

The Power of Humor: Its Impact on Cognitive Load and Affective Filtering in EFL Learning

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Abstract

In the context of globalization, the effectiveness of teaching and learning in English as a Foreign Language (EFL) classroom has a direct impact on the development of students' language proficiency. **While traditional teaching methods have been criticized for inadequately addressing learners' Cognitive Load (CL) and Affective Filtering (AF) in the learning process**, this research examines **the impact of humor discourse strategies on modulating these dual dimensions within EFL learning contexts**. Through systematic experimental design and data analysis, it was found that humor discourse strategies can effectively reduce students' CL and improve learning efficiency, while reducing AF on the emotional level and enhancing students' classroom engagement and motivation. This finding provides new perspectives and methods for EFL teaching, which has important practical significance and application value. The findings not only enrich the theoretical research on the application of humor in the field of pedagogy, but also provide actionable strategic suggestions for teachers in practical teaching.

Keywords: Humorous Discourse Strategies, Cognitive Load, Affective Filtering, EFL Classroom, Teaching Effectiveness

1. Introduction

As globalization continues, the quality of teaching English as an EFL directly affects the development of students' language proficiency. However, traditional teaching methods tend to ignore learners' cognitive and affective processing demands. The Cognitive Load Theory (CLT) states that the psychological load that learners bear in the process of information processing affects their learning outcomes. The Affective Filtering hypothesis, on the other hand, emphasizes the importance of affective factors in language acquisition, and argues that negative affective states may hinder the process of language learning. Therefore, how to effectively reduce students' CL and minimize AF has become a key issue in EFL teaching.

Humor, as a teaching strategy, has gradually attracted the attention of educational researchers due to its unique cognitive and affective regulation functions. Kabooha (2023) pointed out that integrating humorous video tasks into English language teaching can significantly improve students' task motivation and vocabulary performance [1]. Gonulal (2018) explored the potential of humor in EFL classrooms, pointing out that humor creates a more relaxing learning environment, which in turn facilitates students' language acquisition [2].

The role of humor in AF should not be overlooked. Zhang (2023) analyzed Chinese language teaching videos and suggested that humor can effectively reduce students' emotional anxiety and enhance learning motivation in her study[3]. This idea echoes the affective filtering hypothesis, suggesting that humor can be used as an effective affective regulation tool to help students overcome emotional barriers in learning. Wang (2019) explored the effects on students' English listening anxiety through visualization strategies [4].

Based on the above studies, this research aims to deeply explore the effects of humor discourse strategies in the EFL classroom through systematic experimental design and data analysis. Specifically, this study will examine how humor discourse strategies affect students' CL and AF, to provide new perspectives and methods for EFL teaching. Through an in-depth study of humor discourse strategies, we expect to provide actionable strategy suggestions for teachers in actual teaching and help students learn language more effectively.

2. Theoretical Background and Literature Review

2.1 Definition and Classification of Humorous Discourse Strategies

The application of humorous discourse strategies in the EFL classroom aims to achieve specific pedagogical goals by introducing elements of humor. Humorous discourse strategies are categorized in various ways, including linguistic humor, situational humor, and visual humor, among other forms (Figure 1). Linguistic humor is usually presented through puns, jokes, and satire, which can stimulate students' interest and attention and promote language comprehension and memory. For example, the use of puns can add interest without changing the original meaning and enable students to learn complex linguistic structures in a relaxed atmosphere [2].

Situational humor, on the other hand, emphasizes the enhancement of communication between teachers and students through humorous interactions in classroom situations. This interaction not only helps to create a positive classroom atmosphere, but also promotes students' language output and engagement. Through the teacher's humorous guidance, students are more likely to overcome anxiety and tension in language learning and thus participate more actively in classroom activities [5]. Situational humor can also help students better understand and apply language by simulating real-life humorous scenes.

Visual humor presents humorous content through multimedia means such as images or videos. This strategy uses visual stimuli to attract students' attention and enhance memory through vivid visuals. For example, the use of humorous video tasks can effectively increase students' motivation and vocabulary performance while creating a relaxing learning environment and reducing emotional anxiety [2].

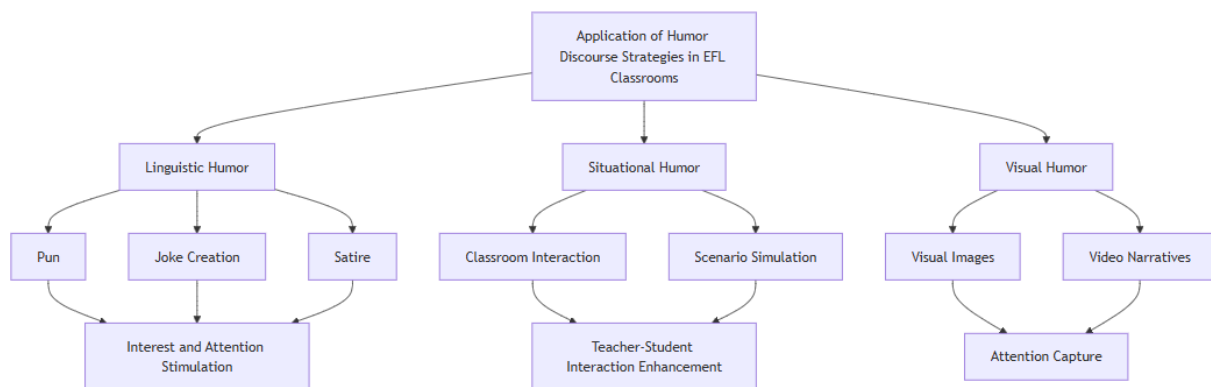


Figure 1. Application of Humor Discourse Strategies in EFL Classrooms

Combined with the diversity and flexibility of humor discourse strategies, teachers can choose appropriate forms of humor according to specific teaching objectives and students' needs. The application of this strategy not only enriches the teaching tools in the EFL classroom, but also provides teachers with more room for innovation. Through the effective use of humor, teachers can create a more relaxed and pleasant learning atmosphere in the classroom, thus promoting students' language learning and personal development.

2.2 Cognitive Load Theory in the EFL Classroom

Cognitive Load Theory (CLT), proposed by Sweller, emphasizes the psychological load that learners undergo during information processing. The theory categorizes CL into three types: intrinsic load, **extraneous** load and germane load. Intrinsic load is mainly related to the complexity of learning materials, and complex materials usually increase learners' intrinsic load. **extraneous** load is closely related to instructional design, and poorly designed instructional activities may increase learners' **extraneous** load, thus affecting learning outcomes. germane load is the degree of effort learners put into understanding and applying knowledge. Ideal instructional design should reduce the **extraneous** load while increasing the germane load in order to promote deep learning.

In EFL classrooms, CLT provides important guidance for instructional design. Through rational instructional design, teachers can effectively reduce students' extrinsic load so that students can devote more cognitive resources to dealing with intrinsic and germane loads. Frumuselu (2021) pointed out that appropriate use of subtitles can help students reduce cognitive load and improve learning outcomes in foreign language learning [6]. This strategy is also applicable in the EFL classroom, where students can better understand and master language knowledge through the combination of visuals and language.

Stiller and Schworm (2019) pointed out that gamified learning can effectively increase students' motivation while positively affecting CL [7]. In EFL classrooms, the humorous discourse strategies can be regarded as a similar element of gamification, whereby through humorous language and contextual design, teachers are able to create a relaxed learning environment to increase students' classroom engagement and enhance their motivation to learn.

In digital learning environments, visual representations and presentation design likewise have a significant impact on cognitive load. Ge's research showed that reasonable visual design strategies can effectively reduce learners' extrinsic load and enhance learning [8]. In the EFL classroom, teachers can use multimedia tools to attract students' attention through visual humor to help them better understand and remember the learning content.

The application of CLT in the EFL classroom not only provides theoretical support for instructional design, but also provides specific strategic suggestions for teachers in actual teaching. Through rational instructional design, teachers can effectively reduce students' CL, thus promoting their language learning and personal development.

2.3 Affective Filtering Hypothesis

The affective filtering hypothesis, proposed by Krashen, emphasizes the critical influence of a learner's affective state on language acquisition. High levels of anxiety, low self-esteem, and lack of motivation can create affective filters that prevent the effective absorption of language input. In the EFL classroom, the presence of affective filters may lead to students' resistance to linguistic input, thus affecting learning outcomes. Research has shown that humor discourse strategies have a significant role in reducing AF. By creating a relaxed classroom atmosphere, humor can effectively reduce students' anxiety and enhance self-esteem and motivation to learn, thus facilitating the process of language acquisition. Bunghanoy and Sumalinog (2023) pointed out that the combined use of AF and learning strategies in online classrooms can significantly improve students' language learning experience [9]. La Spisa (2015) also showed that the affective filter of adult English learners can be effectively reduced and the efficiency of language acquisition can be improved with strategies such as small conversation cards [10].

In actual teaching, teachers can help students learn language in a relaxed environment by designing humorous classroom activities and tasks. This strategy not only reduces AF, but also enhances students' classroom engagement and learning motivation. The application of humorous discourse strategies is not only limited to linguistic humor, but also includes a variety of forms such as situational humor and visual humor. Through the rational use of multimedia resources, teachers can further reduce students' AF and enhance the effectiveness of classroom teaching. Su (2018) showed that the application of audio and video materials in English listening comprehension can effectively improve students' motivation and comprehension [11]. Therefore, the application of humor discourse strategies in EFL classrooms not only provides teachers with rich teaching tools, but also creates a more positive learning environment for students.

2.4 Research on the Application of Humor in Education

Research on the use of humor in education has shown that it has a significant role in enhancing students' attention, increasing the effectiveness of memory and promoting classroom interaction. Through humor, teachers can create a relaxing learning environment in the classroom, which effectively reduces students' anxiety levels and enhances motivation and classroom engagement. Meryem and Dounia (2024) stated that teachers and students have positive attitudes towards the use of humor in EFL classrooms, believing that humor promotes teacher-student interactions and a vibrant classroom atmosphere [12]. This interaction not only helps students to better understand and remember the content, but also improves their language application skills.

However, humor needs to be used in moderation. Excessive or inappropriate humor may lead to distraction or even trigger negative emotions, affecting learning. Kumar et al. (2022) showed that music and songs as teaching tools in EFL classrooms are effective in enhancing students' learning experience, but again, attention needs to be paid to the frequency and manner of their use to avoid interfering with students' attention [13]. Therefore, when designing the content of humor, teachers should consider students' cultural background and receptivity to ensure that the content of humor is consistent with the teaching objectives.

The application of humor in education is not limited to language classrooms. Qiu (2017) showed that in college students' English writing, appropriate peer assessment and humorous feedback can improve students' writing ability and self-efficacy [14]. This shows that humor strategy can play a positive role in different teaching situations and help students improve their learning in a relaxed atmosphere.

The effective application of humor strategy also needs to be combined with specific teaching contexts and students' characteristics. Teachers should flexibly adjust the use of humor according to classroom needs and student feedback to maximize its positive impact. Through humor, teachers can not only stimulate students' interest in learning, but also enhance their language skills and self-confidence in a subtle way. The moderate use of humor

can create a more open and inclusive learning environment in the EFL classroom and promote students' overall development.

3. Research Design and Methodology

3.1 Research Questions and Hypotheses

The core question of this study is to explore the specific effects of humor discourse strategies on students' CL and AF in EFL classrooms. Based on the theoretical background of the previous research, it is hypothesized that humor discourse strategies can effectively reduce students' CL and reduce AF, thus enhancing learning outcomes. To verify this hypothesis, multiple sets of experimental data were introduced into the research design. Through comparative analysis, the study verifies the value of humor discourse strategy in the EFL classroom and provides empirical support for teaching practice.

3.2 Subjects and Sample Selection

The subjects of this study were EFL students in a university in Zhejiang Province, China, two randomly selected teaching classes with a total of 120 students, and were randomly divided into an experimental group and a control group. They received a 12-week humor intervention, i.e., the experimental group used humorous discourse strategies, while the control group used traditional teaching methods. During the sample selection process, the researcher fully considered the students' English proficiency and gender ratio to ensure the representativeness of the sample and the generalizability of the findings. Specifically, the students in the experimental and control groups had a balanced distribution in terms of English proficiency, and the gender ratio was close to 1:1, thus avoiding bias due to individual differences.

3.3 Data Collection Tools and Methods

In this study, classroom observation records were used as one of the main tools to record in detail the frequency and type of teachers' use of humor discourse strategies in the classroom as well as their specific application contexts in the teaching process. This method was able to provide direct evidence about the implementation of humor discourse strategies and help the researcher understand the mechanism of their operation in actual teaching.

The student questionnaire was used to quantitatively assess the CL and AF state of students under the influence of humor discourse strategies. The questionnaire was designed with reference to Nasution's study, exploring students' learning experiences and affective responses under the humor strategy through specific questions [15]. Interviews were used as a supplementary tool to dig deeper into students' subjective feelings and feedback on humor discourse strategies. The design of interview questions is based on Fu's study, which focuses on the impact of video media on language learners' comprehension, aiming to explore how humor strategies affect students' motivation and AF through multimedia formats [16].

3.4 Data Analysis Methods

Data analysis was conducted using SPSS software. Firstly, the differences between the experimental group and the control group in terms of CL and AF were compared by independent samples t-test. Regression analysis was used to explore the effect of humor discourse strategy on learning effect.

4. Research Results and Discussion

4.1 Overview of the Research Results

Table 1 shows that humor discourse strategy significantly reduces students' CL and AF in EFL classrooms. By analyzing the data of the experimental and control groups, the experimental group outperformed the control group in terms of CL and AF scores. Specifically, the average CL score of the experimental group was 3.12, while that of the control group was 4.01, indicating that the humor discourse strategy effectively reduced students' CL. In terms of AF, the experimental group had a mean rating of 2.54, while the control group had a rating of 3.79, showing the positive effect of the humor discourse strategy in reducing affective disorders.

Table 1. Cognitive load and AF scores of the experimental and control groups

Group	Cognitive Load Index (CLI)	Affective Filtering Strength (AFS)
Experimental Group	3.12 (SD = 0.78)	2.54 (SD = 0.92)
Control Group	4.01 (SD = 0.65)	3.79 (SD = 0.81)

4.2 Analysis and Discussion of Results

The analysis of the experimental data shows that the efficacy of the use of humor discourse strategy in the EFL classroom is empirically supported. Table 1 shows that the CL and AF indicators of the experimental group are significantly lower than those of the control group ($p < 0.05$) after using the humor strategy. This result is highly compatible with the two-dimensional model of Sweller's CL theory: by reducing the Extraneous CL of the task, the humor strategy optimizes the mental resource allocation mechanism of the learners, thus building a more inclusive learning ecology. Further mechanistic analysis reveals that humor works through two parallel paths: first, at the cognitive level, it reduces learners' defensive filters of language input by triggering a positive effect; second, at the affective level, humor-induced valence enhances motivation and classroom engagement, which in turn promotes deep processing and cognitive flexibility. It is worth noting that the above findings not only validate the previous theoretical hypotheses, but also echo the methodological findings of the related literature on the role of emotional arousal in L2 acquisition, providing a cross-level chain of evidence supporting the pedagogical value of humor strategies.

4.3 Implications

This study provides a new perspective on EFL teaching and emphasizes that the moderate application of humor discourse strategies in the classroom can significantly enhance teaching effectiveness. Through humor discourse strategies, teachers can effectively reduce students' CL and enhance classroom interaction and students' motivation. Humor not only attracts students' attention, but also promotes the deep processing of information and the durability of memory by stimulating positive emotions. Combined with multimedia resources, the effect of the humor strategy is further enhanced, which can stimulate students' senses visually and audibly at the same time and enhance the learning experience.

In specific teaching practice, teachers should flexibly choose the forms of linguistic, situational and visual humor according to the classroom objectives and the cultural background of the students, to ensure the close integration of humor with the teaching content. Moderate use of humor can create a relaxed learning atmosphere, reduce students' anxiety and affective filters, and thus increase classroom engagement and learning efficiency. Research has shown that the combination of humor discourse strategies with music and songs can also effectively enhance students' language skills and classroom engagement [13]. Therefore, when designing teaching activities, teachers can consider combining humor with other multimedia tools to enrich classroom content and stimulate students' learning interests.

Teachers should pay attention to students' feedback and adjust the frequency and form of using humor strategies in time to avoid distraction or negative emotions caused by overuse. Through continuous practice and reflection, teachers can gradually master the best way to apply the humor strategy and maximize its positive impact in the EFL classroom. Such a teaching strategy not only promotes students' language learning, but also creates a positive and open learning environment that supports students' holistic development.

5. Conclusions and Recommendations

This study verified the value of humor discourse strategies in EFL classrooms through a systematic experimental design and data analysis. The findings show that humor discourse strategy significantly reduces students CL by attracting students' attention, enhancing information memorability, and stimulating positive emotions. Humorous discourse strategies also play an important role in AF. By creating a relaxing and enjoyable classroom atmosphere, the humor strategy effectively reduced students' anxiety levels and increased self-confidence and classroom engagement. This positive change in emotion further enhances students' motivation and language acquisition. The application of humor strategy provides a new perspective and method for EFL teaching, which has important practical significance and application value. Teachers should flexibly use humor strategies in actual teaching to maximize its positive impact and promote students' overall development.

Future research should explore in depth the applicability of humor discourse strategies in different cultural backgrounds and language levels to enrich its application in the EFL classroom. There may be differences in students' understanding and acceptance of humor in different cultural backgrounds, and research should consider the influence of cultural factors on the effectiveness of humor strategies. Students' language level may also affect the effectiveness of humor strategies, and beginners and advanced learners may show different CLs and AFs in understanding and responding to humor. Therefore, research should refine the effectiveness of humor strategies applied at different language levels.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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