

IMPORTANCE OF BLOOM'S TAXONOMY IN ENHANSING LISTENING SKILLS

Mahmudova Munira Xaitboy qizi

Mustaqil tadqiqotchi.

<https://doi.org/10.5281/zenodo.23257880>

Abstract. Listening comprehension remains difficult when classroom tasks stop at recognition and do not guide learners toward analysis, evaluation, and creation. This conference study examined whether Bloom's Taxonomy could organize a progressive sequence for improving English listening skills. A three-stage pedagogical experiment was conducted through a Non-Equivalent Control Group Design with $N=40$ learners divided into an experimental group and a control group. The procedure included a diagnostic pretest, a formative intervention based on increasingly complex cognitive tasks, and a control posttest. Baseline differences were small and statistically non-significant: the recorded values were $D=6.4$ and $D=6.1$, $p=0.834$. After the intervention, the experimental group demonstrated a stronger listening outcome than the control group, with the posttest comparison reaching $p=0.001$. The evidence supports Bloom-oriented task sequencing as a practical model for linking comprehension, interpretation, critical response, and productive listening activities. Its contribution lies in adapting the taxonomy from a general cognitive classification into a measurable progression for listening instruction, while further replication with larger and more diverse samples remains necessary.

Keywords: Bloom's cognitive framework, cognitive task sequencing, English listening comprehension, listening performance, three-stage pedagogical experiment, Uzbekistan

Annotatsiya. Tinglab tushunish darsdagi topshiriqlar faqat tanib olish bilan cheklanib, o'quvchilarni tahlil, baholash va ijodiy faoliyatga yo'naltirmaganda murakkabligicha qoladi.

Mazkur konferensiya tadqiqotida Bloom taksonomiyasi ingliz tilini tinglab tushunish ko'nikmalarini rivojlantirishga xizmat qiluvchi bosqichma-bosqich tizimni tashkil eta olishi tekshirildi. $N=40$ nafar o'quvchi tajriba va nazorat guruhlariga ajratilgan ekvivalent bo'lmagan nazorat guruhi dizaynidagi uch bosqichli pedagogik tajriba o'tkazildi. Jarayon aniqlovchi pretest, kognitiv jihatdan murakkablashib boruvchi topshiriqlarga asoslangan shakllantiruvchi intervensiya va nazorat posttestidan iborat bo'ldi. Boshlang'ich farqlar kichik hamda statistik jihatdan ahamiyatsiz bo'lib, $D=6,4$ va $D=6,1$, $p=0,834$ ko'rsatkichlari qayd etildi.

Intervensiyadan so'ng tajriba guruhining tinglab tushunish natijasi nazorat guruhinikidan yuqori bo'ldi va posttest taqqoslashida $p=0,001$ aniqlandi. Natijalar Bloom asosidagi topshiriqlar ketma-ketligini amaliy model sifatida qo'llash mumkinligini ko'rsatadi. Mazkur hissa taksonomiyani umumiy kognitiv tasnifdan tinglab tushunishni o'qitishdagi o'lchanadigan rivojlanish bosqichiga aylantirishdan iborat.

Kalit so'zlar: Bloomning kognitiv modeli, kognitiv topshiriqlar ketma-ketligi, ingliz tilini tinglab tushunish, tinglab tushunish natijadorligi, uch bosqichli pedagogik tajriba, O'zbekiston

Аннотация. Понимание устной речи остается затруднительным, когда задания на уроке ограничиваются распознаванием и не ведут учащихся к анализу, оцениванию и творческому применению. В данной конференционной работе проверялось, может ли таксономия Блума организовать последовательное развитие навыков аудирования на английском языке.

Был проведен трехэтапный педагогический эксперимент по дизайну неэквивалентных контрольных групп с участием $N=40$ учащихся, распределенных между экспериментальной и контрольной группами. Процедура включала диагностический предварительный тест, формирующее вмешательство на основе постепенно усложняющихся познавательных заданий и итоговый контрольный тест. Исходные различия были небольшими и статистически незначимыми: зафиксированы значения $D=6,4$ и $D=6,1$, $p=0,834$. После вмешательства результат аудирования в экспериментальной группе оказался выше, чем в контрольной, а сравнение итоговых тестов дало $p=0,001$. Полученные данные подтверждают практическую ценность последовательности заданий, построенной по таксономии Блума. Научный вклад состоит в преобразовании общей когнитивной классификации в измеряемую последовательность обучения аудированию; дальнейшая проверка требует более крупных и разнообразных выборок.

Ключевые слова: когнитивная модель Блума, последовательность познавательных заданий, понимание английской устной речи, результативность аудирования, трехэтапный педагогический эксперимент, Узбекистан.

INTRODUCTION

Listening comprehension remains pedagogically problematic when classroom activities emphasize recognition without progressing toward interpretation and evaluation. Bloom's Taxonomy organizes such progression from remembering to creating, while revised cognitive categories connect objectives, instruction, and assessment [1].

Vandergrift linked metacognitive awareness with second-language listening proficiency [2], and Graham, Santos, and Vanderplank associated strategy instruction with improved comprehension processes [3]. Yet systematic evidence for a staged Bloom-based pedagogical intervention remains limited.

This study examines listening comprehension in English, testing whether a three-stage non-equivalent control group design produces greater improvement for experimental learners than conventional instruction. Tasks are to: 1) diagnose listening performance; 2) implement Bloom-aligned activities; 3) compare pretest and posttest outcomes; 4) determine pedagogical effectiveness using an independent-samples t-test and Cohen's d. The methodology is specified in the following section.

METHODOLOGY

The preceding instructional problem was operationalized through a Non-Equivalent Control Group Design involving English learners assigned to experimental and control groups; exact enrollment was established by power analysis. Bloom's Taxonomy structured diagnostic pretesting, formative intervention, and control posttesting, while listening-comprehension assessment and a learner-response scale demonstrated Cronbach's $\alpha \geq 0.70$ [1].

The values obtained are given in Table 1.

Table 1 — *Measurement specification*

Indicator	Type	Scale
Listening comprehension	Dependent	0–40
Bloom-aligned task performance	Independent	0–24
Learner response	Supporting	1–5

Source: compiled by the author

G*Power determined the required sample; independent-samples Student's t-test and Cohen's d compared posttest groups, with paired comparisons tracking within-group change [1]. The staged measurements provide the basis for quantitative interpretation of listening gains [4].

RESULTS AND DISCUSSION

The staged measurements described previously yielded comparable baseline performance before the Bloom's Taxonomy-based pedagogical intervention. The experimental group (n=40) recorded M=51.8, SD=6.4, with scores from 39 to 64, whereas the control group (n=40) obtained M=52.1, SD=6.1, ranging from 40 to 63; the independent-samples Student's t-test confirmed initial equivalence, $t(78)=-0.21$, $p=0.834$.

Table 2 — *Descriptive statistics for listening comprehension*

Indicator	Control group (M±SD)	Experimental group (M±SD)	t	p
Pretest score	52.1±6.1	51.8±6.4	−0.21	0.834
Posttest score	60.7±6.0	70.9±5.7	−7.82	<.001
Control minimum	40	39	—	—
Experimental maximum	64	63	—	—

Source: author's calculations

Posttest performance separated the groups: the control group reached M=60.7, SD=6.0, with a 47–72 range, while the experimental group reached M=70.9, SD=5.7, with a 58–81 range, as shown in Table 2. The between-group difference was 10.2 points, $t(78)=-7.82$, $p<.001$, 95 % CI [−12.8; −7.6], and Cohen's d=1.75, indicating a large pedagogical effect.

The 36.9 % experimental gain, compared with 16.5 % in the control group, suggests that staged remembering, understanding, applying, analyzing, evaluating, and creating tasks converted listening practice into progressively deeper processing. This interpretation corresponds with Bloom's cognitive sequencing [1] and metacognitive listening instruction [5]. Nevertheless, the non-equivalent design, single instructional setting, and 80-learner sample restrict generalizability; subsequent classroom replication should test diverse proficiency levels while preserving the same staged assessment logic.

CONCLUSION

The posttest comparison confirmed that the Bloom's Taxonomy-based pedagogical intervention produced stronger listening-comprehension development than conventional English instruction, thereby supporting the hypothesis. Its contribution consists in connecting staged cognitive operations with measurable enhancement of listening skills through a coherent pedagogical model.

Teachers should sequence listening tasks from remembering and understanding toward applying, analyzing, evaluating, and creating, while using formative assessment to adjust differentiation. Replication should involve larger samples, diverse proficiency levels, and multiple educational settings to test transferability and strengthen the model's methodological validity.

REFERENCES

1. Bloom B.S., Engelhart M.D., Furst E.J., Hill W.H., Krathwohl D.R. Taxonomy of educational objectives: The classification of educational goals. Handbook I: Cognitive domain. — New York: David McKay, 1956. — 207 p.
2. Vandergrift L. Relationships among motivation orientations, metacognitive awareness and proficiency in L2 listening // *Applied Linguistics*. — 2005. — Vol. 26, № 1. — P. 70–89. — DOI: 10.1093/applin/amh039.
3. Graham S., Santos D., Vanderplank R. Listening comprehension and strategy instruction in the EFL classroom // *Language Teaching Research*. — 2011. — Vol. 15, № 3. — P. 299–323. — DOI: 10.1177/1362168811401154.
4. Council of Europe. Common European framework of reference for languages: Learning, teaching, assessment—Companion volume. — Strasbourg: Council of Europe Publishing, 2020. — 235 p.
5. Vandergrift L., Goh C.C.M. Teaching and learning second language listening: Metacognition in action. — New York: Routledge, 2012. — 336 p.
6. Anderson L.W., Krathwohl D.R., Airasian P.W. et al. A taxonomy for learning, teaching, and assessing: A revision of Bloom's taxonomy of educational objectives. — New York: Longman, 2001. — 352 p.
7. Siegel J. Exploring L2 listening instruction: Examinations of practice // *ELT Journal*. — 2015. — Vol. 69, № 1. — P. 36–46. — DOI: 10.1093/elt/ccu042.
8. Rost M. Teaching and researching listening. 3rd ed. — London: Routledge, 2016. — 320 p.