also, not many studies look at short digital micro-interventions that are part of university lessons that take place offline.

This pilot study looks at how Passivgram, an interactive rotating-layer passive-voice practice module on the Grammatomica platform, affects things right away. The study looks into whether a short, structured digital practice session added to a regular face-to-face class can help students make measurable short-term improvements in their passive voice skills.

Literature Review

Passive voice and complicated morphosyntactic structures

The passive voice is a morpho-syntactically complicated structure that combines syntactic reorganization with morphological accuracy. Students need to know how to use auxiliary forms of "be," keep the right tense and agreement, and use the right past participles. This kind of coordination makes it harder to think while you're making something (Ellis, 2008).

Explicit and form-focused instruction can greatly improve grammatical accuracy, according to meta-analytic research (Norris & Ortega, 2000). But when students have to make their own structures in writing or transformation tasks, the instability often stays.

Output and proceduralization

Swain's (1985) Output Hypothesis says that making language is a key part of how grammar grows. When students try to make forms, they realize what they don't know and start to reorganize their thoughts. From the point of view of learning

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new skills, doing something over and over again helps to make grammatical knowledge more automatic and proceduralized (DeKeyser, 2007). Processing Instruction research backs up the idea that structured tasks that help students map form to meaning are useful (VanPatten, 2004). But the intensity and variety of practice are very important factors that affect how well people learn.

Learning science and retrieval practice

Research on retrieval practice shows that actively recalling information helps you remember it better than passively reviewing it (Roediger & Karpicke, 2006). A lot of this work comes from cognitive psychology, but its ideas can also be used for learning rules and grammar. Retrieving morphosyntactic patterns over and over again may make you more flexible and less dependent on memorized templates.

For complicated structures like passive voice, tools that encourage the recombination of sentence parts may help with retrieval-based learning in a limited amount of time in the classroom.

Grammar learning with the help of technology

Digital tools can help people spend more time on a task and make a lot of different practice items quickly (Chapelle, 2001). Reinders and Hubbard (2013) say that reviews of technology-enhanced language learning stress the need for structured task design and interactive engagement. According to meta-analytic evidence, computer-assisted language learning can lead to moderate gains in achievement, especially when students actively build their answers (Lin & Lin, 2019). But a lot of EdTech research looks at long-term interventions or mixed learning settings. There isn't a lot of evidence about short, in-class digital micro-interventions that focus on a single grammatical structure in higher education.

This study fills in the gaps by looking at a focused passive-voice module that was used in a single offline lesson.

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Method

Participants and context

The study involved 15 undergraduate EFL students (N = 15) enrolled in a university course. The intervention took place during a standard 80-minute face-to-face lesson. Participants had prior exposure to passive constructions but continued to demonstrate inconsistencies in production.

Research design

A one-group pretest–posttest pilot design was employed. Students completed a passive-voice assessment immediately before and after the lesson. Because the study did not include a control group, findings are interpreted as descriptive pilot evidence.

Intervention: Passivgram module

Grammatomica has an interactive rotating-layer passive-voice practice tool called Passivgram. The interface has four layers that rotate and correspond to:

1. The patient or subject
2. A tense and auxiliary marker
3. Past participle (V3)
4. Optional complements (agent, instrument, time/place)

Randomized combinations make students write full passive sentences. Students worked on Passivgram for 20 minutes during the lesson.

At the time of the study, the tool functioned as a classroom-based digital prototype under development. Access to the prototype can be provided upon reasonable request.

Assessment instrument

The passive-only assessment included 29 questions scored on a 40-point scale. Item types included: selected-response items, gap filling, form-change transformations, open-ended questions, a paragraph-writing task.

Performance bands were defined as: Low: 0–19, Medium: 20–29, High: 30–40.

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Data Analysis

Analysis focused on descriptive statistics:

- Mean percentage change
- Approximate mapping to 40-point scale
- Observed minimum and maximum shifts
- Normalized gain calculation

Results

The mean performance went up from 49% (pretest) to 70% (posttest), which is a gain of 21 percentage points. This is about the same as going from 19.6 to 28.0 on the 40-point scale, which is an increase of 8.4 points.

To find the normalized gain, do this:

$g = (0.70 – 0.49) / (1 – 0.49) = 0.41$

This means that there was a small improvement in a single-session intervention.

Changes in observed scores

Before the test:

• At least 19 (4 students)

• Maximum: 32 (two students)

After the test:

• Minimum: 23 (6 students)

• 38 (1 student) is the most.

The lowest score moved from the top of the low band to the middle of the medium band (from 19 to 23). The highest score went up a lot, from 32 to 38, which is close to the highest possible score. (see Table 1)

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Table 1 Descriptive Pretest–Posttest Outcomes (40-point scale)

MEASURE	PRETEST	POSTTEST	GAIN
MEAN (%)	49%	70%	+21 pp
APPROXIMATE MEAN (/40)	19.6	28.0	+8.4
MINIMUM	19	23	+4
MAXIMUM	32	38	+6

A qualitative examination of paragraph-writing responses indicated a reduction in auxiliary omission errors and enhanced tense consistency in passive constructions following the intervention.

Discussion

This pilot study offers initial evidence that a concise interactive passive-voice practice module may correlate with quantifiable short-term improvements in the performance of university EFL learners. The 21-point increase and normalized gain of 0.41 suggest that there was a real improvement in one session.

The findings are consistent with skill acquisition theory (DeKeyser, 2007) and retrieval practice research (Roediger & Karpicke, 2006), indicating that the repeated production and recombination of structural elements may enhance procedural control. The rotating-layer design promotes adaptable recombination instead of rote memorization of templates.

It's important to note that the minimum score going up suggests that learners who aren't doing as well may benefit from structured digital practice. The higher maximum score suggests that stronger learners may also be able to work together better.

Because the intervention has been embedded within a regular offline lesson, findings support the feasibility of short digital micro-interventions in higher education contexts.

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Limitations and Future Research

The study has several limitations:

- Small sample (N = 15)
- No control group
- Immediate posttest only
- No inferential statistics due to limited distribution data

Future research should include control conditions, larger samples, delayed posttests, and full individual-level data to allow inferential analysis.

Conclusion

This pilot pretest–posttest study shows that a short, interactive passive-voice practice tool added to an offline university lesson can help students make measurable short-term progress. Although findings necessitate careful interpretation, the results suggest that focused digital micro-interventions may serve as an effective approach to mitigate enduring grammatical challenges in higher education EFL settings.

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