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Tagmemics in the Saudi ESL Classroom: Bridging Phonetics, Phonology, and Culture

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ABSTRACT: This study examines the effectiveness of Tagmemic-based instruction in improving pronunciation accuracy and vocabulary acquisition among Saudi university-level ESL learners. Drawing on Pike's theory of tagmemics, which emphasizes the interplay between linguistic form, function, and context, the study introduces a pattern-based instructional model tailored to address the phonological and lexical difficulties commonly faced by Arabic-speaking learners of English. A quasi-experimental, mixed-methods design was employed over a 16-week semester, involving 60 intermediate-level students divided into control and experimental groups. Quantitative data from pronunciation and vocabulary assessments were complemented by qualitative insights from classroom observations, learner interviews, and reflective journals. The experimental group demonstrated statistically significant gains in segmental and suprasegmental pronunciation, depth of vocabulary knowledge, and learner engagement compared to the control group. The findings suggest that Tagmemic instruction can serve as an effective pedagogical approach in EFL contexts by promoting metacognitive awareness and culturally contextualized learning. The study contributes to applied linguistics by adapting a largely theoretical framework to classroom practice, offering implications for ESL curriculum design and teacher training.

Keywords: Cultural Context, ESL Instruction, Mixed-Methods, Pattern-Based Learning, Pronunciation Accuracy, Saudi Learners, Tagmemics, Vocabulary Acquisition.

1. Introduction

Despite decades of English instruction in Saudi Arabia, many learners continue to struggle with pronunciation accuracy and vocabulary depth, especially when transitioning from rote learning to authentic communication. These challenges persist even after multiple years of formal English education, highlighting a disconnect between instructional approaches and learner outcomes (Elyas & Picard, 2010). In particular, Arabic-speaking learners face well-documented difficulties with English phonemes absent from their native language (e.g., /p/, /v/, /ɪ/) and tend to rely on literal translation when acquiring new vocabulary (Celce-Murcia et al., 2010).

While various frameworks have been proposed to improve ESL instruction, few have adequately addressed the intersection of form, function, and cultural context. This gap motivates the present study, which applies Tagmemic theory—a linguistic framework developed by Pike (1982)—to second language instruction. Tagmemics emphasizes the analysis of linguistic elements in terms of their form, meaning, and distribution within cultural contexts. Though traditionally used in descriptive linguistics and language documentation, its pedagogical applications remain underexplored. This study argues that Tagmemic principles can be effectively adapted for ESL contexts to promote deeper pattern recognition and linguistic awareness among learners.

The theoretical foundation of this research aligns with usage-based models of language acquisition (Ellis, 2008), which propose that language learning is driven by the repeated exposure to and internalization of form-function mappings in context. By integrating Tagmemic analysis with these principles, this study seeks to offer a culturally responsive and cognitively grounded approach to language instruction. It further builds on calls for more contextually embedded and pattern-oriented teaching practices in ESL classrooms, especially in regions like Saudi Arabia where learners' first language presents substantial structural

divergence from English (Mahboob & Elyas, 2014).

This research therefore aims to investigate the effectiveness of Tagmemic-based instruction in enhancing pronunciation and vocabulary acquisition among Saudi ESL learners. It specifically addresses the following questions:

1. Does Tagmemic instruction lead to greater improvements in pronunciation accuracy compared to traditional methods?
2. How does Tagmemic instruction influence vocabulary development, particularly in contextual and productive use?
3. What are learners' perceptions of Tagmemic-based instruction compared to traditional ESL practices?
4. How does Tagmemic instruction affect classroom interaction and engagement?

By answering these questions, the study contributes to both theoretical understanding and instructional practice in second language education.

1. Theoretical Overview of the Main Concepts

1.1 Challenges in English Language Acquisition among Arabic Speakers

Saudi learners of English as a second language (ESL) commonly struggle with pronunciation and vocabulary, owing to structural divergences between Arabic and English. Studies have shown persistent difficulties with segmental contrasts such as /p/ vs. /b/, /v/ vs. /f/, and with suprasegmental features like stress and intonation (Swan & Smith, 2001; Derwing & Munro, 2015). Vocabulary learning is often constrained by reliance on memorization and translation, which limits contextual use and pragmatic flexibility (Nation, 2001; Schmitt, 2010). These issues reflect a broader pedagogical tendency in the region toward decontextualized instruction, where language is taught in isolation from authentic usage (Elyas & Picard, 2010).

2.2 Pronunciation Pedagogy and Pattern-Based Approaches

Research in pronunciation instruction has gradually shifted from isolated phoneme training to integrative approaches that include segmental and suprasegmental features within meaningful contexts (Celce-Murcia et al., 2010; Saito & Lyster, 2012). Trofimovich and Baker (2006) emphasize the importance of phonological awareness, while Thomson and Derwing (2015) argue that suprasegmental instruction may yield stronger overall effects on intelligibility. However, many methods lack explicit frameworks to systematically relate form to function and communicative purpose. Vocabulary development has similarly evolved from discrete-item learning to contextually embedded instruction, grounded in cognitive engagement theories. Laufer and Hulstijn's (2001) involvement load hypothesis and Webb & Nation's (2017) work on depth and breadth of vocabulary knowledge both stress the value of meaningful, cognitively demanding tasks. Yet, even in these models, structural awareness and cross-linguistic analysis are often underdeveloped.

2.3 Tagmemic Theory: A Missed Pedagogical Opportunity

Tagmemics, introduced by Pike (1967, 1982), offers a distinctive lens through which language can be analyzed and taught. It focuses on **the form-function-context triad, recognizing** that language elements carry meaning through their formal structure, communicative role, and position in discourse. Though traditionally used in language description and translation studies, Tagmemics has rarely been applied to second language instruction. Pike's notion of "behavior-with-structure-in-context" resonates with sociocultural theories of language learning and has potential for pedagogical application, particularly in contexts requiring cross-linguistic mediation.

Recent interest in pattern-based instruction has opened space for frameworks like Tagmemics to be reconsidered. Cook (2003) and Ellis (2008) advocate for approaches that acknowledge learners' existing linguistic resources and promote cross-linguistic awareness. Tagmemic theory aligns well with such orientations, offering an organized means of highlighting structural parallels and contrasts between L1 and

L2.

2.4 Culturally Responsive Pedagogy and the Saudi Context

Mahboob and Elyas (2014) argue that ESL instruction in Saudi Arabia must integrate learners' cultural perspectives to be fully effective. Tagmemic principles, which inherently value cultural context, offer a structured yet adaptable way to embed meaning within learners' cultural realities. When phonological and lexical instruction is culturally grounded, learners are more likely to retain and apply new language forms meaningfully (Boers, 2021).

2.5 Gap in the Literature

Although Tagmemics holds theoretical promise, empirical investigations into its classroom application are lacking. No prior studies have systematically examined how Tagmemic-based instruction might influence pronunciation, vocabulary acquisition, or learner engagement in an ESL context. This study addresses that gap by designing, implementing, and evaluating a Tagmemic-informed instructional intervention in a Saudi university context.

2. Methodology

3.1 Research Design

This study employed a longitudinal, quasi-experimental mixed-methods design to investigate the impact of Tagmemic-based instruction on Saudi university ESL learners' pronunciation accuracy and vocabulary acquisition. This design was selected to capture both measurable language gains and qualitative insights over an extended instructional period. Quantitatively, the research followed a pre-test, mid-test, and post-test format comparing two intact groups: one receiving traditional instruction and the other receiving Tagmemic-based instruction. The use of intact classrooms respected natural teaching conditions, ensuring ecological validity. A parallel qualitative component explored learner engagement, instructional practices, and metacognitive development through observations, interviews, and reflective journals. This integrated approach aligns with Creswell and Plano Clark's (2018) recommendation for mixed-methods research when the goal is to capture both outcomes and processes of change.

3.2 Participants

The study involved 60 Saudi EFL learners (32 males, 28 females) enrolled in a mandatory English program at a public university in Riyadh. All participants were Arabic-speaking students aged between 18 and 22 and placed at a B1 level (CEFR) based on institutional placement tests. Participants were drawn from four intact classrooms: two classes (n = 30) formed the control group, and two (n = 30) formed the experimental group. Allocation was randomized at the class level to preserve instructional continuity and logistical feasibility.

Four instructors—two male and two female—delivered instruction. Each instructor was assigned one class and held a master's degree in TESOL or Applied Linguistics, with at least five years of experience. Instructors assigned to the experimental group received 15 hours of training in Tagmemic principles and pedagogical application prior to the semester.

3.3 Instructional Intervention

1. The intervention spanned 16 weeks; with both groups receiving instruction aligned to institutional syllabi and learning outcomes. The key distinction lay in pedagogical approach:
2. Control Group: This group followed conventional instruction emphasizing grammar rules, vocabulary translation, reading and writing accuracy, and basic pronunciation drills using minimal pairs. Cultural context and functional language use were minimally addressed.
3. Experimental Group: Instruction here was explicitly designed around Tagmemic theory (Pike, 1982), which integrates form, function, and distribution within meaningful context. Pedagogical strategies included:

4. Trimodal Phonological Instruction: Students engaged in contrastive analysis of English and Arabic sounds, practiced phonemes in communicative settings, and focused on stress and intonation within authentic discourse.
5. Culturally Embedded Vocabulary Tasks: Lexical items were presented within semantic and cultural frames, linking L1 and L2 conceptual mappings.
6. Pattern Recognition Activities: Learners analyzed language patterns emically and etically, promoting awareness of form-function-context relationships.
7. Contextualized Practice: Tasks simulated real-life interactions and encouraged reflection on language use in specific social settings.
8. Materials for the experimental group were adapted from institutional content but reconstructed to reflect Tagmemic principles while preserving official learning objectives.

3.4 Data collection Procedures

1. Data collection followed a structured sequence across three phases:
2. Pre-intervention (Weeks 1–2): Participant recruitment and consent, administration of baseline assessments (pronunciation, vocabulary, attitude survey), and initial interviews.
3. Intervention (Weeks 3–14): Delivery of instruction, bi-weekly classroom observations, weekly learner journals, and mid-term testing.
4. Post-intervention (Weeks 15–16): Final assessments, exit interviews, post-intervention surveys, and final observations.
5. All assessments were administered by trained assistants blinded to group assignments.

3.5 ***Instruments***

Pronunciation Accuracy: Measured through controlled reading and picture description tasks, evaluated using a rubric adapted from Saito et al. (2017), focusing on segmental and suprasegmental accuracy.

Vocabulary Knowledge: Assessed using an adapted Vocabulary Knowledge Scale (Wesche & Paribakht, 1996), a vocabulary-in-context test, and productive writing samples scored using Nation's (2001) vocabulary use criteria.

Attitude and Perception: A 25-item Likert-scale survey measured shifts in learner confidence, cultural awareness, and perceived instructional value (Cronbach's α = .87). Interviews and journals provided qualitative depth.

Classroom Observations: A modified COLT scheme (Spada & Fröhlich, 1995) guided the analysis of interaction patterns, instructional focus, and communicative behavior.

2.6 Data Analysis

- **Quantitative Analysis:** Conducted using SPSS (v26). Mixed-design ANOVAs tested interaction effects (group × time), supplemented by t-tests and ANCOVAs where applicable. Effect sizes were reported using Cohen's d and partial eta squared. Inter-rater reliability for pronunciation scores was confirmed using intraclass correlation (ICC = 0.89).
- **Qualitative Analysis:** NVivo 12 was used for thematic coding following Braun and Clarke's (2006) six-phase approach. Themes were derived both deductively (based on Tagmemic principles) and inductively (from participant data). Inter-coder agreement reached κ = .83.
- **Integration:** Quantitative and qualitative findings were triangulated in the interpretation phase using joint display matrices (Fetters et al., 2013), highlighting convergences, divergences, and explanatory insights.

3.7 Ethical Considerations

Ethical approval was granted by the university's IRB. Informed consent was obtained from all participants. Gender-sensitive protocols were followed in line with Saudi cultural norms. Anonymity and confidentiality were strictly maintained, and participants were assured that involvement would not impact academic standing

3. Results

4.1 Pronunciation Accuracy

The study examined pronunciation gains using both controlled and spontaneous tasks at three time points: pre-test, mid-test, and post-test. Results indicated statistically significant improvement in the experimental group across all pronunciation measures, while the control group showed modest gains.

Controlled Reading Task. At baseline, both groups performed comparably (Exp M = 65.2, Ctrl M = 64.6). By week 16, the experimental group showed substantial improvement (M = 84.7), while the control group's scores rose only slightly (M = 72.3). A mixed ANOVA revealed a significant interaction between group and time, $F(2,116) = 18.72$, $p < .001$, $\eta^2_p = .24$.

Picture Description Task. This task assessed spontaneous pronunciation. The experimental group improved from M = 59.7 to M = 79.2, whereas the control group increased from M = 60.2 to M = 67.9. The time × group interaction was also significant, $F(2,116) = 16.45$, $p < .001$, $\eta^2_p = .22$.

Segmental and Suprasegmental Features. In segmental accuracy, the experimental group achieved a post-test mean of 82.5 compared to 70.6 in the control group ($F(2,116) = 17.93$, $p < .001$, $\eta^2_p = .24$). Suprasegmental gains were equally pronounced ($F(2,116) = 19.27$, $p < .001$, $\eta^2_p = .25$), reflecting improved use of stress and intonation.

Qualitative Corroboration. Classroom observations confirmed these quantitative findings. Experimental group learners increasingly self-corrected errors, demonstrated more accurate rhythmic patterns, and showed greater awareness of connected speech. Interview data revealed that students attributed their improvement to pattern recognition tasks and contextualized feedback.

4.2 Vocabulary Acquisition

Quantitative analyses revealed that the experimental group demonstrated significantly stronger gains in vocabulary knowledge and usage than the control group across all three assessment measures.

Vocabulary Knowledge Scale (VKS). At pre-test, both groups performed similarly (Exp M = 22.6, Ctrl M = 23.1). By post-test, the experimental group had reached M = 41.7, compared to M = 34.5 in the control group. The interaction between time and group was statistically significant, $F(2,116) = 19.38$, $p < .001$, $\eta^2_p = .25$, indicating a notable advantage for Tagmemic-based instruction.

Vocabulary in Context Test. Performance on this measure, which assessed learners' ability to use vocabulary in semantically and culturally appropriate ways, showed a similar trend. The experimental group progressed from M = 18.2 to M = 29.9, while the control group improved from M = 17.9 to M = 24.8. The interaction effect was significant, $F(2,116) = 14.72$, $p < .001$, $\eta^2_p = .20$.

Productive Vocabulary Use. Participants' ability to use target vocabulary in extended writing tasks also favored the experimental group (Exp Post-test M = 79.8; Ctrl Post-test M = 65.7). The effect size for this measure was strong, $F(2,116) = 17.04$, $p < .001$, $\eta^2_p = .23$.

Qualitative Support. Interviews and journal entries revealed that experimental participants gained greater confidence in contextual vocabulary use. Many described noticing recurring semantic structures and actively applying new words in varied communicative contexts. Cross-linguistic comparisons with Arabic morphology further supported deeper retention and flexible usage. Observational data confirmed that students increasingly relied on semantic groupings and contextual cues during classroom discussions

4.3 Learner Perceptions

Findings from survey data and qualitative responses suggest that students in the experimental group developed significantly more favorable perceptions of their learning experiences compared to those in the control group.

Survey Results. Across four key domains—learning effectiveness, cultural relevance, pronunciation confidence, and motivation—the experimental group reported marked improvements from pre- to post-intervention, with large effect sizes:

- *Learning effectiveness*: Pre M = 3.24, Post M = 4.37, $t = 6.82$, $p < .001$, $d = 1.25$
- *Cultural relevance*: Pre M = 2.86, Post M = 4.18, $t = 7.38$, $p < .001$, $d = 1.35$
- *Confidence in pronunciation*: Pre M = 2.63, Post M = 3.92, $t = 6.24$, $p < .001$, $d = 1.14$
- *Motivation*: Pre M = 3.42, Post M = 4.28, $t = 4.78$, $p < .001$, $d = 0.87$

The control group's shifts were minimal and statistically non-significant in most cases.

Qualitative Insights. Interviews and learning journals from the experimental group underscored several recurring themes:

- **Cognitive clarity**: Students frequently described gaining insight into how English words and sounds are patterned, making it easier to recall and apply them.
- **Cultural integration**: Learners appreciated lessons that embedded language use in cultural settings, noting that such exposure made English feel "less foreign" and more meaningful.
- **Instructional preference**: Tagmemic-based activities were consistently rated more engaging and helpful than traditional drills or textbook exercises.
- **Metacognition**: Several students described actively monitoring their language use, attempting to apply new patterns spontaneously, and reflecting on what worked.

Overall, the combination of structured pattern recognition and culturally responsive teaching appeared to heighten learners' sense of agency and engagement in the classroom

4.4 Engagement and Interaction

Classroom observation data and qualitative accounts revealed substantial differences in engagement patterns between the experimental and control groups, with the former showing more dynamic, student-centered interaction throughout the semester.

Quantitative Findings. Engagement metrics were derived from classroom observations conducted using a structured protocol adapted from the Communicative Orientation of Language Teaching (COLT) framework. Across six observed sessions per group, the experimental classes exhibited:

- 42% more student-initiated questions
- 37% more peer-to-peer interaction episodes
- 51% fewer off-task behaviors
- A higher frequency of student-led clarification requests and meaning negotiation episodes

These metrics indicate a more participatory and cognitively active learning environment in the experimental group.

Qualitative Findings. Three themes emerged from instructor interviews and field notes:

- **Collaborative meaning-making**: Students often worked in pairs or small groups to analyze linguistic patterns, which fostered collective problem-solving and encouraged risk-taking in language use.
- **Ownership of learning**: Learners in the experimental group showed signs of taking initiative in

identifying pronunciation or vocabulary patterns, often asking questions that extended beyond the immediate scope of the lesson.

- **Sustained attention**: Instructors reported fewer discipline issues and noted that students remained engaged with instructional tasks for longer periods without prompting.

In contrast, the control group classes were more instructor-centered, with limited spontaneous interaction and a tendency to rely on repetition and recall-based activities. This distinction suggests that Tagmemic-based instruction not only enhanced linguistic outcomes but also supported the development of an active and self-regulated learning culture.

4.5 Theoretical Implications

This study contributes several important insights to second language acquisition (SLA) theory by recontextualizing Tagmemic principles within contemporary ESL pedagogy. The implications span phonological learning, lexical development, and the broader conceptualization of patterned language use in cross-cultural settings.

Reaffirming Tagmemics as a Viable Pedagogical Framework. Pike's (1982) Tagmemic model, which posits that language operates through structured patterns of form, function, and distribution, has historically been applied in descriptive linguistics and language documentation. This study extends its reach into pedagogical praxis, demonstrating that Tagmemics offers a coherent, operationalizable framework for organizing second language instruction, particularly in contexts involving substantial L1–L2 distance.

Rather than serving as a mere heuristic, Tagmemic principles—such as integrating linguistic form with communicative function and situational context—proved effective in guiding instruction and fostering learner uptake. This repositions Tagmemics as not only a descriptive tool but a pedagogical theory with relevance for SLA.

Bridging Segmental and Suprasegmental Phonology. Findings support a non-modular view of pronunciation learning. Rather than treating segmentals and suprasegmentals as distinct pedagogical targets, the study showed that learners benefited most when patterns spanned both levels of phonology. This supports usage-based theories (Ellis, 2008), which argue that language competence emerges from repeated exposure to meaningful, structured input—mirrored here through Tagmemic sequencing of linguistic elements.

Enhancing Lexical Depth through Pattern Awareness. The study aligns with and expands the Involvement Load Hypothesis (Laufer & Hulstijn, 2001), suggesting that structured pattern recognition not only increases the cognitive demands placed on learners but also deepens lexical retention. The emphasis on morphological patterns, cross-linguistic parallels, and contextual usage—core to Tagmemic pedagogy—strengthens lexical encoding processes and may encourage learners to move from superficial recognition toward productive, context-sensitive use.

Integrating Culture into Linguistic Competence. By embedding cultural meaning in linguistic instruction, the Tagmemic approach aligns with sociolinguistic theories that regard language as socially situated (Jenkins, 2000; Lantolf & Thorne, 2006). This integration supports the claim that effective language teaching cannot remain culture-neutral. Learners' improved pragmatic awareness and vocabulary use reflect this theoretical stance, where meaning-making is inseparable from sociocultural knowledge.

4.6 Pedagogical Implications

The findings of this study carry practical significance for language educators, curriculum designers, and teacher trainers, particularly in contexts where learners' L1 significantly differs from English phonologically and morphologically.

Integrated Pattern-Based Instruction. The clear gains observed in both pronunciation and vocabulary

performance suggest that ESL instruction benefits from an integrated, pattern-based approach. Rather than isolating pronunciation or vocabulary in disconnected drills, teachers should design lessons that highlight recurring form-function-context patterns across linguistic domains. For example, introducing a phoneme within meaningful lexical sets (e.g., /p/ in "pack," "pat," "post") embedded in real-world contexts enhances retention and functional use.

Culturally Responsive Teaching. The experimental group's stronger motivation and engagement highlight the value of culturally anchored materials. Instruction should not assume cultural neutrality but must relate language use to learners' social and cultural realities. In the Saudi context, examples and tasks that acknowledge learners' values, speech norms, and language history can improve both affective responses and learning outcomes.

Teacher Training in Pattern Recognition and Tagmemic Application. Effective implementation of Tagmemic instruction requires teachers to understand how to identify and teach patterns. Professional development should focus on equipping educators with strategies for discovering phonological and lexical patterns, explaining their communicative functions, and guiding learners in recognizing such patterns themselves. Pattern discovery tasks and cross-linguistic comparisons can be introduced in teacher preparation programs.

Promotion of Metacognitive Awareness. Learners in the experimental group demonstrated increased self-awareness in pronunciation monitoring and vocabulary use. Instruction should therefore incorporate reflective activities—such as learner logs, self-correction checklists, and peer feedback—to promote metacognitive skills. These activities empower learners to internalize linguistic patterns and generalize them to novel contexts.

Structured Peer Interaction and Collaborative Discovery. Classroom observations showed more learner-initiated interaction in the Tagmemic group. Tasks that promote peer collaboration around language patterns—such as co-constructing pronunciation rules or negotiating meaning in vocabulary games—can increase interactional competence and learning autonomy. This supports a shift from teacher-centered delivery to student-driven exploration.

4.7 Limitations and Future Research

While this study offers promising findings, several limitations constrain the scope and generalizability of its conclusions.

Duration of Intervention. The 16-week instructional period, though substantial for classroom-based research, may not be sufficient to observe long-term retention of pronunciation and vocabulary gains. Follow-up assessments after several months would help determine whether improvements are sustained over time or diminish without continued instruction.

Contextual and Participant Specificity. The research was conducted within a single institutional context using intermediate-level Saudi learners. Findings may not apply to other educational settings, age groups, or proficiency levels. Future studies should replicate this work in varied contexts—including different regions, private vs. public institutions, and beginner or advanced learners—to test broader applicability.

Instructor Variables. Although all instructors received similar training, individual differences in teaching style and rapport with students may have affected learner outcomes. Future designs should control for teacher effects more strictly—either by using a single instructor for both groups or incorporating blind instructional delivery where feasible.

Focus on Limited Language Domains. This study focused on pronunciation and vocabulary. It did not examine potential transfer effects to other aspects of language proficiency, such as grammar, discourse cohesion, or pragmatic competence. Since Tagmemic theory addresses language holistically, future research could explore its application across a broader range of linguistic competencies.

Measurement Constraints. While both standardized tests and qualitative data were used, some aspects—

such as metacognitive awareness and cultural relevance—were based on self-report and observation, which can introduce subjectivity. Future research should develop and validate more robust instruments for assessing these constructs reliably.

4. Discussion

The present study examined the impact of Tagmemic-based instruction on pronunciation accuracy, vocabulary acquisition, learner engagement, and cultural responsiveness in the Saudi ESL context. The findings provide strong empirical support for integrating Tagmemic principles into second language pedagogy, as the experimental group demonstrated significantly greater gains than the control group across linguistic, cognitive, and affective measures.

5.1 Linking Findings to Existing Research

The improvement in pronunciation accuracy aligns with previous studies emphasizing the importance of both segmental and suprasegmental instruction for intelligibility (Derwing & Munro, 2015; Thomson & Derwing, 2015). However, this study extends earlier research by embedding pronunciation training within a structured, pattern-based framework that integrates form, function, and context. Learners in the experimental group not only mastered individual phonemes but also demonstrated enhanced control over prosody and rhythm, suggesting that Tagmemic instruction fosters more holistic phonological competence.

Similarly, vocabulary gains observed in the experimental group resonate with cognitive engagement models such as the Involvement Load Hypothesis (Laufer & Hulstijn, 2001). Yet, the present findings go further by illustrating that explicit pattern recognition and cultural contextualization deepen lexical retention and promote more flexible, productive use of vocabulary. Students frequently reported that linking English lexical items to familiar cultural frames improved their confidence and ability to use words appropriately in varied contexts.

The marked rise in learner engagement and motivation reflects the broader literature on culturally responsive pedagogy (Mahboob & Elyas, 2014). By grounding instruction in learners' linguistic and cultural realities, Tagmemic-based tasks appeared to reduce the perceived foreignness of English learning, enabling students to view language acquisition as a meaningful and achievable process. Observational data showing increased peer interaction and self-initiated learning further highlight the motivational impact of this approach.

5.2 Theoretical Contributions

From a theoretical standpoint, this study demonstrates that Tagmemics—traditionally employed in descriptive linguistics—can be adapted into a practical pedagogical model for ESL contexts. The integration of form-function-context analysis into classroom instruction supports usage-based theories of language learning (Ellis, 2008), which emphasize the role of patterned, meaningful input in language acquisition. Furthermore, the culturally embedded design responds to calls within applied linguistics for instruction that reflects the sociocultural dimensions of language use (Lantolf & Thorne, 2006).

5.3 Pedagogical Implications

The findings offer several actionable implications for ESL teaching and curriculum design. First, incorporating Tagmemic principles into instructional materials can foster more robust and transferable language skills. Teacher training programs should therefore equip instructors with strategies for identifying linguistic patterns, integrating cultural context, and designing cognitively engaging tasks. Additionally, the observed gains in learner autonomy suggest that Tagmemic-based instruction may be particularly well-suited to blended and technology-enhanced learning environments, where self-regulated learning is essential.

5.4 Limitations and Future Directions

Despite its contributions, the study has limitations that warrant consideration. The 16-week intervention period, while sufficient to demonstrate short-term gains, does not allow conclusions about long-term retention or transfer to other language domains such as grammar or discourse competence. Moreover, the research was conducted in a single institutional context with intermediate-level learners, limiting generalizability. Future studies should investigate Tagmemic instruction across proficiency levels, cultural settings, and linguistic domains, as well as examine the sustainability of observed gains over time..

5. Conclusions

This study examined the impact of Tagmemic-based instruction on pronunciation accuracy and vocabulary acquisition among Saudi ESL learners. Drawing on Pike's Tagmemic theory, the intervention integrated form, function, and context to target persistent challenges in English language learning. Across quantitative and qualitative measures, the experimental group showed significantly greater improvement than the control group—not only in segmental and suprasegmental pronunciation and vocabulary depth but also in learner attitudes, engagement, and metacognitive awareness.

The results demonstrate that Tagmemic instruction provides a viable and theoretically grounded alternative to traditional ESL methods, particularly for learners whose first language differs markedly from English in phonological and lexical structure. The findings support broader calls for culturally responsive, pattern-based pedagogies that align language instruction with learners' linguistic backgrounds and cognitive strengths.

More broadly, the study affirms the practical value of linguistic theory when translated thoughtfully into pedagogy. It shows that theoretical models such as Tagmemics—too often confined to linguistic description—can inform and improve classroom practice. With appropriate adaptation, such frameworks may enhance not only instructional effectiveness but also learner autonomy and cultural awareness.

Ultimately, this research contributes to the growing body of work advocating for integrated, context-sensitive approaches to second language instruction. It encourages educators, curriculum designers, and policymakers to consider how theoretical insights can translate into tangible gains in learner outcomes.

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