

## Exploring Constructivism in the Context of English Material Development for Senior High Schools: A Literature Review Approach

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### Abstract

English language learning in high schools in Indonesia still focuses on theory, namely memorizing tenses, practicing grammar, and sentence structure, while communicative skills such as spontaneous speaking and real-life interactions receive very little attention. Previous research shows that students feel low on confidence and limited facilities and practice time. Psychological aspects such as self-confidence, student learning styles, technology integration, and authentic assessment are still rarely an integral part of teaching material design. This study aims to map best practices and weaknesses in the development of constructivist-based English teaching materials in high schools, with an integrative focus on the use of technology, variations in student learning styles, and authentic assessment, so that students' communication skills and confidence are improved. The method used is a literature review from 2018-2024 from national and international journals, proceedings, and research reports. This study uses thematic analysis techniques and framework analysis. The main findings indicate that approaches such as PjBL and CTL that involve projects, simulations, discussions, and real-life interactions can increase student engagement, creativity, critical thinking, and self-confidence. The integration of technology as a learning medium is indeed appealing, but its implementation has not been optimal in supporting authentic communication. Diversity in learning styles strengthens the effectiveness of teaching materials, and authentic assessments help measure students' actual abilities. This study fills a gap in the local literature by combining aspects of technology, learning styles, and authentic assessment within a single framework.

**Keywords:** Constructivism, English teaching materials, high school

### Introduction

English language learning at the senior high school (SMA) level in Indonesia is largely dominated by face-to-face methods that emphasize theory, namely

memorizing tenses, grammar exercises, and sentence structures, and are very lacking in practicing communicative skills. For example, Yasa et al. (2023) in their study "Analysis of English Learning Difficulties in Speaking for Grade X-3 Students of SMA Negeri 1 Susut - Bali" found that students experienced doubt and lack of confidence in practicing speaking due to limited practice time and inadequate facilities. This condition is reinforced by the observation that the learning atmosphere tends to seem mechanistic and focuses on the teacher, rather than dialogue interactions or real-life simulations.

Meanwhile, other preliminary studies have identified many technical problems such as lack of vocabulary and grammar, especially aspects that are rarely used in everyday life (e.g. Present Perfect, Past Perfect) as well as non-contextual learning media. However, although several studies such as by Syafitri et al. (2019) showed a strong correlation between student self-confidence and speaking ability ( $r = 0.98$ ), these studies have not integrated many aspects of student self-confidence or psychology directly into the design of teaching materials or authentic assessments. Similarly, research on constructivist methods such as project-based learning (PjBL), although showing positive results in terms of student engagement, material comprehension, and critical thinking, is still limited to certain aspects and often does not include the combination of technology, individual student learning styles, and authentic assessments in a single study. For example, Silvia, (2018) examined the effectiveness of English language materials through PjBL, finding that the materials were "fairly good" to "effective" in improving student comprehension, engagement, and critical thinking. However, a weakness of this study was the dominant focus on materials and participation, rather than simultaneously on spontaneous speaking ability, assistive technology, and student learning styles (Silvia, 2018)

This new research brings new insights by addressing these gaps more comprehensively. Its main novelty is its specific focus on developing constructivist-based and integrative English language learning materials for high school: combining aspects of technology use, student learning styles, and authentic assessment within a single framework. Using a literature review method, this research synthesizes empirical and conceptual findings scattered throughout the literature to map best practices, practices, systematic weaknesses, and real needs in the field.

This research is expected to provide relevant practical recommendations for teachers, curriculum developers, and researchers through the design of teaching

materials that are not only theoretical but also applicable: for example, teaching materials that allow for many spontaneous speaking activities, real interactions, the use of media and technology that suit students' learning styles, and assessments that are able to measure English communication skills in real contexts. Thus, this research fills the gap between theory and practice, especially in terms of how teaching materials can be designed so that students not only master the theory but also have sufficient confidence and practical ability in speaking English.

## **Research Methodology**

This study chose literature study as the main method in order to obtain a comprehensive picture of the development of constructivism-based English teaching materials for high school students. In the literature collection stage, the technique used was an online search in national and international journal databases such as Google Scholar , ResearchGate , and official university portals. The literature inclusion criteria were: (1) Publications in the 2018-2024 period, (2) Relevant themes such as constructivism, teaching materials development, educational technology, student learning styles, and authentic assessment, (3) Types of sources including journal articles, books, conference proceedings, research reports, official documents, (4) Literature available in Indonesian or English. The number of literature reviewed was adjusted to the number of articles that met all these criteria, for example, dozens of studies, depending on availability in the database which included development research (R&D), case studies, experiments/quasi-experiments, theoretical reviews.

In the literature data analysis stage, the research uses thematic analysis and framework analysis techniques . analysis). Thematic analysis is used to identify the main themes from the literature, such as how the design aspects of teaching materials (materials, learning media), the application of technology, variations in student learning styles, types of authentic assessment, and challenges faced in the application of constructivist teaching materials. Framework analysis is used to map and organize the conceptual elements of constructivism such as concrete experiences, social interactions, self-reflection, real contexts, and how these elements appear in the selected studies. From the framework mapping, relationships between themes can be obtained, for example the influence of technology on authentic practices and learning styles on student acceptance.

To ensure that the conclusions resulting from this literature review are valid and reliable, the research employed several strategies. First, content validity was achieved by using literature from recognized sources (reputable journals, academic books, official proceedings), as well as through consultation with experts in the field of English language teaching or educational methodology to determine whether the theoretical framework, themes, and indicators taken covered important aspects. Second, source triangulation. Literature was drawn from various types and sources (experimental, case, development, theoretical) and from different geographical or institutional contexts, so as not to rely on a single type of study or one region. Third, inter-researcher reliability. Interpretation of themes, categorization of teaching materials, and analysis of the framework were checked by more than one researcher or peer. Reviewers check for consistency in classification and interpretation. If discrepancies arise, discussions are held to reach consensus. Fourth, procedures are documented transparently. Literature selection criteria, thematic analysis steps and framework, and the rationale for theme and subtheme classifications are recorded for possible verification by others.

## **Findings and Discussion**

### **Findings**

#### ***Application of Constructivism in the Development of Teaching Materials***

##### *1. Constructivist Principles and Relevance in English Language Teaching Materials*

Constructivism assumes that students construct their own knowledge through active experience, exploration, social interaction, and reflection (e.g., Kamsiah et al., 2024; Vygotsky, 1978). In the context of high school English teaching materials, this means that the material cannot simply present theories of tenses or sentence structures; it must also stimulate activities such as problem-solving, simulations, discussions, and real-life projects relevant to students' experiences.

##### *2. PjBL and CTL Approaches as Implementation Paths*

Literature review shows that teaching materials are often developed through Project-Based Learning (PjBL) and Contextual Learning (Contextual Teaching and Learning – CTL). Teaching materials that use PjBL / CTL usually involve project assignments (e.g., making video talks, writing simple articles, presentations), simulations of real-life situations, and group discussions. For example, Lukman et al. (2024) found that teaching materials that use students' real experiences increase

students' knowledge retention and activeness in language practice. Dethan & Modok, 2024; Saragih & Dewi, 2024) also reported that CTL / PjBL encourages soft skills such as collaboration, creativity, and critical thinking.

### *3. Social Interaction and Collaboration in Knowledge Construction*

In addition to real experiences, the application of constructivism emphasizes collaboration between students such as group discussions, peer review, role-playing, simulation, and teamwork. Irsyad et al. (2024) showed that in English classes, interaction between students through group projects and peer-review is very helpful in building self-confidence and broader perspectives. Dethan & Modok, (2024) emphasized that productive communication as well as soft skills improve through collaboration.

## ***Integration of Technology, Learning Styles, and Authentic Assessment***

### *1. The Role of Technology in Constructivism-Based Teaching Materials*

Technology serves as a medium that supports interactivity, flexibility, and authenticity of teaching materials. Jasrial & Zaim, (2023), for example, found that the integration of digital media (interactive modules, online platforms) makes materials more engaging, relevant, and suited to the characteristics of the digital generation. Furthermore, the study "Investigating technology integration in English language instructions from 2018 to 2024" by Wiranata et al. (2024) shows that technology is increasingly commonly used, especially by prospective teachers, but its use in line with pedagogical goals still needs to be strengthened.

### *2. Student Learning Styles and Material Differentiation*

Constructivism theory recognizes that students have different learning styles (visual, auditory, kinesthetic). Therefore, teaching materials need to include a variety of media (video, images), methods (discussion, podcast), and hands-on activities. A study by Sudarman et al. (2024) showed that when teaching materials accommodate students' learning styles, especially in speaking and writing skills, learning outcomes are more effective (motivation, confidence, engagement).

### *3. Authentic Assessment and Its Role in the Learning Process*

Authentic assessment (projects, portfolios, presentations, reflective journals, creative products) emphasizes tangible outcomes and the learning process over memorization. Perumal & Ajit (2022) and Srour et al. (2021) state that authentic assessment helps students think critically, solve problems, and demonstrate understanding in real-world contexts. A study at SMPN 6 Semarang by Maulidawati

et al. (2020) found authentic types such as oral interviews, retelling, writing samples, and demonstrations are used; authentic assessment is reported to improve student achievement even though teachers face challenges in knowledge and preparedness.

### **Challenges and Opportunities in Developing Teaching Materials**

#### *1. Infrastructure Challenges, Teacher Competence, and Resources*

Some schools, particularly in remote areas, experience limited technological facilities, internet access, and adequate digital equipment (Nursiah, 2021). Furthermore, teachers often lack training or experience in designing innovative teaching materials or are unfamiliar with authentic assessments and project methodologies. Problems also arise from the dense curriculum and the focus on national exams, which prioritize theory and written output.

#### *2. Learning Culture and Curriculum Policy*

A student and school culture that is still heavily focused on test scores (theory, grammar) sometimes under-supports project-based and authentic approaches. Some parties (teachers, principals, education offices) may not be convinced that investing time and resources in constructivist teaching materials directly impacts test scores. Furthermore, the lack of standard guidelines guiding teachers in designing constructivist-based teaching materials exacerbates the practice gap.

#### *3. Opportunities with the Independent Curriculum and New Education Policy*

Indonesia's Independent Curriculum, which emphasizes project-based learning, strengthening the Pancasila Student Profile, and the use of technology, provides significant opportunities for the development of constructivist teaching materials. The availability of digital learning resources, online platforms, and growing awareness of the importance of 21st-century skills (the 4Cs: critical thinking, communication, collaboration, and creativity) support innovation. Furthermore, teachers who receive training, inter-school collaboration, and policy support can become agents of change.

## **Discussion**

### **Comparison with International Studies**

Several international studies provide a consistent picture, and some provide a contrast to what was found in this literature research. For example, English teachers' integration of digital technologies in the classroom by Bui (2022) found that

technology is often used teacher-centeredly and as a tool for delivering content, rather than as a transformational or redefinition tool that allows students to construct knowledge through authentic and collaborative activities. This supports the study's finding that although technology is increasingly being incorporated into teaching materials, its use is still not optimal for fully constructivist principles.

Another international study is *In-service Teachers' Perceptions of Technology Integration in English as a Foreign Language* by Wang & Curran (2025) study, *Competing for Views and Students: The Implications of Platformization for Online Language Teaching*, shows that teachers are very positive about technology integration but also face barriers such as cost, lack of training, and infrastructure constraints. This aligns with the challenges in this literature, which mentions limited teacher competency and facilities.

Quasi-experimental studies in Indonesia such as "The Effectiveness Project - Based Collaborative Learning in Improving English Speaking Skills of High School Students" by Suwarni & Natsir (2024) confirmed that PjBL significantly improved speaking skills compared to conventional methods. Students in the experimental group showed increased motivation, self-confidence, and critical thinking. This supports that the constructivist + project approach is indeed effective in local contexts.

### **Research Contribution**

This study summarizes the latest literature (2018-2024) to describe the practices, challenges, and innovations in developing constructivism-based teaching materials in high schools in Indonesia, at least in the integration of three aspects, namely technology, learning styles, and authentic assessment, which are rarely discussed simultaneously in local literature.

Woven together themes such as authentic experiences, collaboration, technology, authentic assessment, and learning styles, rather than as separate aspects. This helps teachers, curriculum developers, and policymakers understand the synergies between these aspects.

Practical recommendations include how teaching materials can be designed to promote active student engagement, support speaking, utilize technology optimally, and implement authentic assessments that capture language skills in real contexts.

**Research Limitations**

The limitations of this research are: (1) Because of the library study method, this research relies on published literature, namely literature that has not been published (grey literature), local school reports, and teacher practices in the field may not be documented and therefore excluded, (2) Variations in the quality of the literature, namely some local studies may not be very detailed in reporting the implementation of technology, learning styles, or authentic assessments. There is a lack of clarity in some reports about how authentic aspects or technology are integrated concretely, (3) Highly varied local contexts (urban vs. rural, private vs. public high schools, teachers with high vs. low training) may make the conclusions drawn not fully generalizable to all high schools in Indonesia, and (4) Time and scope. This study only goes until 2024 and does not include the most recent developments after the full rollout of the Independent Curriculum in all regions and the long-term effects of the use of constructivist teaching materials on students' speaking skills in real-world contexts.

**Conclusion and Suggestions**

Based on a literature review from 2018-2024, this study concludes that the application of constructivism in the development of English teaching materials in high schools brings about important changes, namely that the material, which was originally theoretical and memorization-based, is now more directed towards activities that actively involve students, real-life experiences, social interactions, reflection, and collaboration. Approaches such as Project-Based Learning (PjBL) and Contextual Learning (CTL) have proven effective in not only improving language skills but also soft skills. skills such as creativity, critical thinking, and self-confidence. The integration of technology, student learning styles, and authentic assessments emerged as three key, mutually reinforcing elements: technology makes the material more engaging and provides a real-world context, learning styles ensure that students learn according to their preferences, and authentic assessments enable a more holistic measurement of learning outcomes and provide students with opportunities to demonstrate their abilities in meaningful contexts.

On the other hand, significant challenges remain, including limited technological facilities and infrastructure in some schools (including those in remote areas), a lack of teacher competency in designing constructivist-based teaching



materials and authentic assessments, a learning culture that prioritizes exams/memorization, and curriculum policies that sometimes do not provide sufficient space for the optimal implementation of project-based and contextual methods. Significant opportunities arise, particularly with the support of the Independent Curriculum, increased access to digital learning resources, and the demand for 21st-century competencies (4Cs: Critical Thinking, Communication, Collaboration, Creativity) which are increasingly becoming relevant.

This research provides several unique contributions, namely: (1) Simultaneous Integration of Three Key Elements. Many previous studies have focused on only one or two aspects (e.g., only technology, or only learning styles, or only assessment). This research combines all three simultaneously (constructivism + technology + learning styles + authentic assessment), thus providing a more complete picture of how teaching materials can be designed to be effective and relevant in the context of English education in high schools in Indonesia, (2) Systematic and Current. With a relatively new literature period (2018-2024), this research captures the latest innovations and current trends in practice and challenges, including reviewing the implications of the Independent Curriculum and how schools and teachers have begun to respond to it, and (3) Specific Practical Recommendations. This research is not only theoretical, but produces recommendations that can be directly applied by teachers (teaching material design, media variations, authentic assessment), policy makers (policy and infrastructure support), and researchers (areas of research that are still lacking). This helps bridge the gap between theory and practice.

Based on the research findings and contributions, the following recommendations can be addressed to various parties as follows:

1. Teachers: (1) Constructivist approach in the classroom. Incorporate projects, simulations, discussions, and reflective activities into English teaching materials, (2) Use educational technology creatively. Videos, video projects, interactive modules, online platforms, as part of the learning activities and not just as an addition, (3) Pay attention to students' learning styles. Provide a variety of media and methods such as visual, auditory, kinesthetic so that students are more involved, especially in speaking, and (4) Use authentic assessments. Projects, portfolios, presentations, creative products, which allow students to demonstrate abilities in real contexts, and provide constructive feedback.

2. Policy makers: (1) Provide infrastructure support. Internet access, digital devices in schools, especially in remote areas, (2) Organize training and professional development for teachers so they are able to design constructivist-based teaching materials and authentic assessments, (3) Compile and socialize standard guidelines for the development of constructivist teaching materials at the high school level so that teachers have clear guidance, and (4) Regulate evaluation and examination policies so that they not only measure memorization and grammatical aspects, but also communicative abilities and language use in real contexts (speaking, interactions, projects).
3. Researchers: (1) Conduct empirical research that tests the long-term effects of constructivist teaching materials (including a combination of technology + learning styles + authentic assessment) on students' speaking abilities in the real world, not just in the classroom, (2) Explore grey literature or unpublished practice studies of teachers to capture local innovations that may not have been academically documented, (3) Conducting comparative research between types of schools (public vs private, urban vs rural) to see differences in the effects and barriers of context, and (4) Investigating barriers to implementation: for example curriculum load, time, teacher competence, costs, and how to overcome them.

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