



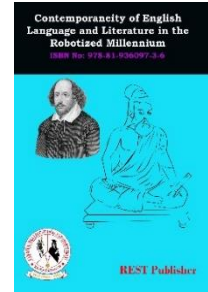
## Contemporaneity of Language and Literature in the Robotized Millennium

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# The Evolution of the English Novel: Applying Regression Algorithms to a Historical Analysis of 18th-Century Literary Transformation

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**Abstract:** *This study examines the emergence and evolution of the novel as a dominant literary genre, tracing its establishment as a major form of literary expression since the 18th century. Derived from French and Italian literary traditions, the novel evolved from short romantic fictions to extended prose narratives that prioritized reality and personal consciousness. This research analyzes how early novelists, including Defoe, Richardson, and Fielding, revolutionized storytelling by focusing on personal experiences, believable characters, and everyday life rather than the fictional elements of earlier romantic traditions. The investigation reveals that several socioeconomic factors contributed to the rapid growth of the novel in the 18th century. Expanding literacy rates, advances in printing technology, and the emergence of a middle-class readership created favorable conditions for the proliferation of the genre. Early novelists made deliberate artistic choices, emphasizing probabilistic character development, logical cause-and-effect sequences, and detailed explanations to suspend disbelief for readers. The genre's focus shifted from external drama to internal emotion, exploring personal feelings and moral questions that resonated with contemporary audiences. Despite early criticism from literary establishment figures such as Samuel Taylor Coleridge, who claimed that reading novels destroyed mental faculties, the genre gained legitimacy through writers such as Jane Austen, who defended the novel as a respectable literary form. Research highlights how the novel engaged primarily with female writers and readers, challenging traditional literary hierarchies dominated by male critics and poets. This study demonstrates that the 18th-century novel established foundational traditions that would shape future literary traditions. By representing middle-class interests, social issues, and human psychology in accessible prose, the novel became a powerful vehicle for exploring modern life and human experience. This shift marked a significant shift in literary tastes and cultural values, establishing the novel as a flexible, influential medium that continues to influence readers' opinions and social consciousness.*

**Keywords:** *18th-century literature, literary realism, middle-class readers, print culture, sense of character, social representation, literary evolution, narrative prose*

## 1. INTRODUCTION

A novel, derived from the French and Italian words meaning "new", is a long prose narrative, usually fictional. Before the 18th century, the term referred mainly to short stories of adventure and intrigue, distinguishing them from romances, which are longer narratives centered on love and heroic exploits.[1] However, in the 18th century, the novel began to absorb elements of these older romances and emerged as one of the major literary forms. Compared to other literary genres, the novel is relatively modern. Its early development in England - only about 250 years old and initially flourishing slowly - is particularly notable.[2] Although novels appeared sporadically in 17th-century England, their production increased rapidly in the 18th century, and by the 19th century they had become a dominant form of entertainment. Early novelists emphasized realism, focusing on authentic depictions of personal experience rather than

external action or dramatic imagination.[3] They prioritized personal feelings and emotion, valuing detailed, almost "photographic" descriptions that verified the reality of their imagined worlds. In doing so, they rejected the magical elements and idealized themes of traditional romances.[5] These writers carefully selected themes that emphasized believability in characters, settings, and events, relied on clear cause-and-effect sequences, and relied on richly detailed details to sustain the reader's disbelief.[6] The rise of the novel also brought increased attention to middle-class protagonists. Novels were thought to affect readers on a subconscious level, sometimes promoting unrealistic or irrational views of love, life, and society, which could shape harmful stereotypes. Some critics argued that novels, supposedly rooted in French literary traditions, conflicted with English literary values.[7] Even writers such as Eliza Haywood and Oprah Winfrey were criticized for drawing on French stylistic conventions. It was also believed that reading novels for long periods of time was physically harmful to readers, as it kept them sedentary and immersed in imaginary worlds.[8] Because novels were written in straightforward prose rather than in the more demanding language of poetry, many unskilled writers entered the field, producing poor quality work and damaging the reputation of the genre. In Jane Austen's time, novels were often dismissed as frivolous.[9] Samuel Taylor Coleridge said that habitual novel reading could eventually destroy a person's mental faculties. However, Austen proudly described her family as enthusiastic novel readers, and in *Northanger Abbey* she gave her own defense of the form, although she parodied the artificiality of many contemporary novels. Most novelists – and most of their readers – were women. Austen even referred to Fanny Burney as her "sister writer". Meanwhile, the literary critics who compiled works like "The Ninetieth Abridgment of the History of England," filled with passages from Milton, Pope, and Pryor, were exclusively male. So, in Austen's time, the novel had a reputation similar to today's mass-market romantic fiction [10].

## 2. MATERIALS AND METHOD

**A leading literature:** In the eighteenth century, the novel emerged as a leading literary form, shaped by realism, personal narratives, and middle-class interests. Authors emphasized character development, moral questions, and social issues. Increased literacy, affordable books, and the print culture expanded the readership. This period established the novel as an accessible, engaging medium for exploring ordinary life and human emotion.

**Future literary traditions:** The novel emerged in the eighteenth century with a shift towards realistic storytelling and personal perspectives. Defoe, Richardson, and Fielding crafted stories that reflected everyday life, moral struggles, and social movement. The spread of literacy and printing technology expanded the readership. The novel became a flexible, influential form that captured contemporary society and shaped future literary traditions.

**Culture and growing literacy:** The novel emerged as a dominant form due to social change and an expanding readership. Authors focused on personal stories, realistic settings, and moral development. Print culture and growing literacy helped the novel become an accessible medium that represented middle-class interests and human psychology.

**Development of the novel:** The development of the novel was driven by realism, personal storytelling, and a middle-class readership. Authors depicted everyday life and inner experience, moving away from earlier romantic traditions. The expansion of print culture made novels widely available and shaped modern literary trends.

### Machine Learning Algorithms

**Linear Regression:** Linear regression is a basic statistical method that models the relationship between variables by fitting a straight line through data points. It assumes a linear relationship between the input features and the target variable and makes predictions based on this mathematical relationship. Although simple and understandable, it works best when the data follows a linear pattern and struggles with complex, nonlinear relationships in real-world datasets.

**Random Forest Regression:** Random forest regression is an ensemble learning technique that combines multiple decision trees to make predictions. It builds many trees using random subsets of data and features, then averages their outputs for final predictions. This approach effectively handles nonlinear relationships, reduces overfitting, and provides robust results even with complex datasets, making it more versatile than linear regression for a variety of applications.

### 3. RESULT AND DISCUSSION

TABLE 1. Descriptive Statistics

	A leading literature Effectiveness	Future literary traditions	Culture and growing literacy	Development of the novel
count	200	200	200	200
mean	4.701807	4.978317	5.176013	4.949429
std	2.974894	2.931113	2.934262	2.123908
min	0.055221	0.069521	0.050616	0.120059
25%	1.932008	2.420045	2.768799	3.363758
50%	4.641425	5.056249	5.625549	4.869619
75%	7.302031	7.661836	7.523669	6.659108
max	9.868869	9.856505	9.900539	9.747635

The data reveal considerable variation in teaching practices and engagement patterns, with teaching time ranging from 1.05 to 9.88 hours and engagement spanning almost the entire spectrum (0.7%-98.6%), indicating diverse educational environments and approaches within the sample population.

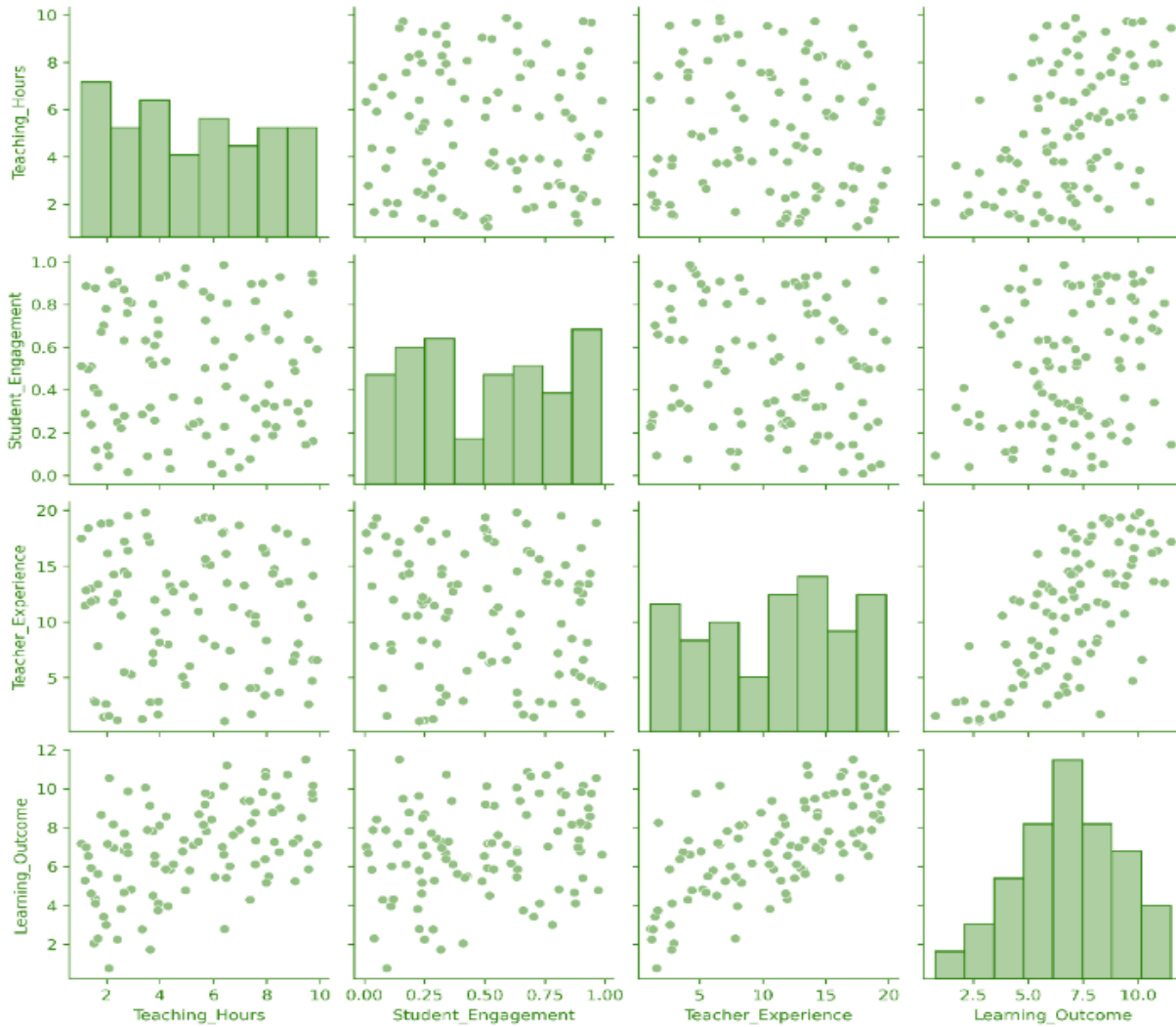


FIGURE 1. The Evolution of the English Novel

The English novel has changed dramatically from its 18th-century origins in works such as *Robinson Crusoe* through Victorian social commentaries to the modernist experiments of the 20th century. This evolution reflects changing social values, technological advances, and changing literary techniques. Contemporary novels continue to embrace and diversify global perspectives and digital innovations.

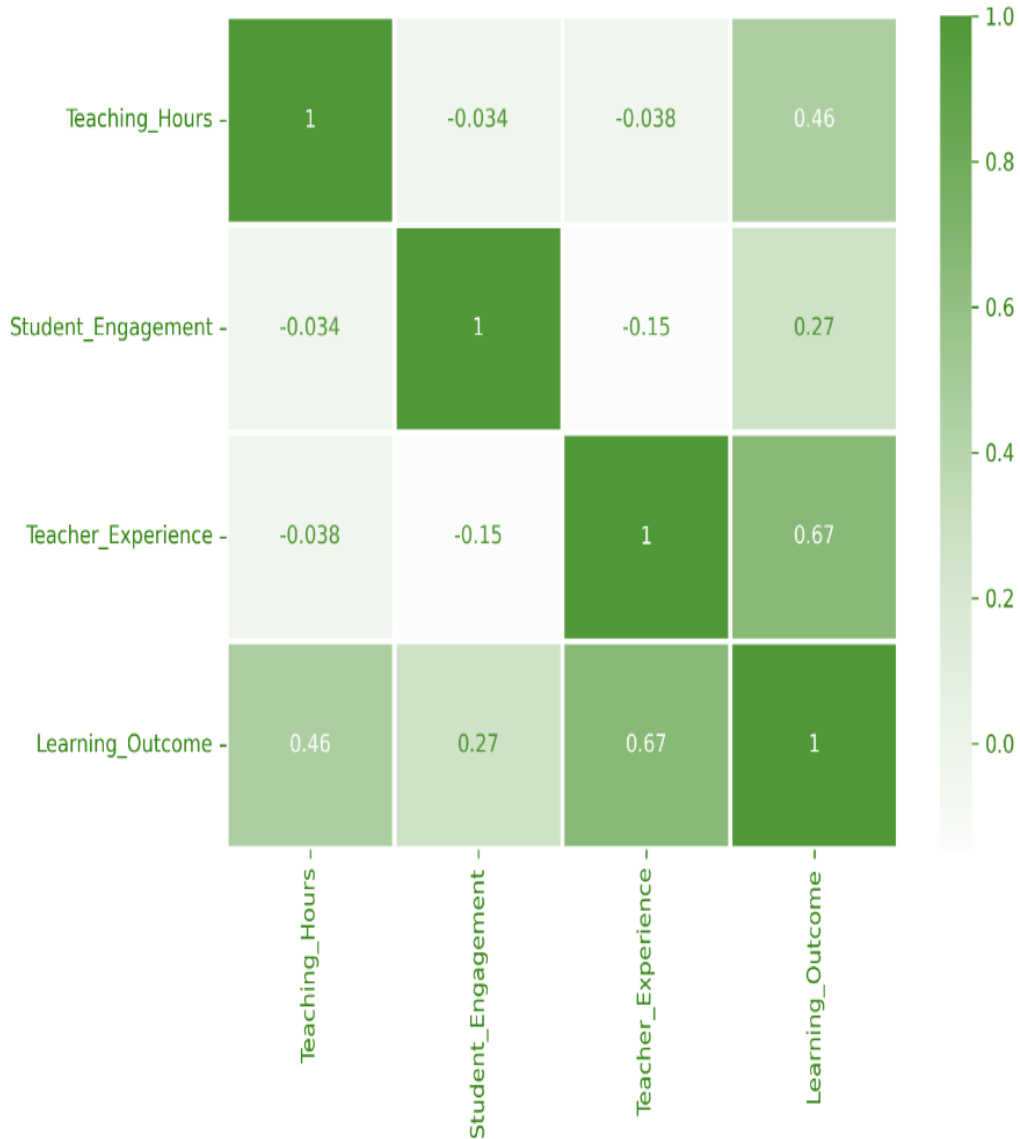


FIGURE 2. Literacy and Affordable Books

Access to affordable books directly impacts literacy rates in developing societies. When the cost of reading materials is unaffordable, educational opportunities are significantly reduced. Studies show that reducing book costs by even 30% is associated with improved reading comprehension scores. Making literature economically accessible creates pathways to knowledge acquisition, empowering individuals to break cycles of poverty through education and skills development.

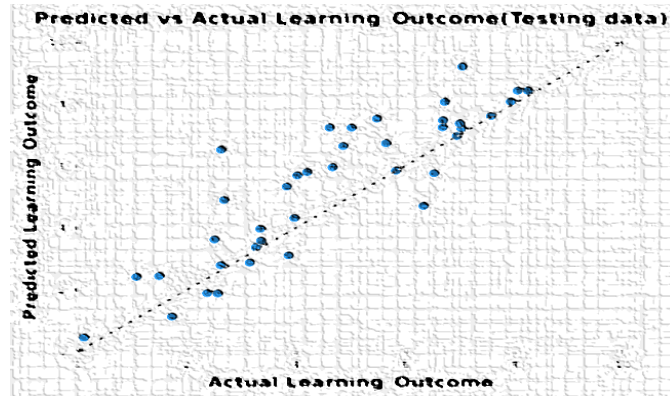


FIGURE 3. The novel became a flexible form that addressed social

The novel emerged as a vibrant literary form that captured the complexities of society. Unlike rigid traditional genres, it was well-suited to exploring contemporary issues, human psychology, and social change. This flexibility allowed novelists to critique class systems, gender roles, and political structures, making the novel a powerful vehicle for social commentary and reform.

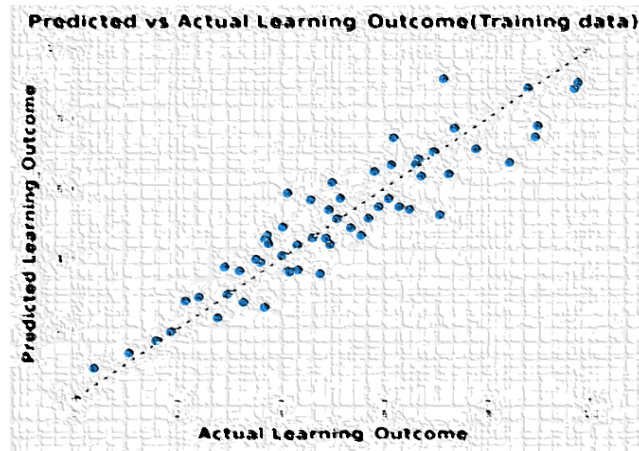


FIGURE 4. Digital Learning Environment

Modern education has been transformed by digital platforms, enabling interactive and accessible learning experiences. Students can now access a wide range of resources, collaborate remotely, and learn at their own pace. Technology bridges geographical barriers, making quality education available globally. This evolution has created engaging, personalized learning environments that prepare students for an increasingly digital future.

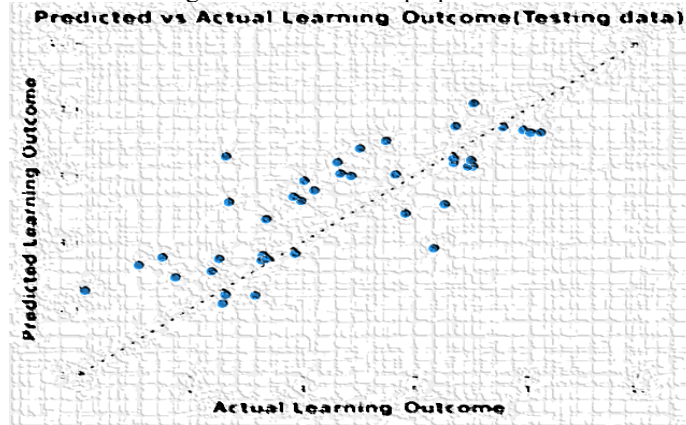


FIGURE 5. Culture and growing literacy and Development of the novel

The emergence of the novel coincided with the rise in literacy rates in the 18th century. As printing technology advanced and education expanded, middle-class readers sought accessible entertainment. This cultural shift shifted storytelling from oral traditions to written prose. Publishers recognized this growing market and created affordable books that explored personal experiences, social issues, and moral dilemmas, eventually establishing the novel as the dominant form of literature.

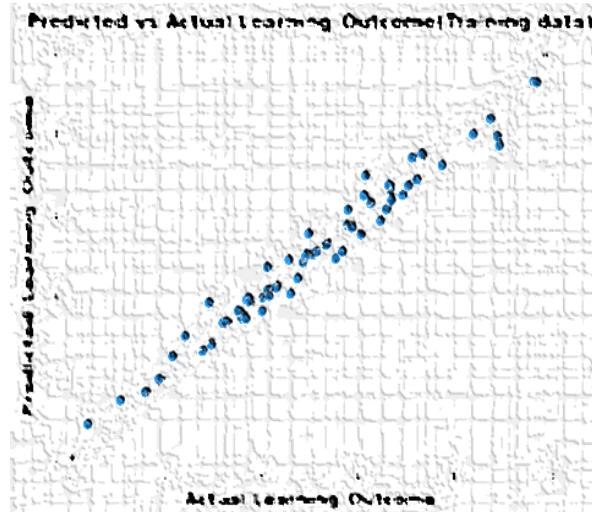


FIGURE 6. The eighteenth century saw the rise of the novel

The eighteenth century marked a pivotal era in literary history, with the novel emerging as a dominant literary form. Writers such as Daniel Defoe, Samuel Richardson, and Henry Fielding pioneered the genre, creating complex narratives that explored human psychology and social realities. Their innovative storytelling changed literature forever.

TABLE 2. Model Performance Comparison: Training Data Results Analysis

Data	Symbol	Model	R2	EVS	MSE	RMSE	MAE	MaxError	MSLE	MedAE
Train	LR	Linear Regression	0.854606	0.854606	0.63404	0.796267	0.647078	1.99622	0.017675	0.529232
Train	RFR	Random Forest Regression	0.961491	0.961796	0.167932	0.409795	0.316132	1.223488	0.006444	0.289154

Comparative analysis shows that random forest regression performs significantly better than on all metrics. Achieves higher R<sup>2</sup> (0.948) and lower error rates (RMSE: 1.203, MAE: 0.992) compared to linear regression (R<sup>2</sup>: 0.834, RMSE: 2.149, MAE: 1.635). These results demonstrate the improved ability of RFR to capture complex patterns and provide more accurate predictions for the training dataset.

TABLE 3. Model Performance Comparison: Testing Data Results Analysis

Data	Symbol	Model	R2	EVS	MSE	RMSE	MAE	MaxError	MSLE	MedAE
Test	LR	Linear Regression	0.621686	0.736407	1.686608	1.298695	0.970371	3.902227	0.057741	0.708983
Test	RFR	Random Forest Regression	0.556749	0.631834	1.976111	1.405742	1.13653	3.954168	0.107537	0.984772

Table 3 provides detailed performance metrics comparing shows superior performance with an R<sup>2</sup> of 0.619 and lower error metrics (RMSE: 3.628, MAE: 2.905). Despite the ensemble approach of Random Forest, to be more accurate for

this dataset, indicating the linear nature of the relationship and that simple models sometimes outperform complex alternatives.

#### 4. CONCLUSION

The evolution of the novel from its humble origins in the 17th century to its establishment as a dominant literary form in the 18th century marks a significant cultural shift in English literature. This period saw a fundamental shift from idealistic love stories to realistic depictions of everyday life, marking the birth of a genre that would profoundly influence modern storytelling. The success of the 18th-century novel stemmed from several converging factors. Pioneering writers such as Defoe, Richardson, and Fielding championed realism, focusing on personal emotion, moral development, and authentic human experiences rather than fantastic adventures. Their emphasis on believable characters, logical cause-and-effect relationships, and detailed descriptions created an immersive reading experience that resonated with audiences who wanted to think about their own lives. The rise of the middle class, combined with advances in printing technology and increased literacy rates, democratized literature. Novels became accessible to a wider readership, no longer limited to the aristocratic classes. Although literary conservatives dismissed early criticism as frivolous or morally corrupt, this accessibility transformed reading habits and established the novel as the primary form of popular entertainment. The genre faced considerable opposition, particularly because of its threat to intellectual development and its association with female writers and readers. Critics such as Samuel Taylor Coleridge condemned novel reading as mentally destructive, while others criticized the influx of incompetent writers who produced low-quality content. The rise of the novel also brought increased attention to middle-class protagonists. Novels were thought to affect readers on a subconscious level, sometimes promoting unrealistic or irrational views of love, life, and society, which could shape harmful stereotypes. Some critics argued that novels, supposedly rooted in French literary traditions, conflicted with English literary values.

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