

Incorporating Ethnoscience into Contextual English Learning Material Design

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ARTICLE INFORMATION

Article History:

Accepted: 26-09-2022

Approved: 24-10-2022

Keywords:

design;
ethnoscience;
contextual;
english material

ABSTRACT

This study investigates the effectiveness of Ethnoscience-based English language materials, which are specifically designed to include cultural knowledge into the process of language acquisition. The study focuses on how two instructional development experts validated these materials, evaluating different pedagogical components with the use of a comprehensive scorecard. The evaluation verifies that the resources are highly aligned with educational requirements, have a well-organized structure, and successfully integrate Ethnoscience principles, guaranteeing a comprehensive linguistic and cultural learning experience. The key findings emphasize the systematic organization, clarity, utilization of practical examples, and incorporation of visual aids, all of which contribute to improved understanding and significance. The materials are renowned for their cultural sensitivity and the utilization of precise, grammatically accurate language, which promotes an all-encompassing and courteous teaching setting. The study asserts that the Ethnoscience-based approach greatly enhances English language teaching, advocating for its ongoing assessment and proposing its potential for wider use in diverse educational settings.

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English is an international language as a single language or second language of a country which is used as a means of communication by many people and has been developed and spread well (Alfian, 2016). Unfortunately, Indonesian people still have difficulty learning English to understand and apply it (Alkhalwaldeh, 2017). The main cause of difficulties faced by students in learning English is that the material taught is not about the activities students carry out in everyday life. It is almost certain that the teaching materials contained in English reading books only provide limited information and only a few discuss local culture and students' backgrounds (Azizah et al., 2020). Likewise in studying various numerous indigenous traditions, distinct cultures, and languages combine to form a rich tapestry of cultural heritage that is both complicated and vulnerable to destruction. The rapid advancement of globalization, while bringing numerous advances and benefits, also poses a significant threat to these indigenous civilizations. The expanding impact of other cultures is more than just a surface-level change in lifestyle; it goes deeper, undermining the essential nature of indigenous customs and practices that have been passed down through centuries. The erosion in question is more than just the elimination of cultural artifacts or traditions; it also represents the progressive collapse of a people's identity and historical heritage.

The significance of this issue cannot be overstated. Indigenous cultures include a tremendous amount of information, values, and wisdom that are essential for the overall development of individuals and communities. Their perspectives on life, relationships, and the environment are remarkable and extremely valuable in today's interconnected world. As a result, preserving these cultures means more than just sustaining practices for the sake of tradition; it also entails protecting a way of life that contributes to the global community's abundance and diversity. Educational activities are critical in the effort to conserve. Schools can help students appreciate and understand their ancestry by incorporating local traditions into the curriculum. This integration should be viewed as an essential component of a comprehensive education, not as a supplementary or optional subject. The goal is to create in children a sense of appreciation for their cultural history and to learn from the wisdom given down by their forefathers (Estuarso, 2017; Gunantar, 2016; Zein, 2018).

In this case, acculturation and cultural background play a critical role in education. Traditional educational viewpoints usually separate cultural learning from formal education, viewing it as a secondary or marginal component of schooling. When confronted with the challenges of globalization, this technique falls short. Implementing a contextual educational framework that prioritizes the incorporation of local culture into the learning process is a must. This technique would teach children not only about their own culture, but also how to interact with and respect other cultures. It requires creating an educational program that is adapted to the region's unique circumstances, with local images, tales, and experiences serving as the foundation for knowledge acquisition. Such a model would help students understand the importance and relevance of their culture in today's society,

providing them with the tools they need to preserve and promote their legacy. Furthermore, it would foster a sense of pleasure and distinctiveness, allowing students to become advocates for their heritage in an increasingly interconnected global community (Pariscal & Gonzales-Aboy, 2022).

Contextual learning, particularly in the field of English language education (ELT), offers enormous potential when focused on the local environment and students' daily life. This learning technique is intrinsically meaningful because it requires students to actively interact with their immediate surroundings, resulting in a stronger connection to the subject matter. In the field of English language acquisition, the usage of a contextual framework goes beyond the traditional way of teachers delivering information to students. Instead, it encourages the integration of language skills through ordinary work and personal interactions in the learners' immediate environment. This approach is consistent with the concept that language acquisition entails not just learning linguistic abilities, but also understanding and navigating the cultural and situational contexts in which the language is used. English is widely used as an international language, both as a foreign language and as a second language in many nations, therefore learning it is crucial for efficient global communication. By connecting English to learners' life experiences and cultural backgrounds, the contextual learning approach has the potential to improve the language's accessibility and relevance (Brocos & Jiménez-Aleixandre, 2020; Matchimo, Ekkapim, & Janghan, 2021).

Despite the global prominence of English, challenges persist, particularly in countries like Indonesia, where learners often struggle with both comprehension and application of the language. This difficulty stems, in part, from a disconnect between the learning materials and the learners' everyday experiences. Traditional English teaching methods often rely on textbooks and materials that do not reflect the students' cultural context or daily life activities. Such an approach can render the learning process less engaging and relevant, thereby hindering effective language acquisition. The essence of language lies in its ability to connect individuals to their world; hence, teaching materials should encompass topics and scenarios that resonate with the learners' own experiences. By incorporating local culture and relevant daily life scenarios into English language teaching, educators can bridge the gap between the language and the learners, making the learning process more intuitive and impactful. Studies such as Lestari (2019) have shown that teachers enact their agency by using local cultural practices as teaching strategies in their ELT classrooms, which has been effective in engaging students by making lessons more relevant to their local context (Lestari, 2019).

In the realm of English language teaching, especially for junior high school students, the integration of local culture into learning materials is not just beneficial but imperative for effective language acquisition. Based on preliminary studies (Napiah, 2021), the researcher has highlighted a significant need for developing English language materials that are not only culturally appropriate but also practically applicable in the everyday lives of students. This necessity gives rise to a pivotal research question: What is the optimal design for Ethnoscience-based English learning materials within a contextual model suitable for junior high school students? Addressing this question is essential for crafting an educational approach that resonates with the cultural and cognitive development of these young learners. Ethnoscience, which encompasses the study of the way different cultures understand and interact with their natural world, offers a rich framework for this endeavor. By incorporating Ethnoscience into English language learning, educators can create materials that are not only linguistically instructive but also culturally enlightening, providing students with a more holistic understanding of both the language and the world around them. The aim of such research is thus to analyze and develop an educational design that integrates Ethnoscience with English language instruction, tailoring it to the unique learning needs and cultural backgrounds of junior high school students.

The concept of ethnoscience, which comes from the Greek words 'ethos' (nation) and 'scientia' (knowledge), presents an interesting combination of local culture owned by a particular nation, tribe or group (Agustin et al., 2018). Cultural understanding and scientific inquiry (Usman et al., 2019). It can be broadly interpreted as the local culture specific to a nation, ethnicity, or social group, encompassing the collective wisdom and practices that have evolved over time within these communities. Ethnoscience goes beyond mere accumulation of facts; it involves a dynamic process of knowledge production through activities like remembering, understanding, analyzing, evaluating, reasoning, and articulating. This scientific approach to cultural knowledge allows individuals to connect more deeply with concepts and ideas that are integral to their natural environment and social context (Hadi, 2019). Essentially, Ethnoscience represents a system of knowledge intrinsic to a particular ethnic or social group, often reflecting the practices, beliefs, and traditions unique to that group's local culture and environment. By studying Ethnoscience, one gains insight into how specific communities have developed their understanding of the world, often through empirical methods and established traditions.

Contextual learning material, in this respect, emerges as a vital tool in education, particularly in language learning. It is a model that immerses students in real-world situations and experiences, directly relevant to their daily lives. This approach to foreign language learning emphasizes experience-based, dynamic processes where learning occurs through active engagement with people, objects, and environments. Contextualized learning materials, therefore, become an integral part of the curriculum at primary and secondary education levels. These materials are designed based on constructivist learning theory, which posits that learners construct knowledge and meaning from their experiences (Sulistiyono, Missriani, & Fitriani, 2021; Sumarna & Gunawan, 2022). The goal is to provide students with learning experiences that are not just theoretically sound but also practically relevant, enabling them to apply their learning in real-life contexts (Muharam et al., 2023).

In the opinion of (Enidar at al., 2018) that Evaluating language material, as argued by researchers, requires consideration of several critical factors. First and foremost is the understanding of student needs, which includes tailoring the language learning process to suit the age, individual learning patterns, and specific goals of the learners. Secondly, the educational setting plays a crucial role, especially in terms of understanding the status of the language being taught – whether it is a first language, a second language, or a foreign language. The outcomes of using specific materials can vary significantly based on these factors. Thirdly, it's essential to assess whether the materials align with the principles and approaches being employed in teaching. For instance, materials designed for communicative language teaching should facilitate effective communication among learners. Finally, the compatibility of the syllabus with the language resources and the overall evaluation of these resources is crucial. By considering these aspects, educators can ensure that the language learning materials are not only culturally and contextually relevant but also pedagogically sound, thereby enhancing the overall effectiveness of language education.

Contextual learning, as outlined in the previous discussion, is an educational approach that emphasizes the importance of connecting learning material to real-world situations, making it particularly relevant and meaningful for students (Orange, Quadros-Flores, & Ferreira, 2019). This approach is rooted in the constructivist theory of learning, which posits that learners construct knowledge and understanding through experiences and interactions with their environment. In the context of language learning, this approach is especially powerful as it integrates language skills with practical applications, thereby enhancing both comprehension and retention. The key aspects of contextual learning include:

1. **Real-World Relevance:** Contextual learning involves using materials and scenarios that students are likely to encounter in their everyday lives. This relevance to the real world helps students see the practical applications of what they are learning, which can increase their engagement and motivation (Orange, Quadros-Flores, & Ferreira, 2019).
2. **Active Learning:** This approach encourages active participation from students. Instead of passively receiving information, students engage in hands-on activities, group discussions, and problem-solving tasks that require them to apply what they've learned in practical scenarios (Orange, Quadros-Flores, & Ferreira, 2019).
3. **Integration of Knowledge:** Contextual learning is not about learning in isolation; it integrates various disciplines and areas of knowledge. In language education, this means not just focusing on grammar and vocabulary but also incorporating cultural, historical, and social aspects, thereby providing a more holistic understanding of the language (Thomas et al., 2019).
4. **Personalized Learning Experiences:** Since contextual learning is tied to the students' own experiences and backgrounds, it allows for a more personalized approach to education. Teachers can tailor the content and methods to suit the specific needs and interests of their students, making the learning experience more relevant and effective for each individual (Sha, Rashid, Mukundan, & Alkhatib, 2020).
5. **Reflective and Critical Thinking:** This approach encourages students to reflect on their learning and to think critically about how it applies to various contexts. Students are not just learning information; they are learning how to think about and use that information in different situations (Salam, Ibrahim, & Iskandar, 2019).
6. **Collaborative Learning:** Contextual learning often involves collaborative projects and group work, where students learn from and with each other. This collaboration enhances communication skills and fosters a sense of community and teamwork in the learning process (Nadaf & Nazir, 2022).

Recent trends in language and culture research highlight a growing emphasis on the socio-cultural dimensions of language and its teaching models, acknowledging the critical role of cultural aspects in language education. Additionally, the practical application of ethnoscience in education is evidenced by a study that concentrates on training pre-service teachers to incorporate an ethnoscience approach in teaching chemistry. This not only demonstrates the versatility of ethnoscience in educational settings but also underscores its potential utility in areas beyond its traditional confines, including language teaching. These developments collectively point to an evolving landscape where the integration of cultural knowledge, as encapsulated in ethnoscience, is becoming increasingly recognized and valued in the broader context of education and language learning.

The current research landscape in the intersection of ethnoscience, culture, and language reveals a nuanced and growing field, yet it also uncovers a significant gap in the application of ethnoscience within English language teaching. Ethnoscience, as a field, delves into the complex relationship between culture and language, acknowledging that language is not just a tool for communication but also a repository of cultural knowledge and practices. Recent research agendas in language and culture underscore the socio-cultural dimensions of language, emphasizing the pivotal role of cultural context in language teaching models (Maddamsetti, 2020; Owczarek, 2020; Stone, 2023). This recognition marks a critical shift from traditional language teaching methodologies, which often treated language as a set of grammatical rules and vocabulary to be memorized, to a more holistic approach where language is seen as intertwined with cultural identity and social practices (Zhang et al., 2018; Jaskot et al., 2022). However, despite this growing recognition, there appears to be a paucity of focused research on the direct incorporation of ethnoscience into English language teaching practices. This gap suggests a potential area of exploration where the principles

of ethnoscience could be more explicitly integrated into English language curricula, thereby enriching the teaching and learning experience by grounding it in culturally relevant content.

Addressing this gap requires a paradigm shift in the development of English language teaching materials and methods. The curriculum needs to be designed with a keen understanding of the local culture and the background of the students. This involves not only the inclusion of local content but also the adaptation of teaching methods to align with the students' social and cultural realities. By situating English language learning within the familiar context of students' lives, educators can create a more inclusive and effective learning environment. This contextual approach not only aids in language acquisition but also helps students develop a broader understanding of how language functions in various social and cultural settings. It empowers them to use English as a tool for real-world communication, thereby enhancing their global competency (Hutchinson, 1987). Ultimately, the goal is to create a learning experience that is both culturally relevant and academically rigorous, preparing students to navigate the complexities of a globalized world with confidence and cultural sensitivity.

METHOD

In this study, a cyclical and systematic approach was used to create and evaluate educational materials that were tailored to meet the needs that were found in the learning setting. The first step in our method was to carefully list these needs. Next, we did a lot of research to fully understand the core educational needs. This first step was necessary to make sure that the creation of tools was directly based on what teachers and students wanted. In the next steps of our method, we customized the materials to fit the needs of the students, made them, and used them in the classroom. Each step was carefully planned to make it easy to use in different situations. The most important part of our method was having the students use the materials we made. This gave us a solid way to evaluate their performance against set educational goals. This stage of evaluation was very important because it not only showed how useful the materials were, but it also led to new ideas that helped with the next round of development. This shows that the study is committed to improving educational materials in steps. The study used this method to try to come up with a clear and repeatable way to make educational materials that can change along with changing needs and goals in the classroom.

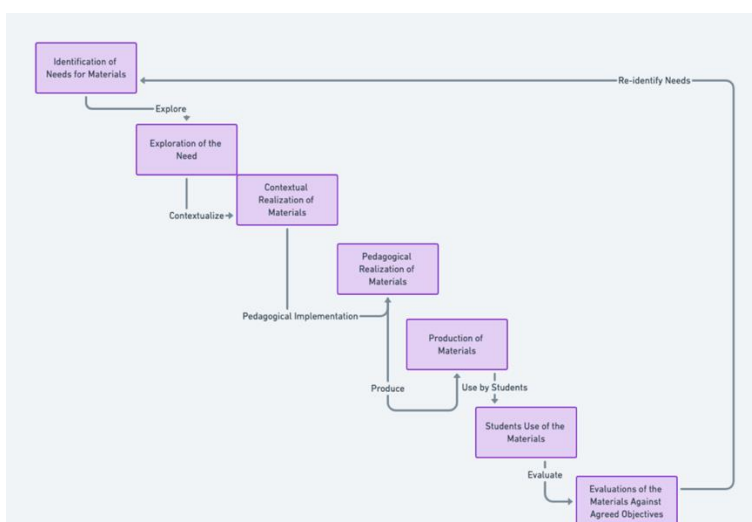


Figure 1. A Teacher's Path Through the Production of New or Adapted Materials (Jolly & Bolitho, 1998)

This study's population comprised junior high school students, with the sample including both students and three English teachers. A questionnaire, validated by two experts, served as the research instrument, encompassing language aspects across 15 components and material aspects through 16 statements, each rated on a 1-5 scale. The validation process involved marking ticks against categories corresponding to a five-point scale, with a threshold of 51% determining the theoretical worthiness of the content for consideration.

FINDINGS AND DISCUSSION

This study explores the integration of ethnoscience in English Language Teaching (ELT) materials, recognizing the significant role of cultural diversity in language education. This study explores the integration of ethnoscience in English Language Teaching (ELT) materials, recognizing the significant role of cultural diversity in language education. The research focuses on two central objectives. The first step is to meticulously develop ELT materials that seamlessly incorporate ethnoscience concepts. This will create a learning environment where cultural knowledge and language acquisition coalesce. The second step,

which is equally crucial, is to conduct a thorough expert validation of these materials to ensure their pedagogical soundness and cultural appropriateness. This approach represents a departure from traditional language teaching methods by integrating cultural elements directly into language learning. This fosters a more inclusive and effective educational experience. The need for this innovative approach was highlighted in our previous publication, which presented a comprehensive need analysis, setting the stage for our current endeavor.

Incorporating Ethnoscience

The core of this study was to examine the role of ethnoscience in the development of English Language Teaching (ELT) materials and to validate these materials with the expertise of cultural and linguistic specialists. Our findings are organized around four interconnected themes as depicted in the diagram: Social Elements, Cultural Aspect, English Language Teaching, and Educational Aspect. These themes collectively underpin the structure and content of the developed English Learning Materials. This approach highlights that language learning involves not only grammar and vocabulary, but also understanding the cultural contexts in which the language is used (Lyon, 1981). The aspect of Ethnoscience-based English learning materials can be comprehensively explained as follows:

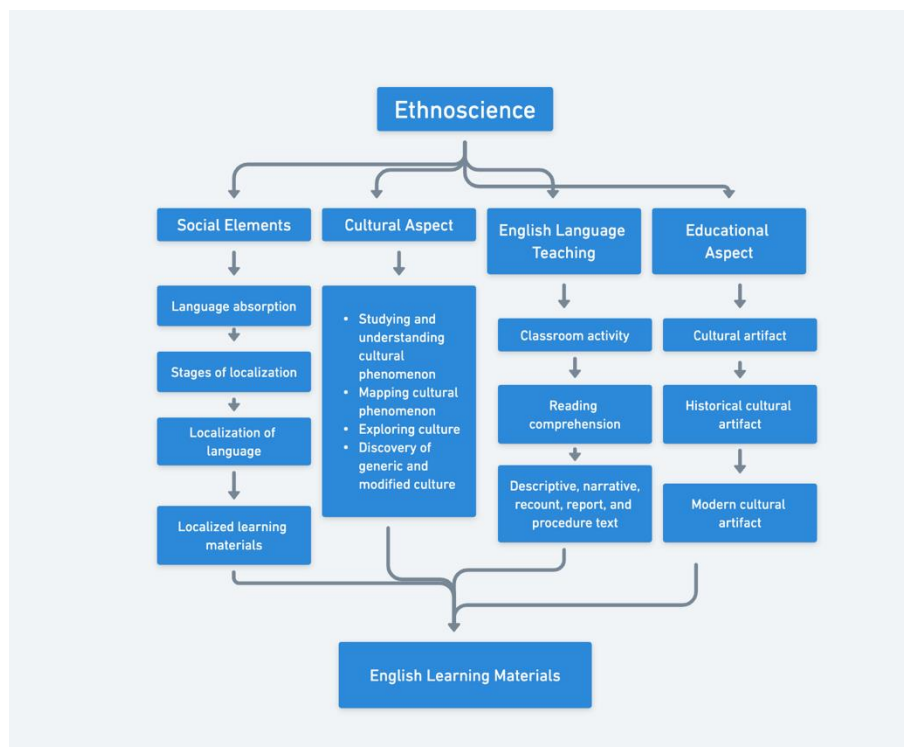


Figure 2. Ethnoscience in ELT Material Development

Social Elements

The 'Social Aspect' of Ethnoscience-based English learning materials recognizes that language learning is deeply interwoven with social interactions and the learner's environment. This element is crucial as it acknowledges the social nature of language and how cultural context can enrich the language learning experience. The following is a detailed outline:

1. **Language Absorption:** This is the phase where learners are first exposed to English in a social context, such as through conversation with native speakers, multimedia resources, or social media engagement. It's a naturalistic approach where language is acquired organically, and learners pick up on contextual cues, accents, intonations, and cultural nuances.
2. **Stages of Localization:** After initial exposure, the process involves adapting the language to align with the learner's local context. Localization includes:
 - **Cultural Adaptation:** Tailoring the language to reflect local cultural references, idioms, and slangs.
 - **Contextual Relevance:** Ensuring that the language is presented within contexts that the learner finds familiar and relevant to their daily life.

- **Incremental Learning:** Gradually introducing localized aspects of the language to build a strong foundation that respects the learner's native linguistic structure.
3. **Localization of Language:** This step is about fully integrating the language into the local context. This could involve:
 - **Culturally Relevant Examples:** Using local examples in teaching materials, such as local names, places, and culturally significant events.
 - **Adapted Content:** Modifying content to include local folklore, stories, and current events that make the learning process more engaging.
 - **Socially Inclusive Language:** Incorporating language variations that acknowledge and respect the diversity within the learner's community.
 4. **Localized Learning Materials:** The final product of this aspect is the creation of learning materials that are steeped in the learner's cultural and social realities. Such materials are not merely translations but are crafted to be:
 - **Culturally Congruent:** Materials resonate with learners' cultural identity and experiences.
 - **Engaging and Relevant:** Content is designed to be interesting and applicable to the learners' social context.
 - **Educationally Effective:** Resources are pedagogically sound and foster an environment conducive to language acquisition.

By emphasizing the Social Aspect, Ethnoscience-based English learning materials recognize that language is not learned in isolation but through active engagement with one's social and cultural environment. This holistic approach ensures that as learners acquire the English language, they do so in a manner that is meaningful, relevant, and respectful of their social identity and cultural heritage.

Cultural Aspect

The Ethnoscience-based approach to designing English learning materials intertwines linguistics with cultural immersion. It begins with a thorough study and understanding of cultural phenomena, including customs, traditions, and social behaviors unique to a culture. This initial step is crucial as it establishes the basis for developing educational materials that are not only linguistically precise but also culturally appropriate and considerate of the learners' backgrounds.

1. **Studying and Understanding Cultural Phenomenon:** This involves an in-depth exploration of cultural phenomena, which can include customs, traditions, beliefs, and social behaviors specific to a culture. The objective is to gain a nuanced understanding of the culture's impact on language and communication. This step is fundamental in creating learning materials that are culturally informed and respectful of the learner's own cultural background.
2. **Mapping Cultural Phenomenon:** Mapping refers to the systematic representation of cultural phenomena and their relationships to language learning. This could involve identifying key cultural concepts, practices, and values, and illustrating how they are expressed or influenced by language. This step helps in structuring learning materials so that they align with cultural knowledge and linguistic expressions.
3. **Exploring Culture:** This is the active engagement with culture in the context of language learning. Exploring culture includes examining literature, art, history, and social practices. It is about providing learners with the opportunity to see the language in action within its cultural setting. It also means understanding the variations and diversities within a single culture, which is crucial for developing materials that are genuinely representative.
4. **Discovery of Generic and Modified Culture:** The discovery phase focuses on identifying both the core (generic) and the evolving (modified) elements of culture. Generic cultural elements refer to long-standing traditions and norms, while modified culture reflects contemporary changes and adaptations. English learning materials informed by this discovery can present a dynamic view of culture that includes both traditional and current perspectives.

English Language Teaching

The third component of the Ethnoscience-based English learning materials framework is 'English Language Teaching,' which involves a structured approach to language instruction. The following is a breakdown of its components:

1. **Classroom Activity:** This represents the interactive and practical application of language learning within a classroom setting. Activities are designed to engage students in using English in various communicative contexts. These activities could range from group discussions, role-playing, debates to language games that encourage the use of English in a social setting.
2. **Reading Comprehension:** This component focuses on the development of skills necessary to understand written English. It includes strategies for interpreting text, understanding context, and critical analysis of written materials. This may involve dissecting articles, stories, essays, and other forms of written content to enhance understanding and retention.

3. **Descriptive, Narrative, Recount, Report, and Procedure Text:** These refer to different types of texts that students are exposed to and learn to produce. Each text type serves a specific purpose:
- Descriptive texts paint a picture of people, places, events, or ideas.
 - Narrative texts tell a story or account of events or experiences.
 - Recount texts retell past events for the purpose of informing or entertaining.
 - Report texts present information about something, typically as the result of research or analysis.
 - Procedure texts provide instructions or directions on how to do something.

The following table categorizes various topics and activities that can be used to create English learning materials with a focus on local culture and practices, allowing learners to engage with the language in a context that is meaningful and relevant to them.

Table 1. The Ethnoscience-based English Learning Materials in Contextual Model

Type of Text	The Ethnoscience-based English Learning Materials in Contextual Model
Descriptive	The text gives more detailed information for the form of buildings, objects, or people. <ol style="list-style-type: none"> 1. Hide and seek at Pedurangan 2. Bolambat game 3. Brobosan tradition 4. Tradition of Suronan 5. Traditional rope skipping 6. Kupat Jembut/Kupat sumpel 7. Tahu Gimbal food
Narrative	A text that tells a sequence of events from a story that happened in the past about the origin of an area, culture, language, and local specialties. <ol style="list-style-type: none"> 1. Jami' Suman Kalijogo Mosque in Penggaron Kidul 2. The origin of Sendangguwo 3. Nyadran 4. Mushola Al- Amin 5. Lumpia
Recount	The Text tells the storyteller's experience by providing information about local culture and customs. <ol style="list-style-type: none"> 1. Sorak Huray 2. Kite Game in Tlogomulyo area 3. Egrang (stilts)
Procedure	The texts that provide information about activities on how to make traditional foods and drinks. <ol style="list-style-type: none"> 1. How to make Jongkong 2. Mitoni
Report	The text that provides complete information based on an analysis of local arts, language, culture, and customs. <ol style="list-style-type: none"> 1. Riwoondo offering ritual in Semarang 2. Popokan (diapers) 3. Walimatu Khitan (Celebration)

The inclusion of these various text types in English Language Teaching ensures that students are equipped with the skills to understand and produce a wide range of written English forms, which is critical for their overall language competence. This structured approach to English Language Teaching is critical to the overall framework of Ethnoscience-based learning materials as it ensures that students are not only learning English as a language but are also becoming proficient in using it within a cultural context that resonates with their experiences.

Educational Aspect

The "Educational Aspect" of Ethnoscience-based English learning materials pertains to the integration of educational theories and practices into the design of language learning resources, ensuring that they are pedagogically sound and cater to various learning needs. This aspect can be broken down into two main components:

1. **Cultural Artifact:** This component acknowledges the use of objects, texts, and resources that are imbued with cultural significance as educational tools. Within the scope of English language teaching, this might involve:
2. **Historical Cultural Artifact:** Using items or texts with historical significance to the culture from which they originate or to the culture being studied. These artifacts serve as a gateway to discussions about history, tradition, and changes over time, thus providing a rich context for language learning. They can be employed to teach not only language skills but also cultural literacy.
3. **Modern Cultural Artifact:** Incorporating contemporary items or media that reflect the current state of the culture. This could include anything from modern literature, films, music, to social media content. These artifacts help learners to understand and engage with the language as it is used today, often including colloquialisms and slang, thus making the learning experience more relevant and immediate.

Table 2. The Differences Between Historical Cultural and Modern Artifacts in The Context of Ethnoscience-based Learning Materials

Historical Cultural Artifact	Modern Artifact
<ul style="list-style-type: none"> • Defined as relics of man-made works in the past discovered through search or history. These artifacts can be in the form of buildings of places of worship, monuments, household utensils, or handicrafts. • Examples include: <ol style="list-style-type: none"> 1. Kiwonan at Mushola Al-Amin 2. Jami' Sunan Kalijogo Mosque in Penggaron Kidul 3. Padusan 4. Warak Ngendog 5. Lumpia 	<ul style="list-style-type: none"> • Defined as relics of cultural artifacts in the past that can be renovated into modern cultural artifacts by providing additional buildings so that old artifacts do not collapse or are made more magnificent than before. This includes structures like mosque buildings, house buildings, etc. • Examples include: <ol style="list-style-type: none"> 1. Kiwonan at Mushola Al-Amin 2. Jami' Sunan Kalijogo Mosque in Penggaron Kidul 3. Padusan 4. Warak ngendog 5. Lumpia

The table distinguishes between artifacts that have been preserved in their historical state and those that have been modified or upgraded in modern times while retaining their cultural significance. The Educational Aspect is designed to ensure that Ethnoscience-based English learning materials do not just teach language in isolation but also foster comprehensive educational development. This includes enhancing critical thinking skills, encouraging cultural inquiry, and developing an ability to analyze and understand complex texts. It is a holistic approach that aims to educate learners in a way that is both culturally and academically enriching.

Expert Validation

The validation results for the Ethnoscience-based English language materials were positive and thorough. The results are presented in a scorecard format, covering various elements of the materials. The validation was conducted by two experienced instructional development experts, who brought their extensive knowledge and experience to the evaluation process. Their expertise provided a dual perspective that ensured a thorough review of the instructional design and offered insights into the cultural relevance and pedagogical effectiveness of the materials. This assessment aimed to scrutinize the appropriateness, comprehensiveness, and efficacy of the Ethnoscience-based approach in facilitating English language acquisition within diverse cultural contexts.

Table 3. Expert Validation Result 1

No	Items	Score					Remark
		5	4	3	2	1	
Content							
1	The content aligns with the established learning goals and performance benchmarks.		V				
2	The instructional materials are structured following the teaching approach's sequential steps.		V				
3	The developed materials integrate Ethnoscience principles within an English learning framework that emphasizes context.		V				
4	The content is systematically arranged for coherence.			V			
5	The presentation of the material is articulated in a straightforward and clear manner.			V			
6	Examples and problem sets are framed in the context of real-life situations.		V				
7	The content is directly applicable to everyday experiences.	V					
8	Visual aids are included to enhance student comprehension of the material.		V				
9	The material is carefully curated to avoid any offense to religious beliefs, racial identities, or ethnic groups.		V				
Language							
10	The word choice is straightforward and comprehensible to students.		V				
11	The language employed is clear and unambiguous.		V				
12	The language adheres to proper and accurate grammatical standards.			V			

Table 4. Expert Validation Result 2

No	Items	Score					Remark
		5	4	3	2	1	
Content							
1	The content aligns with the established learning goals and performance benchmarks.		V				
2	The instructional materials are structured following the teaching approach's sequential steps.		V				
3	The developed materials integrate Ethnoscience principles within an English learning framework that emphasizes context.		V				
4	The content is systematically arranged for coherence.			V			
5	The presentation of the material is articulated in a straightforward and clear manner.			V			
6	Examples and problem sets are framed in the context of real-life situations.		V				
7	The content is directly applicable to everyday experiences.	V					
8	Visual aids are included to enhance student comprehension of the material.		V				

9	The material is carefully curated to avoid any offense to religious beliefs, racial identities, or ethnic groups.	V
Language		
10	The word choice is straightforward and comprehensible to students.	V
11	The language employed is clear and unambiguous.	V
12	The language adheres to proper and accurate grammatical standards.	V

The results of the expert validation for the ethnoscience-based English language tools are a strong endorsement of the quality and usefulness of the educational content. Two experts in instructional development did the evaluation. They used a scoring method to carefully look at the materials for a number of factors, such as how well they fit with the curriculum and how sensitive they were to different cultures. Our talk is based on the results of this in-depth review, which give us a wide-ranging picture of the materials' good points and what they mean for teaching languages in a multicultural setting.

The approval mostly looked at how well the material content matched up with well-known educational standards and learning goals. This consistency is very important because it makes sure that students are not only using material that is good for them, but also working toward clear, measurable goals. Sticking to the teaching method makes this effect even stronger by providing a logical and orderly sequence of lessons that support learning well. This method, which focuses on growing knowledge gradually, works for a range of learning styles and speeds, making it possible to provide customized lessons that meet the needs of each student.

The materials' seamless integration of ethnoscience concepts is a huge step forward in teaching English. These materials go beyond standard language lessons because they put language learning in the context of a wide range of cultural phenomena and scientific ideas (Akmal, 2021; Vitoria et al., 2021). This helps people understand English as a language and also immerses them in the cultural stories that shape how the language is used (Jaskot et al., 2022). This method fits with modern ideas about education that say different national points of view should be included in classrooms so that students can learn how to communicate well in a globalized world (Widyaningrum & Prihastari, 2021). The organized arrangement of the material makes the learning process much more cohesive. For students to understand and remember what they are learning, the lessons must be well planned. This is especially true when the subjects are complicated, like when language is mixed with cultural studies (Rizki & Putri, 2022). Clear presentation also makes sure that students can easily find their way through the information without having to think too much, which lets them focus on using their language skills in real-life situations. The material's focus on real-life applications, with cases and problem sets based on real-life events, connects what you learn in school to what you do outside of school. This method not only makes the materials more useful, but it also makes it easier for students to use their language skills in real life. Visual aids make this real-world relevance even stronger by giving students clear examples of abstract ideas that help them understand and remember them. When the students are learning a language, visual tools are especially helpful because the link between pictures and words can help them remember and understand more.

Cultural sensitivity is an aspect of the materials that cannot be overstated. In today's diverse educational landscape, materials that are culturally inclusive and sensitive are not just preferred but required. The expert validators, such as Waszau (2019), noted the careful curation of content to avoid potential offense, ensuring that all learners feel respected and valued. This sensitivity extends to the use of language in the materials—clear, unambiguous, and grammatically correct—thereby setting a high standard for language acquisition that is inclusive and accessible. As highlighted by Klimova et al. (2019), improving students' sensitivity to culture and cultivating cultural awareness is essential in the foreign language learning environment. Linares (2023) emphasizes the challenge for pre-service language teachers to overcome their ethnocentrism, while Segura-Robles and Parra-González (2019) demonstrate that teachers in multicultural contexts show high levels of cultural sensitivity. Finally, Zhang (2019) investigates the significant impact of grammatical sensitivity on cross-cultural communication, underlining the importance of integrating these aspects into educational materials.

There are numerous implications to these findings. To begin with, the validation serves to affirm the effectiveness of materials grounded in ethnoscience in facilitating English language acquisition in a pedagogically sound and culturally immersive environment. These materials symbolize a substantial progression in language instruction, in accordance with more extensive educational objectives that promote intercultural comprehension and proficiency in communication within a worldwide framework. Furthermore, the favorable evaluation highlights the capacity of these resources to function as an exemplar for the creation of future materials pertaining to language instruction. They provide evidence that integrating cultural elements and language acquisition in an educationally effective and respectful manner is not only feasible, but also advantageous.

In summary, the outcomes of the expert validation provide confirmation that the English language materials based on ethnoscience are reliable, pertinent, and adaptable. This validation serves to strengthen the credibility and efficacy of these materials while also establishing a model for the creation of forthcoming educational materials that incorporate linguistic diversity and cultural sensitivity. The results of the study support the notion that an instructional methodology should mirror the diversity of our societies; it is recognized that language learning is most successful when it is profoundly ingrained in the learners' cultural and contextual circumstances.

CONCLUSION AND SUGGESTION

The conclusion that can be derived from the extensive research and findings presented in this study is that the English language materials based on ethnoscience that were developed and assessed in this study have substantial potential to improve language education. The instructional development expertise of two experts in expert validation has confirmed that the materials adhere to educational standards, have a structured and culturally aware instructional framework, and successfully incorporate ethnoscience principles. As a result, these materials offer a comprehensive educational resource that is rich in both linguistic and cultural knowledge. The coherent organization of the content and the explicit demonstration of materials enhance the educational encounter for students, rendering it both captivating and easily navigable.

The incorporation of visual aides and the utilization of real-world applications have garnered significant acclaim for their capacity to augment understanding and render knowledge more practical and pertinent to the everyday experiences of students. The dedication to promoting cultural sensitivity in the materials serves to emphasize the institution's strong belief in fostering an inclusive and respectful educational setting. It has been determined that the plain, direct, and grammatically accurate language utilized throughout the materials contributes to their overall comprehensibility and educational value.

ACKNOWLEDGMENT

This research was sponsored by Direktur Riset, Teknologi, dan Pengabdian Kepada Masyarakat (DRTPM) under the Program Penelitian Pascasarjana for Penelitian Tesis Magister 2022 with contract number: 158/E5/PG.02.00.PT//2022 dated 10 May 2022. The descended contract number 026 /LL6/PB/AK.04/2022 dated 11 May 2022, and 021/LPPM-UPGRS/ SP2H/ PENELITIAN/V/ 2022 dated 12 Mei 2022.

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