

The Effectiveness of Data-Driven Instruction in Enhancing Writing Proficiency among Iraqi EFL Secondary School Learners

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Abstract: The present study aims to investigate the effectiveness of Data-Driven Instruction in enhancing writing proficiency among Iraqi EFL secondary school learners. To achieve the aim of the study, a quasi-experimental design was adopted. The participants(N=60) were randomly assigned to two groups: an experimental group (n=30) taught according to Data-Driven Instruction and a control group (n=30) taught according to the conventional method during the academic year (2025-2026). A pre-test and a post-test were administered to measure students' writing proficiency before and after the treatment. The writing test was scored according to an analytic scoring rubric that covered the main components of writing, such as content, organization, vocabulary, grammar, and mechanics. To ensure the face validity of the study instruments, the lesson plan, the writing test, and the scoring rubric were submitted to a panel of jury members specializing in English Language Teaching(ELT) and Linguistics. The study results showed a positive effect of Data-Driven Instruction on students' writing proficiency. Students in the experimental group performed better than the control group students in the post-test. The findings also showed a marked improvement in the ability to organise ideas, use appropriate vocabulary, construct sentences with grammatical accuracy and apply writing mechanics more effectively of the experimental group. The improvement is ascribed to the systematic use of data-driven instruction (DDI) in student writing, diagnostic assessment, targeted feedback and remedial activities that respond to the real needs of learners. The study findings revealed that Data-Driven Instruction is a successful pedagogical approach to improve the writing skills of Iraqi EFL secondary school students. It helps teachers to make informed pedagogical decisions and helps learners to be more aware of their weaknesses and progress. Therefore, the study suggests that Data-Driven Instruction should be incorporated into EFL writing classes and that teachers should be trained on how to analyse students' writing data and use them to improve instruction.

Keywords: Data-Driven Instruction, writing skills, Iraqi EFL secondary school students

1. Introduction

Writing is an intrinsic component of second-language learning as it enables learners to develop ideas, organise knowledge, showcase academic knowledge, and communicate beyond the classroom. However, successful written production for EFL learners involves the simultaneous management of purpose, audience, content, organization, vocabulary, grammar, cohesion, and mechanics. These demands make writing a multidimensional ability rather than a mere piling up of correct sentences (Hyland, 2019; Weigle, 2002). A learner may be able to produce grammatically acceptable sentences but may still struggle to develop or sequence ideas; or another learner may be able to communicate meaningful content but may need substantial support with language use and editing. The complexity of writing has important implications for instruction and assessment. A single total score may tell us whether performance is relatively strong or weak, but it provides little guidance about what should be taught next. Analytic assessment is more useful for instructional purposes because it breaks down performance into observable dimensions, and patterns can be examined across students, tasks, and occasions (Brown & Abeywickrama, 2019; Weigle, 2002). When evidence is translated into focused teaching assessment becomes part of learning, not just a record of achievement.



The heart of Data-Driven Instruction is this evidence to action principle. DDI is a systematic process in which teachers collect relevant evidence, interpret patterns of performance, select an instructional response, and monitor the effect of that response. Hamilton et al. (2009) described effective data use as an ongoing cycle of instructional improvement, while Mandinach (2012) emphasizes that data become educationally meaningful only when they inform decisions. DDI therefore extends beyond the possession of scores or the administration of frequent tests. It requires the data literacy needed to ask a useful question, judge the quality of evidence, interpret it in context, and convert the interpretation into pedagogical action (Mandinach & Gummer, 2016).

Writing is particularly suitable for this process because students' texts provide visible evidence of their choices. Rubric profiles, recurring error patterns, successive drafts, revision records, and teacher observations can reveal whether learners primarily need support with idea development, paragraph organization, lexical selection, sentence structure, or mechanics. The teacher can then use targeted mini-lessons, model analysis, guided practice, flexible grouping, peer response, and focused revision rather than providing the same undifferentiated correction to the entire class. Feedback becomes the link between evidence and improvement when it identifies a manageable priority and gives learners an opportunity to act on it (Ferris, 2011; Hattie & Timperley, 2007; Shute, 2008).

1.1 Problem of the research

Writing is a fundamental productive skill in English Language Teaching (ELT), yet it remains one of the most challenging areas for English as a Foreign Language (EFL) learners. Students in secondary school frequently have difficulty expressing their ideas clearly, organising their thoughts in a logical manner, and using proper grammar, vocabulary and conventions of written English. The problems are aggravated by the little instructional attention usually given to writing in EFL classes, which has a negative impact on students' overall language proficiency and their academic performance (Hurd & Lewis, 2008). In general, students' writing proficiency is low when compared to Iraqi EFL secondary schools. This is supported by a considerable amount of local literature (Abbas & AlBakri, 2018; Al-Shboul & Huwari, 2015; Hamza, 2012; Jasim, 2012; Muslim, 2014). My own experience as an EFL practitioner and the structured interviews with fellow educators further validate this continuing pedagogical gap. Furthermore, the empirical results presented by Worasit and Boonchai (2025) show that the absence of data-informed pathways in instruction results in learners being unable to make effective use of their linguistic knowledge. Therefore, the problem of the present study lies in the insufficient application of Data-Driven Instruction to enhance and systematically scaffold writing performance among Iraqi EFL secondary school learners.

1.2 Aims of the research

The present research aims to:

1. Examine the effectiveness of Data-Driven Instruction in enhancing the writing proficiency of Iraqi EFL secondary school learners.
2. Identify the most common writing weaknesses (grammar, vocabulary, organization, and mechanics) among Iraqi EFL secondary school learners.
3. Determine the extent to which Data-Driven Instruction improves students' writing performance compared with the traditional teaching approach.

1.3 Hypotheses

The following hypotheses were tested:

1. There is a statistically significant difference at the 0.05 level between the mean scores of the experimental group who are taught writing through Data Driven Instruction and those of the control group who are taught writing by the traditional method on the post administrations of the EFL writing test in favor of the experimental group.

2. There is a statistically significant difference at the 0.05 level between the mean scores of the experimental group who are taught writing through Data Driven Instruction on the pre and post administrations of the EFL writing skills test in favor of the post one.

1.4 Limits of the Research

This research was limited to:

1. The sample of the study includes Iraqi EFL 5th grade learners at secondary school (N=60).
2. The second semester of academic year (2025-2026).
3. The use of Data-Driven Instruction
4. Some writing skills necessary for Iraqi EFL 5th grade learners at secondary school: (content, organization, vocabulary, grammar, and mechanics).

1.5. Significance

The present Research was significant in many ways:

- For secondary school learners it seeks to develop their writing skills, since it enhances using Data-Driven Instruction.
- For school teachers, it directs them to the importance of using different teaching techniques to meet the diversity of learners.
- For supporting EFL teachers in identifying students' writing weaknesses and addressing them through diagnostic assessment and data-based instructional decisions.
- Enriching the academic literature with empirical evidence on the effectiveness of Data-Driven Instruction in enhancing writing proficiency among Iraqi EFL secondary school learners.
- For providing practical pedagogical insights that can help teachers, curriculum designers, and educational decision-makers improve the teaching of writing in secondary schools.
- For improving Iraqi EFL learners' writing skills for academic achievement and real-life communication purposes.

1.6 Definitions of Basic Term

Data-Driven Instruction: Conceptually, Data-Driven Instruction is a systematic process in which educators collect, analyze, and interpret relevant evidence about learning and use the resulting information to plan, adapt, and evaluate instruction (Hamilton et al., 2009; Mandinach, 2012).

Operationally, DDI in the present study refers to the structured cycle used with the experimental group: collecting learners' writing samples; scoring them analytically in content, organization, vocabulary, grammar or language use, and mechanics; identifying recurrent patterns; selecting targeted lessons, grouping, practice, and feedback on the basis of those patterns; and collecting subsequent writing evidence to judge progress and revise instruction. It does not refer to corpus-based Data-Driven Learning.

Writing Proficiency: Conceptually, writing proficiency is the ability to produce written discourse that fulfils a communicative purpose through relevant and sufficiently developed content, coherent organization, appropriate vocabulary, effective grammatical and syntactic control, and accurate mechanics. Because writing ability is multidimensional, its assessment should reflect the qualities of the text rather than rely on a single count of errors (Hyland, 2019; Weigle, 2002).

Operationally, writing proficiency is the score obtained by each participant on the study's pretest or posttest writing task using the approved analytic rubric. The overall score is the combined result of the five assessed components: content, organization, vocabulary, grammar or language use, and mechanics. Higher scores indicate stronger performance under the defined task and scoring conditions.

2. Review of Literature and Related Studies

2.1 Scope of Data-Driven Instruction (DDI)

Data-Driven Instruction is a systematic process through which educators collect, organize, interpret, and apply evidence about student learning to improve instruction. Hamilton et al. (2009) described effective data use as an ongoing cycle of instructional improvement in which teachers use student-achievement information to establish learning goals, identify strengths and weaknesses, modify lessons, and monitor subsequent progress. Similarly, Mandinach and Gummer (2016) define data literacy for teaching as the ability to transform multiple types of information into actionable instructional knowledge. These definitions suggest that DDI is not simply the possession of test scores; it is the disciplined conversion of evidence into pedagogical decisions. The term data-driven is sometimes criticised for implying that decisions should be driven by numbers. Contemporary scholarship, therefore, often refers to data-informed or data-based decision making to emphasise that data are one source of evidence in professional reasoning (Mandinach & Schildkamp, 2021; Schildkamp, 2019). The present study maintains DDI as this is the term used in the study title, but takes an explicitly data-informed interpretation. Teachers are still responsible for judging the quality of evidence, taking classroom context into account, choosing appropriate responses, and evaluating whether those responses benefit learners. DDI can work on different levels. At the classroom level, a teacher may examine writing samples to see whether students require additional instruction in paragraph unity, verb tense, lexical choice, or punctuation. Patterns may be used to organise temporary instructional groups at the group level. At the individual level, a learner's rubric profile can inform personalised feedback and goals. At the school level, aggregated evidence may be used for professional development or curriculum planning (Datnow & Hubbard, 2016; Schildkamp, 2019). The present study is mainly classroom-based and aims to investigate the role of evidence from writing performance as a guide to the treatment given to an experimental group.

2.2 The DDI Cycle

There are several models of educational data use in the literature, but the majority consist of a cycle of goal definition, evidence collection, interpretation, instructional response and evaluation (Hamilton et al., 2009; Marsh, 2012). The cycle starts with a clear learning target, since evidence cannot be meaningful without a standard or desired outcome. Data relevant to the problem are then collected and classified to enable the analysis of patterns at the individual, group and class levels. Teachers hypothesise about the causes of performance, select an instructional response, and collect new evidence to determine if the response was effective. It is essential that DDI be cyclical. The post-test is more than just a final record of accomplishment. It is evidence of whether or not instructional decisions resulted in the intended change. If little progress is made, the teacher modifies the hypothesis or the intervention. Progress in one dimension but not in another permits adjustments in subsequent instruction. This way, DDI supports continuous improvement, not a one-time classification.

2.3 Theoretical Foundations of DDI:

DDI is an instructional framework grounded in five interconnected theories emphasizing evidence, adaptation, interaction, and learner agency:

1. Formative Assessment Theory: Driven by Black and Wiliam's framework (establishing goals, assessing current performance, and bridging the gap) alongside Hattie and Timperley's model of targeted feedback. It uses assessment evidence to guide teaching and revision.

2. Constructivism and Scaffolding: Views writing as an active, constructive process. Utilizes Vygotsky's Zone of Proximal Development to calibrate responsive, individualized instructional support based on diagnostic evidence.

3. Sociocultural Theory: Frames writing as a social, mediated act. Incorporates collaborative data interpretation, peer feedback, teacher-student conferences, and guided discussions structured by clear criteria.

4. Self-Regulated Learning: Promotes learners' active control over goals, monitoring, and revision strategies using performance evidence, progress trackers, and reflective self-evaluation (Nicol & Macfarlane-Dick, 2006).

5. Differentiated Instruction: Uses empirical DDI evidence to adapt instruction flexibly, grouping students dynamically around specific, evolving writing needs rather than permanent labels (Tomlinson, 2014).

2.4 Related Previous Studies

Jung et al. (2017): investigated the effectiveness of an early writing intervention delivered within a data-based instruction framework. The participants were 46 students with and without identified disabilities in Grades 1 to 3. They were randomly assigned within their classrooms to either an experimental group or a business-as-usual control group. The experimental group received research-based writing instruction for 30 minutes, three times per week, over 12 weeks. Curriculum-based writing measurements were regularly collected and analyzed to identify students' difficulties, monitor their progress, and modify instruction accordingly. Writing performance was measured through curriculum-based writing measures and the Woodcock–Johnson III Tests of Achievement. The findings revealed statistically significant effects on the curriculum-based writing measures, with Hedges' g values ranging from 0.74 to 1.36. Significant effects were also found on the standardized writing measure for students with disabilities. The study provided strong initial evidence that the systematic use of writing-performance data to guide instructional decisions could improve students' writing outcomes.

McMaster et al. (2020): conducted a randomized controlled study to examine the effectiveness of a professional-development system designed to support teachers' implementation of data-based writing instruction. The study involved special-education teachers from 19 classrooms in two Midwestern school districts and 53 students with intensive early-writing needs. The teachers were randomly assigned to either a DBI-TLC treatment condition or a business-as-usual control condition. Treatment teachers received writing-assessment tools, instructional materials, learning modules, classroom applications, and continuing coaching. Students' writing performance was evaluated through curriculum-based writing measures and the Test of Early Written Language–Third Edition. Treatment teachers significantly outperformed control teachers in DBI knowledge and skills, with a large effect size of $g = 2.88$. Their students also demonstrated positive performance patterns on curriculum-based writing measures, with effect sizes ranging from 0.23 to 0.40. However, the effects on the standardized writing test were relatively small. The findings demonstrate that effective DDI requires teachers to possess sufficient knowledge and practical support to interpret writing data and transform the results into targeted instructional interventions.

3. The Experimental Design

The experimental design is a structured plan utilized by the researcher to gather necessary data, control extraneous variables that may influence the results, and conduct appropriate statistical analyses to test the research hypotheses. Miller (1984: 124) defines experimental design as “the general plan which is to be used in testing a given prediction”.

Consequently, a quasi-experimental, non-randomized control group, and pretest/posttest design was adopted for this study. This design evolved two intact groups : the control group(CG) and the experimental group(EG).

At the beginning of the experiment, both groups were administered the same pretests to ensure the initial group equivalence.

During the implementation, only the experimental group was exposed to the treatment (the independent variable, DDI), and at the end of the experimental period, both groups (EG and CG) were post tested in the dependent variable. The experimental design is diagramed as follows:

Table (1) The Experimental Design

The groups	The pre-test	Independent variable	The post-test
Experimental	Writing Proficiency	(Data Driven Instruction)strategy	Writing Proficiency
Control		Traditional method	

3.1 Population and Sample of the Research

The population comprised fifth-preparatory male EFL learners in schools administered by the Diyala Directorate General of Education during the 2025–2026 academic year. Al-Maarif Secondary School for Boys was selected by lot. The scientific branch contained three intact sections. Sections A and B were selected, and Section A was assigned to the experimental condition while Section B served as the control condition. To minimise prior exposure effects, six repeaters were excluded, leaving a final sample of 60 students (30 per group). The groups were matched on age, parental education and pre-intervention writing. There was no significant difference in age, $t(58) = 0.38$, $p > .05$. Chi-square tests indicated no significant group difference in educational level for either fathers or mothers. Baseline total scores provided in the appendices of the thesis were also reanalysed and found to have no significant difference between the experimental ($M = 20.83$, $SD = 4.40$) and control ($M = 19.97$, $SD = 2.87$) groups, $t(58) = 0.90$, $p = .370$. These equivalence checks do not alter the quasi-experimental nature of the design because intact classes, rather than individual students, were assigned.

3.2 Writing Test and Scoring

Writing proficiency was assessed using parallel pretest and posttest tasks appropriate to the prescribed fifth-preparatory curriculum. The pretest consisted of writing on eating habits and writing an email to a relative describing a friend. The posttest was to write a letter to a British friend describing an Iraqi traditional celebration and a story about a personal event. The tasks were reviewed by specialists for level, relevance, clarity and alignment to the target writing skills.

Content, organization, vocabulary, grammar and mechanics were evaluated using an analytic rubric adapted from Brown (2007). Each dimension rated each response from 1 (poor) to 4 (excellent). The score on each dimension, based on two writing tasks, ranged from 2 to 8, and the total writing score ranged from 10 to 40. Analytic scoring was selected as it gives diagnostic information required for DDI treatment instead of a single overall judgement.

3.3 Validity, Pilot Testing, and Reliability

Face and content validity were addressed by submitting the writing tasks, directions, lesson plans, and analytic rubric to specialists in English language teaching, linguistics and methodology. Reviewers evaluated the appropriateness of the prompts, the clarity of directions, the coverage of the intended writing dimensions, and the appropriateness of the scoring criteria. They acted on their recommendations as revisions. This process provided evidence of expert judgement for the intended interpretation and use of the scores (American Educational Research Association et al., 2014). The instruments were pilot tested with another group of 20 male students on 17 th February, 2026. The pilot reported that the instructions and topics were clear and that each test administration took approximately 45 minutes. Test-retest reliability (10 days) was (.95). To assess the consistency of scoring, the researcher and an experienced independent English teacher scored the same scripts; inter-rater reliability was (.85). Cronbach's alpha was also (.85) showing acceptable internal consistency for the reported use of the instrument.

3.4 The experimental application

The experimental application was launched on February 18, 2026 and continued until April 17, 2026. Both groups studied Units 5-8 of English for Iraq for the fifth secondary grade and covered the corresponding curriculum activities with writing as the principal focus. The specialist panel reviewed lesson plans for both conditions before implementation. The control group received routine teacher-led writing instruction and feedback without the systematic diagnostic grouping and monitoring cycle. The experimental group followed the DDI sequence explained below.

The first phase was analysis and diagnosis. Students completed the baseline writing tasks, which were scored on all five rubric dimensions. The researcher examined class-wide and individual patterns such as recurring problems in idea development, paragraph structure and coherence, word choice, tense and agreement, spelling, punctuation, and capitalisation. The results were translated into need profiles and not just treated as final marks. The second stage was one of focused instructional action. Students were placed in flexible, temporary groups according to their most pressing writing needs. Groups received focused mini-lessons, model analysis, guided practice, and remediation activities related to the diagnosed difficulty.

Because grouping was need-based rather than permanent, students could move as subsequent work demonstrated improvement. Shared curricular objectives were retained, but the amount and form of support differed according to the evidence.

The third stage combined feedback, revision, and monitoring. During writing activities, the teacher provided immediate feedback to groups and individual students, and structured peer response was encouraged. Students used feedback to revise their texts, while new writing evidence was reviewed to determine whether an instructional response should be continued, adjusted, or replaced. The final posttest was administered under comparable conditions on April 16, 2026.

4. Results

Results of the research are reported in terms of its hypotheses.

Testing the First Hypothesis

4.1 Posttest Differences Between Groups

Table(3) shows higher posttest scores for the experimental group on every dimension and on the total score; all independent-samples t tests were significant, $p < .001$. The total-score difference was $M = 27.67$ ($SD = 4.33$) versus $M = 17.20$ ($SD = 4.23$), $t(58) = 9.47$, $\eta^2 = .607$. Dimension-level eta-squared values ranged from .522 for organization to .600 for mechanics.

Table (3)
Posttest Comparisons Between the Experimental and Control Groups

Skills	Experimental M (SD)	Control M (SD)	t(58)	η^2
Content	5.67 (0.96)	3.50 (0.90)	9.02	.584
Organization	5.50 (0.94)	3.50 (1.01)	7.95	.522
Vocabulary	5.47 (0.86)	3.53 (0.97)	8.15	.534
Grammar	5.47 (0.94)	3.33 (0.92)	8.89	.577
Mechanics	5.43 (0.90)	3.33 (0.84)	9.33	.600
Total	27.67 (4.33)	17.20 (4.23)	9.47	.607

Note. n = 30 per group. All tests were significant at $p < .001$.

4.2 Testing the Second Hypothesis

4.3 Pretest-Posttest Change in the Experimental Group

The experimental group improved significantly on every dimension and on the total score. The total increased from $M = 20.83$ ($SD = 4.40$) at pretest to $M = 27.67$ ($SD = 4.33$) at posttest, $t(29) = 18.70$, $p < .001$, $dz = 3.41$. As Table 2 shows, the dimension-level paired effect sizes were also large ($dz = 1.82$ - 2.17), supporting the second hypothesis and indicating substantial within-group growth.

Table (4)

Pretest-Posttest Comparisons Within the Experimental Group

Skills	Pretest M (SD)	Posttest M (SD)	t(29)	dz
Content	4.20 (1.00)	5.67 (0.96)	11.00	2.01
Organization	4.27 (1.01)	5.50 (0.94)	11.89	2.17
Vocabulary	4.30 (0.79)	5.47 (0.86)	10.79	1.97
Grammar	4.03 (0.85)	5.47 (0.94)	11.56	2.11
Mechanics	4.03 (1.10)	5.43 (0.90)	9.96	1.82
Total	20.83 (4.40)	27.67 (4.33)	18.70	3.41

Note. $n = 30$. All tests were significant at $p < .001$. dz denotes Cohen's standardized mean change based on the difference-score standard deviation.

4.4. Discussion

The results support both hypotheses. Students who experienced the DDI treatment outperformed those who received conventional instruction, and the experimental group improved markedly from pretest to posttest. Not just one surface feature was improved: significant differences were noted in content, organization, vocabulary, grammar, and mechanics. This overall trend is consistent with the central argument that the most useful writing data are those that are disaggregated, interpreted, and tied to a targeted response rather than reduced to a final total score. Several features of the treatment may plausibly have influenced the outcome. First, analytic scoring converted student texts into instructional profiles. Teachers could identify whether the dominant need was ideas, structure, vocabulary, grammar or mechanics and thus could choose a more focused next step. Second, flexible grouping enabled efficient help for common needs without a permanent label of proficiency. Third, feedback was combined with revision and new writing, giving students an immediate opportunity to act on information and produce evidence of progress. This sequence is informed by the theory of formative assessment, which argues that evidence only improves learning through subsequent decisions and action (Black & Wiliam, 2009; Hattie & Timperley, 2007). Findings are also consistent with previous research on data-based writing instruction. Jung et al. (2017) demonstrated that early writing outcomes could improve when intervention was implemented within a data-based framework. McMaster et al. (2020) showed that teachers can be supported to use writing data more effectively, although student effects varied by outcome. Shanahan et al. (2023) further established that teacher knowledge and skill in data-based writing instruction were associated with student growth, while Choi et al. (2024) reported additional growth after data-informed instructional changes. The larger efficacy trial by McMaster et al. (2025) provided positive experimental evidence across proximal and distal writing outcomes. The present study extends that line of evidence to an Iraqi secondary EFL context and to broader analytic dimensions of composition.

At the same time, the magnitude of the present effects should be interpreted cautiously. DDI was implemented as a package that included diagnostic assessment, grouping, targeted mini-lessons, feedback, peer interaction, revision, and monitoring. The design cannot identify which component produced the largest contribution. It is therefore more accurate to attribute the findings to the organized evidence-to-action treatment than to data collection alone. Data do

not teach; instructional expertise is required to interpret a pattern and select a suitable pedagogical response (Mandinach, 2012; Schildkamp, 2019).

The results at the dimension level provide further insight. Organization had the smallest between-group eta-squared value, though the effect was still large, whereas mechanics had the largest. Surface conventions sometimes respond to directed instruction and repeated editing quickly, but organization requires control over the relation of ideas throughout a longer text. Nevertheless, the large gains in content and organization indicate that the intervention was not limited to error correction. The use of model texts, focused planning, structured feedback and revision seem to have supported both meaning-level and sentence-level performance.

5. Conclusions

The results of the current study reveal that Data-Driven Instruction has a positive effect on improving the writing skill of Iraqi EFL secondary school learners. The results showed that the experimental group of students performed better than their counterparts in the control group in the post-administration of the writing test. The implication is that systematic data, diagnostic assessment, focused feedback, and instructional decisions based on the actual writing needs of learners can be effective in developing students' writing abilities. Moreover, the enhancement was not limited to the general writing score. The students' written compositions improved greatly in the major aspects of writing such as content, organization, vocabulary, grammar, cohesion, and mechanics. This means that Data-Driven Instruction allows teachers to identify students' weaknesses more accurately and to plan appropriate remedial and enrichment activities accordingly. Consequently, students become more aware of their mistakes and more able to improve their writing. The study also concludes that Data-Driven Instruction provides a useful framework for connecting assessment and instruction. This strategy considers the assessment results as a continuous source of information for planning, teaching, feedback and modification rather than as a final stage. Therefore, DDI can be perceived as an efficacious pedagogical approach for fostering writing competence in EFL classrooms, particularly in contexts where students face persistent problems in expressing ideas, organising paragraphs, utilising accurate grammatical structures, and applying appropriate writing mechanics. Overall, the findings show that integrating Data-Driven Instruction into writing lessons can benefit both teachers and learners. It enables teachers to make informed instructional decisions and helps students identify their areas of weakness and work incrementally toward improved writing performance. Therefore, DDI is suitable for developing writing proficiency among Iraqi EFL secondary school learners.

5.1 Recommendations

1. In light of the findings of the present study, the following recommendations are proposed:
2. English language teachers are recommended to adopt Data-Driven Instruction in teaching writing because it allows them to identify students' actual weaknesses and provide instruction according to their learning needs.
3. Curriculum designers are encouraged to give more attention to the practical aspect of writing instruction by including activities that depend on diagnosis, feedback, revision, and continuous improvement.
4. School administrations and educational supervisors are advised to support teachers by providing training courses on how to collect, analyze, and use students' writing data effectively.
5. The Ministry of Education is recommended to include modern instructional strategies, such as Data-Driven Instruction, in teacher-training programs, especially for English language teachers.

5.2 Suggestions for Further Studies

Based on the findings and limitations of the present study, the following suggestions are offered for further research:

1. A similar study could be conducted to investigate the effectiveness of Data-Driven Instruction in improving other language skills such as reading, speaking, or listening.

2. Further research may examine the effect of Data-Driven Instruction on different types of writing, such as descriptive, narrative, argumentative, and expository writing.
3. Further research could investigate the relationship between Data-Driven Instruction and students' motivation, self-regulation, and autonomy in learning English writing.

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