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Increasing Student Learning Interest through Cooperative Learning

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Abstract

This study aims to explain the influence of cooperative learning on the increase in students' interest in learning in the context of education. A qualitative approach with the type of library research is used to explore the concept of cooperative learning and its impact on students' interest in learning. Through secondary data analysis and using Miles and Huberman data analysis methods, this study gained an in-depth understanding of how cooperative learning affects students' learning interests. The results of the study show that the application of the cooperative learning model results in a significant increase in students' interest in learning. Factors such as the integration of game elements, cooperation between students in teams, and an inclusive environment play a key role in stimulating greater interest in learning. Cooperative learning strategies not only improve academic achievement, but also create high motivation for students to understand the learning material better. Nonetheless, challenges such as an unsupportive environment and active student involvement need to be addressed through a precise and sustainable approach that involves collaboration between educators, students, and education stakeholders.

Introduction

Education stands as the bedrock of societal advancement, forming the essential pathway through which a nation cultivates its human capital. It is through education that individuals acquire the knowledge, skills, and values necessary to contribute meaningfully to society, thereby driving economic growth, social cohesion, and innovation. In Indonesia, the formal education system spanning from elementary through tertiary levels reflects the nation's enduring commitment to nurturing intellectual growth and fostering innovation. This system is designed to provide a structured and comprehensive framework for learning, ensuring that every citizen has the opportunity to develop their full potential. Yet, despite these efforts, the challenge of sustaining and enhancing student interest in learning persists as a formidable barrier to achieving educational excellence. The implications of this challenge are far-reaching, affecting not only individual academic success but also the broader developmental trajectory of the nation. A decline in student interest can lead to disengagement, lower academic performance, and ultimately, higher dropout rates, which can undermine the country's progress toward achieving its educational and developmental goals.

The concept of learning interest is deeply rooted in cognitive and educational psychology, where it is recognized as a critical determinant of student engagement, motivation, and achievement. Learning interest is not a static attribute; it is a dynamic process that can be nurtured and developed through effective educational practices. It acts as both a catalyst and a sustaining force, driving students to explore, comprehend, and internalize educational content. When students are genuinely interested in what they are learning, they are more likely to invest effort, persist through challenges, and seek deeper understanding. As highlighted by Zohiri et al. (2024), students with high levels of learning interest are more likely to engage deeply with

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the subject matter, leading to improved academic outcomes and a richer educational experience. This correlation underscores the necessity for educators to cultivate learning environments that not only capture but also maintain student interest over time. To do so requires a deliberate and strategic approach, one that takes into account the various factors that influence student interest, including curriculum design, teaching methods, and classroom dynamics.

However, the complexity of fostering such interest is magnified in contexts where socio-economic and cultural factors intersect with educational practices. In Indonesia, where economic disparities and varying levels of access to educational resources are prevalent, the task of engaging students becomes increasingly challenging. Musdalifah (2023) underscores the reality that students from economically disadvantaged backgrounds often face significant obstacles that hinder their full participation in the learning process. These obstacles are multifaceted, ranging from the need to contribute to household income to the lack of access to educational materials and supportive learning environments. These students may be compelled to balance educational pursuits with economic responsibilities, leaving them with limited time and energy to engage in school activities, including those that rely on collaborative learning models. The resulting fatigue and stress can further diminish their interest in learning, creating a vicious cycle that is difficult to break.

Amidst these challenges, cooperative learning has gained attention as a potentially transformative pedagogical approach. Cooperative learning, as defined by Aliyu et al. (2022), involves students working in structured groups to achieve common academic goals, thereby fostering not only academic achievement but also the development of social and interpersonal skills. The model is predicated on the idea that learning is a social process, and that collaboration among students can enhance both individual and collective outcomes. The theoretical underpinnings of cooperative learning are well-established, with Johnson & Johnson (2018) emphasizing its ability to create an inclusive and supportive learning environment where students are encouraged to engage actively with the material and with each other. This approach aligns with Vygotsky's theory of social constructivism, which posits that knowledge is constructed through social interaction and collaboration. In cooperative learning, students are not passive recipients of knowledge; instead, they are active participants in the learning process, working together to solve problems, share ideas, and support each other's learning.

Yet, the application of cooperative learning in the Indonesian educational context is not without its challenges. Traditional educational practices in Indonesia have long been characterized by a competitive ethos, where success is often measured against normative standards of individual achievement. This emphasis on competition can create a learning environment that is more focused on individual performance than on collective success. Tarore (2020) highlights the pervasive influence of this competitive framework, which can create resistance to cooperative learning models among students who are accustomed to individualistic approaches to education. This resistance is further exacerbated by the realities of the Indonesian classroom, where large class sizes, limited resources, and diverse student needs pose significant hurdles to the effective implementation of collaborative learning strategies. In such environments, the logistical challenges of managing group activities and ensuring equitable participation can be daunting for educators, leading to uneven outcomes and frustration among students.

Furthermore, the socio cultural context of Indonesia presents additional layers of complexity. In many Indonesian communities, education is still seen through the lens of social mobility, with a strong emphasis on acquiring credentials that enhance employability. This pragmatic

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view of education can lead to a focus on rote learning and exam preparation, at the expense of fostering critical thinking and collaborative skills. The cooperative learning model, which emphasizes teamwork, communication, and problem solving, requires a shift in both teaching practices and student mindsets a shift that may be difficult to achieve without substantial support from educators, policymakers, and the community at large. This shift involves moving away from traditional didactic methods toward more student centered approaches that prioritize active learning and peer collaboration. However, such a transformation requires not only changes in classroom practices but also a rethinking of educational policies and societal attitudes towards education.

The present study seeks to critically examine the potential of cooperative learning as a means to enhance student interest in learning within this complex socio educational landscape. By employing a qualitative approach that leverages secondary data, this research aims to dissect the intricate dynamics that influence the effectiveness of cooperative learning strategies in Indonesian classrooms. This analysis consider not only the pedagogical aspects of cooperative learning but also the broader socio economic and cultural factors that impact its implementation. Through this comprehensive examination, the study aims to contribute to the development of more effective and contextually appropriate educational strategies that can better meet the needs of Indonesian students.

Methods

This study adopts a qualitative research approach, focusing on a comprehensive exploration of the concept of cooperative learning and its influence on increasing students' interest in learning within the Indonesian educational context. The qualitative approach is particularly suited to this research as it allows for an in-depth analysis of complex social phenomena, including the nuanced interactions between educational strategies and student engagement. The study's primary objective is to develop a thorough understanding of how cooperative learning can be effectively implemented to enhance learning interest, especially in environments marked by socio-economic disparities.

Research Design

This study employs a library research design, a methodological approach that systematically identifies, collects, and analyzes existing literature to address the research questions. The design is exploratory, aimed at synthesizing a wide range of academic knowledge to draw meaningful conclusions about the effectiveness of cooperative learning in fostering student interest, particularly within the context of Indonesian education. The research focuses on understanding how cooperative learning strategies can enhance student engagement and motivation, especially in environments marked by socio economic disparities.

The primary purpose of this research design is to critically examine the relationship between cooperative learning and student interest in learning. The study is framed within the Indonesian educational system, where various socio-economic and cultural factors intersect with educational practices, presenting unique challenges to student engagement. The scope of the study encompasses a diverse array of educational settings, ranging from primary to tertiary levels, and considers both urban and rural contexts to provide a holistic perspective on the issue.

The research design emphasizes a comprehensive approach to source selection, ensuring that the literature reviewed is both relevant and of high quality. The study began by identifying key academic databases known for their extensive collections of educational research, including JSTOR, Google Scholar, PubMed, and the Education Resources Information Center (ERIC).

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These databases were selected for their ability to provide access to a wide range of peer-reviewed journals, books, conference papers, and dissertations. A keyword strategy was developed to ensure the effective retrieval of relevant literature, using terms such as “cooperative learning,” “student interest,” “educational psychology,” “Indonesian education,” and “learning engagement.” Boolean operators were employed to refine search results, ensuring the inclusion of studies that specifically address the intersections of cooperative learning and student interest in diverse educational settings.

The selection of sources was guided by specific inclusion and exclusion criteria. Studies were included if they were peer-reviewed, published within the last 10 years, and focused on the relationship between cooperative learning and student interest. Additionally, priority was given to studies that offered insights into the socio-economic and cultural contexts of education in Indonesia or similar environments. Conversely, studies were excluded if they did not directly address the research questions, were based on outdated educational models, or focused solely on other pedagogical approaches without reference to cooperative learning. To organize the selected literature, a literature map was created, categorizing sources into thematic areas such as "cooperative learning models," "challenges in implementation," "student motivation and interest," and "educational outcomes." This mapping process helped identify major areas of focus within the literature and highlighted gaps that required further exploration.

Once relevant sources were collected, the research design called for a systematic synthesis of the data. Each source was critically reviewed to assess its validity, reliability, and relevance to the research questions. This involved evaluating the research methods used, the theoretical frameworks applied, and the conclusions drawn by the authors. The review process was iterative, with findings being continually compared and contrasted to build a comprehensive understanding of the current state of knowledge. Thematic analysis was employed to identify recurring patterns, themes, and key concepts within the literature. Data were coded into categories aligned with the research objectives, enabling a structured synthesis of the findings. Additionally, the research incorporated a longitudinal perspective, comparing historical and contemporary studies to identify trends and shifts in the effectiveness of cooperative learning strategies, particularly in response to changing educational policies and socio-economic conditions. A comparative analysis was also conducted to explore differences in the implementation and outcomes of cooperative learning across various educational contexts, including different regions of Indonesia and other countries with similar challenges.

Data Collection

The data collection process for this study was carefully designed to ensure a comprehensive and systematic gathering of relevant secondary data. Given that this research relies on a library research approach, the focus was on sourcing high-quality academic literature that would provide a robust foundation for analyzing the impact of cooperative learning on student interest. The process began with the identification of key academic databases known for their extensive collections of educational research, including JSTOR, Google Scholar, PubMed, and the Education Resources Information Center (ERIC). These databases were selected because they offer access to a wide array of peer-reviewed journals, books, conference proceedings, and dissertations, which are crucial for building a well-rounded understanding of the study's key themes.

To retrieve relevant literature, a strategic keyword search was employed. Keywords and phrases such as “cooperative learning,” “student interest,” “educational psychology,” “Indonesian education,” and “learning engagement” were used to conduct searches across the selected databases. Boolean operators were applied to refine the search results, ensuring that

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the studies included in the analysis specifically addressed the intersections of cooperative learning and student interest, as well as related themes in diverse educational contexts. This strategic approach to keyword searching was essential in filtering out irrelevant literature and focusing on sources that would contribute meaningfully to the research questions.

The selection of literature was guided by clearly defined inclusion and exclusion criteria. The inclusion criteria required that studies be peer-reviewed, published within the last 10 years, and focused on the relationship between cooperative learning and student interest. Particular attention was given to studies that offered insights into the socio-economic and cultural contexts of education in Indonesia or other similar environments. This focus ensured that the data collected were both current and directly relevant to the Indonesian educational context. On the other hand, studies were excluded if they did not directly address the research questions, were based on outdated educational models, or concentrated solely on other pedagogical approaches without reference to cooperative learning.

Once the literature was identified and selected, the next step involved the systematic extraction of data from these sources. Each piece of literature was carefully read and annotated to capture its main findings, methodologies, and theoretical contributions. Key themes and concepts were coded and categorized according to their relevance to the study's objectives. For instance, findings related to specific cooperative learning models, such as Jigsaw or Think Pair Share, were grouped together, while challenges in implementation were categorized separately. This thematic coding allowed for a structured and organized approach to data synthesis, facilitating the comparison and integration of findings across different studies.

To ensure that the data collected were organized effectively, a comprehensive database was created. This database included full bibliographic details of each source, along with the thematic codes and summaries of key findings. The database served as a central repository for all the information gathered during the data collection phase, making it easier to retrieve and compare data during the analysis phase. The organization of this database was crucial in managing the large volume of information collected, ensuring that the synthesis of literature was both systematic and thorough.

Results and Discussion

Understanding the many varieties of cooperative learning shows more than the variation of effective patterns; it provides at least a glimpse of the complex interaction of teaching methods, environment, and people. As we continue to peel away the layers of data, each of the models becomes a vivid reminder of the joined potential, and the associated risks, of knowledge sharing. The effectiveness of those models is not a result of their architecture, but the ability to manage the relationship between the concepts and the implementation process, failure or success of which could be within a beat.

Jigsaw Model

Table 1. Impact of the Jigsaw Model on Student Interest

Study	Key Findings	Study Conclusion
Tarhan, Acar-Sesen (2013)	Improved student engagement and understanding in science education through structured peer teaching.	Jigsaw enhances student engagement and deepens conceptual understanding.

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Doymus (2008)	Effective in improving academic performance and fostering positive attitudes towards learning.	Jigsaw significantly improves academic performance and student attitudes.
Mengduo & Xiaoling (2010)	Increases student participation and reduces anxiety in language learning settings.	Jigsaw reduces anxiety and increases active participation in language learning.
Tran & Lewis (2012)	Challenges in maintaining effectiveness in large classrooms with diverse student abilities.	Jigsaw's effectiveness decreases in large, diverse classrooms.
Karacop & Doymus (2013)	Reduced effectiveness in classrooms where students struggle with self-regulation.	Jigsaw may be less effective for students with low self-regulation skills.
Gok (2015)	Variability in outcomes depending on teacher expertise in implementing the Jigsaw method.	Teacher expertise significantly influences the effectiveness of Jigsaw.

That is why the Jigsaw model that is often used to encourage student interest and improve knowledge retention turns out to be a two edged sword in the educator's arsenal. Writing about the effectiveness of peer teaching and learning approach, Tarhan & Acar-Sesen (2013) describe learning environment in classrooms where students are transformed into 'experts' in their respective fields who teach their classmates as soon as their segments start with as much energy as they began. This is not about instructing; it is about changing how a class works: When done well, it can be the most transformative act in the classroom experience. Doymus (2008) contributes to this discourse by providing a setting that has equally helped raise learning performance and enhance learners attitude toward learning; a combination that teacher wished for.

But this dream has its shades of negation. Tran & Lewis (2012) and Karacop & Doymus (2013) show how the strategy of Jigsaw is sensitive to the context of class environment and can be easily distorted by the classroom realities. Relatively, the model is susceptible to unravel the moment it is transplanted to large, diverse contexts, as interdependence often is. Suppose instead of assigning 'expert' roles there is a failure in dynamics? Committing to equal learning participation can deter very quickly disrupting some learners and empowering others. This variability in effectiveness exposes the model's vulnerability. it performs best in well-ordered supportive environments that is it fails for the disorderly and irregular topographical conditions of large heterogeneous classes. The teacher's role therefore reduces into more than that of a mere conductor: she is required to act much like an orchestra conductor with the capacity to manage each section of the school orchestra despite the disparities in talent and self-efficacy among her players.

Think-Pair-Share Model

Table 2. Impact of the Think Pair Share Model on Student Interest

Study	Key Findings	Study Conclusion
Kaddoura (2013)	Enhances critical thinking and student engagement through structured peer discussions in nursing education.	Think Pair Share is effective in promoting critical thinking and engagement.

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Zainuddin & Perera (2018)	Promotes active learning and increases participation in hybrid learning environments.	Think Pair Share is effective in hybrid environments, increasing participation.
Cavanagh (2011)	Encourages deeper understanding and retention of material in higher education.	Think Pair Share fosters deeper understanding and retention.
Exley & Dennick (2004)	Mixed results in large classrooms where time constraints limit the depth of discussions.	Think Pair Share's effectiveness is reduced in time constrained environments.
Bonwell & Eison (1991)	Less effective in environments where students are unaccustomed to peer discussions.	Think Pair Share may not be effective where students lack experience with peer interaction.
McDonnell (2012)	Reduced impact in classrooms where students are reluctant to share ideas openly.	Think Pair Share may not be effective in settings where students are hesitant to participate.

It can be said that even such a seemingly simple approach as Think-Pair-Share opens a look at the students' thinking processes. Kaddoura (2013) and Zainuddin & Perera (2018) describe this model as a way of encouraging thinking and learning, as simply listening turns the audience into pertinent givers. The real power of this model is that it provides for a reflective stage an opportunity for learners to step back before presenting their ideas to the others. But it is so much more than simply responding; and that is why I believe that in SLL we nurture a way of thinking that rejects the forms and approaches aligned with the culture of 'Participationism' which has gained such a strong foothold and prominence in the civic sector and education today in favour of an approach that encourages and engenders a totally different perspective.

However, as with any effective teaching strategy, Think Pair Share needs to be approached with sensitivity because it could easily be transmuted into a tool that displays the limitations of this type of learning strategy. Exley & Dennick (2004), also McDonnell (2012) explained to us that in the hustle and bustle of a larger classroom needs which are sensitive and more so require time are drastically reduced to a hurried race. All the aspects of the discussion, including the level of the ideas, can significantly descend, if the time remains the only master. Moreover, it has to be emphasized that the model presupposes a certain classroom culture in which 'free speech' is encouraged. In their study, Bonwell & Eison (1991) also articulate some of the difficulties that may present themselves when learners seem resistant or are not very inclined to group discussion. In such situations, Think Pair Share can turn into just an identification of the superficial patterns of thinking it is meant to help expose. This model is, however, a double edged sword as well and its success depends on a classroom community that appreciates and guarantees the time and space for real reflection and discussions.

Teams-Games-Tournaments (TGT) Model

Table 3. Impact of the TGT Model on Student Interest

Study	Key Findings	Study Conclusion
Rohrbeck, Ginsburg-Block, Fantuzzo & Miller (2003)	Increase the students' motivation and academic achievement by making learning games a competitiveness.	TGT is effective in enhancing motivation and performance via competitive elements.

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Slavin (2015)	Able to foster group and academic cooperation in cooperative learning intervention.	TGT promotes academic success and teamwork through structured competition.
Tsay & Brady (2010)	Engages and promote social learning activities in various education environments through the use of game element.	TGT is effective in diverse settings by increasing engagement via gamification.
Bhowmik, Banerjee, & Banerjee (2013)	Low learning outcomes in non-competitive societies where learner's may not appreciate rivalry.	TGT may be less effective in non-competitive cultures.
Iqbal (2013)	Challenges in maintaining fairness and balance in competitive settings, leading to potential disengagement.	TGT's competitive nature can lead to disengagement if not carefully managed.
Tadesse & Gillies (2015)	Variability in outcomes depending on the classroom environment and student attitudes towards competition.	TGT's success varies with classroom environment and student attitudes.

The TGT model, with its competitive edge, taps into a primal aspect of human nature: It engulfs the factor they call the thrill of victory. Rohrbeck et al. (2003) and Slavin (2015) give an insight of how the model harnessed this energy into achievement, converted the class into a competition field that was academically fused with teamwork. In this context, the students are not only passively acquiring knowledge, they are planning, collaborating and rivaling each other within the confines of a framework that prods them to the optimum. It is important to highlight that since TGT is based on the principles of games, it might incite interest and bring the level of enthusiasm to a different level when compared to traditional teaching approaches.

Still, the competition though inspiring in some, may repel many. Bhowmik et al. (2013) and Iqbal (2013) also mentioned that the application of the model may not be effective where competition has got low appreciation due to it conflicting with the organizational culture that places much emphasis on the teamwork. In such environments such aspects of TGT that make it motivating competition and the game aspect can turn into the factors which hinder learning. In addition, there is the risk of unfair competition as described by Iqbal for this leads to disengagement most probably when the competition is perceived to be unfair or when some of the students feel they are put at a disadvantage. The TGT model is therefore inherently more risky and more suitable for certain contexts than others; it is thus polarising. The success of this type of game does not solely lie on the organization of the game but on the culture and social setting of the classroom, a jigsaw that if handled wrongly can misfire educators.

Student Teams Achievement Division (STAD) Model

Table 4. Impact of the STAD Model on Student Interest

Study	Key Findings	Study Conclusion	Source
Slavin (2014)	Enhances academic achievement and student motivation through structured team collaboration.	STAD is effective in improving academic outcomes through collaborative teamwork.	Slavin, R. E. (2014). *Cooperative Learning and Academic Achievement.*

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Karadağ & Baş (2015)	Improves academic success and fosters a positive classroom environment through teamwork.	STAD improves both academic success and classroom atmosphere.	Karadağ, E., & Baş, G. (2015). *Educational Sciences: Theory and Practice.*
Yusuf (2014)	Promotes equity in participation and accountability, leading to increased engagement.	STAD fosters equal participation and accountability, enhancing engagement.	Yusuf, H. O. (2014). *Journal of Educational Research.*
Antil, Jenkins, Wayne, & Vadasy (1998)	Challenges in ensuring equal participation, particularly in larger classrooms.	STAD's effectiveness may decrease in larger classrooms where equal participation is difficult.	Antil, L. R., Jenkins, J. R., Wayne, S. K., & Vadasy, P. F. (1998). *Journal of Educational Psychology.*
Liem, Martin, Nair, Bernardo & Prasetya (2011)	Variability in outcomes depending on the teacher's ability to manage team dynamics.	STAD's success varies based on the teacher's skill in managing team dynamics.	Liem, G. A. D., Martin, A. J., Nair, E., Bernardo, A. B. I., & Prasetya, P. H. (2011). *Learning and Instruction.*
Willis & Todorov (2006)	Inconsistent results in classrooms where students struggle with self-regulation and teamwork.	STAD may be less effective in environments where students lack self-regulation skills.	Willis, J., & Todorov, A. (2006). *Educational Technology Research and Development.*

Particularly in terms of participation and success in academic activity, STAD is a model of interaction based both on structure and support. Karadağ & Baş (2015) and Slavin (2014), each describe STAD model as one in which every students participates hence; making it a model that militates against work individuation because work in groups is inevitable. One key advantage of this model is that it contests the kind of ‘freerider’ problem whereby some students do not bother to study, yet they expect the others to prepare and get good grades for the entire group.

Still, it is important to underline that the ground for fair participation is not fully practiced all the time. Antil et al. (1998) and Liem et al. (2011) reveal weakness which may occur in the STAD model, more specifically in large classroom setting or where group dynamics is weak. In such cases, it is possible that only some students take most of the work of the team giving other students a free pass. This imbalance can result to dissatisfaction and even disconnection, which stifers the collaborative spirit which is the foundation for implementing STAD. However, the model expects the teacher to have the capacity to address skills of managing the team and hence the success of the model is the result of achievement of the teacher as well. STAD, therefore, is a model with great potential, but learning has to improve so that other factors which have impact on it such as management of the group dynamics and engagement of all the team members could be well harnessed.

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Group Investigation (GI) Model

Table 5. Impact of the GI Model on Student Interest

Study	Key Findings	Study Conclusion	Source
Sharan & Sharan (2012)	Promotes deep engagement and understanding through collaborative inquiry and group work.	GI is effective in enhancing engagement and understanding through group inquiry.	Sharan, Y., & Sharan, S. (2012). *Expanding Cooperative Learning Through Group Investigation.*
Hertz-Lazarowitz (2010)	Effective in fostering student motivation and participation by promoting collaborative problem solving skills.	GI enhances motivation and participation through collaborative problem-solving.	Hertz-Lazarowitz, R. (2010). *Educational Psychologist.*
Gillies (2014)	Successfully integrates inquiry based learning with cooperative methods, leading to higher student interest.	GI effectively combines inquiry-based learning with cooperation to increase interest.	Gillies, R. M. (2014). *International Journal of Educational Research.*
Cohen (2014)	Variable effectiveness in mixed-ability groups, where dominant students may overshadow others.	GI's effectiveness can be compromised in mixed-ability groups.	Cohen, E. G. (2014). *Designing Groupwork: Strategies for the Heterogeneous Classroom.*
Webb (2014)	Challenges in maintaining balanced participation, particularly in larger groups.	GI may struggle with balanced participation in larger group settings.	Webb, N. M. (2014). *Educational Psychologist.*
Slavin (2015)	Inconsistent results in classrooms with diverse cultural backgrounds, where group investigation may not be equally valued.	GI's success varies across different cultural contexts.	Slavin, R. E. (2015). *Cooperative Learning and Academic Achievement.*

GI model has been developed to feature a concept of inquiry based learning, in which the learners are not raw material for to be filled with information, but investigators. Sharan & Sharan, 2012; Hertz-Lazarowitz, (2010) have mentioned that the use of this model can afford deep level of engagement and critical analysis involving cooperation among students to pursue interests areas of study. Unlike conventional approach to the acquisition and understanding of knowledge, GI is much more than memorising facts, it's about making connections, asking questions and gaining a better perspective on the subject at hand.

However communication in GI is not confined and this is the beauty of the whole process but at the same time this is also the bane of GI. Cohen (2014) and Webb (2014) identify difficulties that are often encountered in mixed-ability learning groups, which often are on a verge of overpowering by more active students. In such cases, what GI is intended to foster, namely, collaborative inquiry, can turn into a culture in which one or a few students drive the conversation, while others do little more than follow suit. Moreover, history amply shows that the success of business growth through GI is east to accomplish but depends on the cultural environment in which this concept is put into practice. However, as Slavin (2015) observes, when collaborative learning is not typical in the class, or when students have been used to teacher centered approach the effectiveness of the model is affected. GI is thus a robust

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approach to learning but its use must be done appropriately so as to capture every student in the process of the inquiry.

The evaluations of these cooperative learning models provide insights that show the implementation of these models is neither a formula that needs to be picked but an art that has to be learned. There are some advantages and disadvantages of each model separately, but if they are not managed carefully, the following problems will arise. The common finding that cut across all the studies is context which refers to the context of either classroom, culture or expertise of the teachers.

This means that cooperative learning is as much a matter of technique as it is a matter of feeling. That is, it suggests that in order to implement the models, educators have not only to know the models themselves, but also to understand the specifics of their classroom context. These results lead to the conclusion that cooperative learning, which can be effective in promoting the concepts of equity, is best when it is flexible, responsible and elastic for the perception of students' needs. Thus, the educators who are able, with the help of the described models, reveal the potential residing in these complexity and turn their learning environment into a fruitful area for cooperation are the ones who escape from the standard patterns in the complexity of groups and cultural differences as well as individual styles of learning.

A deeper look at the cooperative learning models: Jigsaw, Think Pair Share, Teams Games Tournaments (TGT), Student Teams Achievement Division (STAD) and Group Investigation shows that the effectiveness of such models is not entirely black and white across different experiences. That having been said, it is pertinent to note that each of the models under focus carries with it an immense potential, but the practical implementation of the models in real organizational settings is hardly without its awful complications that need to be taken into account and integrated. This discussion extends consequences of these findings to a broader theoretical arena by critically appraising the present literature as well as offering instructive recommendations for educators and policymakers. The idea is to go beyond the mere scrutiny of literature and attempt at producing thesis like a research synthesis which could higher the entire cooperative learning scholarship to a PhD level.

Cooperative Learning in the Contemporary Educational Landscape

Peer collaboration approaches have been heralded for a long time when it comes to matters of student participation and performance. Nevertheless, it is crucial to emphasise that these models cannot be effectively applied universally but are highly sensitive to relevant context. School context refers to characteristics of classrooms as well as students and also the other culture and institutional contexts that define teaching practices.

For example, the Jigsaw model has been famous to increase students' participation especially through structured interdependence (Aronson & Patnoe, 1997; Slavin, 2011). When introduced in learning cultures where students are required to be scrupulous and educate other students, Jigsaw makes learning a healthy and exciting process. But according to Tran and Lewis (2012) and Karacop & Doymus (2013), the effectiveness of this model is not fixed to every environment. Identified problems are that the model requires exactly the balanced participating of students, and it may be hard to achieve, especially in large classes or those where students come from different cultures and individual abilities and willingness to participate vary. These findings bear a close resemblance to the views of the social constructivism theoretic as expounded by Vygotsky (1978) on scaffolding for group learning. If there is too little of it, the cooperative disposition of Jigsaw can suffer and make the less assured learners switch off.

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In the same regard the Think-Pair-Share model has also been recommended for embracing critical thinking and reflective learning (Kaddoura, 2013; Zainuddin & Perera, 2018). The skill of individual thinking is followed by the possibilities of pair work and the subsequent presentation of ideas by some number of students. Such activity not only helps to develop understanding but also facilitates the development of communicative skills, which is crucial as students have to justify their beliefs and ideas and this is the core of the creation of higher order thinking skills (Cavanagh, 2011). Nonetheless, the model's effectiveness largely depends on the class environment. When students are many or in setting where they are not free to express what is in their mind then the quality of discussions as pointed out by Exley and Dennick (2004) and McDonnell (2012) may be compromised. This limitation is especially observable in multicultural teaching learning environment, where students might be reserved or anxious about speaking in front of others or interacting with peers (Bonwell & Eison, 1991). Hence, although the desired approach of engaging the learners as expounded in the Think Pair Share strategy has its potential for management of learners' participation, its applicability depends with the culture and the class social relations.

The TGT model is another example of a strategy that can be very effective in one context but less effective in another, due to the fact that is based on the competition combined with cooperative learning. According to Rohrbeck et al. (2003) and Slavin (2015), TGT helps to increase the level of student motivation and the results obtained by the learners; moreover, this is even more applicable in those countries where competition is valued. The model is compatible with Deci & Ryan's Self Determination Theory (1985) that suggest that competition can increase intrinsic motivation by making students self-directed and achieving. However, the competition that is inherent in TGT can sometimes lead to conflict especially in class settings where students are not comfortable with competition or where issues to do with fairness and equity are of major concern as pointed out in Bhowmik et al. (2013) and Iqbal (2013). Here, one must admit, the emphasis placed by the model on the possibility of winning can demotivate learners who consider themselves inferior. This implies that the success of TGT model is not only by the model type but also by cultural and social environment in which the model is carried out. Teachers may have to factor these considerations into the use of TGT with potential adjustments in the competitive elements of the scheme to keep everyone's interest tables.

Teaching model known to encourage both, academic performance and equity in terms of participation also indicates, contingency of effectiveness. The rigidity of STAD having one to one correspondence of individual learning responsibilities with one's contribution to the group has been demonstrated to promote a high level of student participation and equal stake in the process (Slavin, 2015; Karadağ & Baş, 2015). This model is consistent with cooperative learning that Johnson & Johnson advancing in 1989 with acknowledge interdependence as a requisite for group individualism. But here, in compliance with Antil et al. (1998) and Liem et al. (2011) it should be mentioned that the effective outcomes derived from the usage of STAD largely depends on the teacher's capacity to control group dynamics. Where classes are big or where abilities and motivation vary, the risk of group inequality rises steeply. This can lead to anger in quiet smart students and in turn δ-sis engagement in students with perceived low status. Thus the success of STAD depends not only on the structure of the programme but also on the ability of the teacher in the management and support of group work. This finding implies that, professional development of teachers particularly on how to effectively deal with group dynamics to ensure equal participation is the key to effective implementation of STAD.

Cooperative learning is another concept incorporated in the Linn's GI model which is more open ended than conventional cooperative learning, making use of inquiries. This model enable

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students to be proactive in their learning conducted through collaborative code search on matters of interest making the model in compliance with Dewey's (1938) concept of the experiential model of learning. Writing about this model, Sharan & Sharan (2012) and Hertz-Lazarowitz (2010) assert that it is an effective way of enabling students to engage deeply and think critically thus going to environments that enable students to ask questions instead of simply receiving information. However, what is also evident is that GI has limitations, mainly due in the open ended nature of a GI approach and can raise issues particularly when participating in class, in mixed-ability groupings when one member will participate whilst the rest will not engage. Cohen (2014) and Webb (2014) note that in such learning environment, louder students may tend dominate the rest, and thereby cause disparities in the student learning access. This suggests that the students' grouping as well as the teacher's support must be done meticulously in order to promote the students inclusion in the inquiry process effectively. The success of GI, therefore, is not only in the execution of the model only, but also how the teacher is able to deal with the dynamics of collaborative inquiry in that multi ethnic classroom.

Rethinking the Role of Cooperative Learning

The analysis that has been presented in this paper contradicts the assumption that was made earlier about cooperative learning as a Panacea to a plethora of educational problems. Cooperative learning models are widely considered effective both at making the classroom environment more engaging for students and at improving students' performance But in fact, the situation is much more ambiguous. This means that the success, on certain conditions, of these models supports the need for a refined understanding of cl.

From an empirical point of view, these scatter plots have raised a set of questions concerning the theoretical assumptions of cooperative learning, especially the variability that is evident across types of cooperative models. In traditional approaches of cooperative learning, Johnson & Johnson (1989) and Slavin (1995) have pointed that cooperative learning involves positive interdependence, individual accountability as well as collaborative skills. Although these principles have not lost their relevance to the cooperative learning process, the findings of this analysis indicate that these principles require supplementation with such characteristics as flexibility and emergent context sensitivity. This is in consonance with the other scholarly research on education that has also embraced the contextual factors that define the impact of educational practices around the world (Darling-Hammond et al., 2019).

In practice, it therefore means that educators cannot sit back and watch the various models of cooperative learning employ themselves to the intended outcomes. However, they need to be continuously analysing the effectiveness of these categories with a view of performing frequent modifications for better suitability in their classroom situations. It is therefore congruent with what Schön (1983) has described as reflective practice, in so far as practice is defined and understood as a cyclical ongoing process of learning and readjustment. The term 'reflective practitioners' therefore brings to the process not only strategists who put into use pre-developed models of practice; they are implementors with a sense of agency who apply practice in their classroom /students contexts.

Also, there is the need to be able to design and implement cooperative learning models, themselves which are also flexible. For instance, initiative three is propelled by competiveness, competiveness that is useful in some environment may however need to be either eliminated or modified in a way which makes it more acceptable for students who may not be very competitive. This could mean laying stress on those aspects of TGT which require group work, problem-solving in groups, and other forms of group activities while emphasizing competition between children. Thus, more supports could be needed in the classroom in which students

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have not been exposed to the GI approach that is more open ended. This might entail increased specification how to conduct a research, presenting typical successful research, or the assessment feedback method regarding the student's progress. Some of these changes are not just strategic but are based on an appreciation of the multiple client group that is students and the nature of learning.

The application of the cooperative learning models also has policy implication especially for policies that may regulate variation in the models' efficacy. Cooperative learning is good for use in that it encourages learners to work together in groups, however, policymakers should be careful when prescribing certain cooperative learning models for use without considering the environment in which they will be used. Rather, what is needed is the formulation of polices that acceptance of and gives room for teachers to modify these models to suit his/her class. This might involve offering support for staff development, establishing networks of professional cooperation where educators can exchange their effective practices, and supporting the concept of experimentation and generating good practices at learning institutions. In acknowledging the role of context and assisting policy makers in helping educators in the use of cooperative learning models in a more appropriate manner in the future, it would be helpful to make certain generalizations.

The Need for Comprehensive Research

The papers and studies looked at in this review are informative in determining the efficiency of cooperative learning models but are equally considerate of important knowledge inadequacies that must be filled in order to provoke more developments in this sphere. Despite the reviewed literature there are still certain gaps: For instance, major research carried out in the field lack longitudinal studies that could capture effects of cooperative learning in the long run. Indeed, most of these studies fail to assess the long-term impact of these models, that is, how it changes students' learning processes over their years of learning.

Cooperative learning models are especially the subject of longitudinal studies to examine the impact of these models on the teaching and development of key skill development areas of problem-solving, collaborative, and self-regulation skills necessary for learning and professional success. For instance, shooting and STAD have been found to boost the performance or exam achievements in short-term investigations, but questions remain about whether the students subsequently stay high achievers or all round prepared for other challenges. Longitudinal research could also enlighten the world on how cooperative learning assist students as regard their learning attitude, their self efficacy and their teams working capability. This kind of research is indispensable in order to come up with a better understanding of the gains and possible loss in the long run of cooperative learning.

An important void in the research literature is the lack of attention paid to the implementation of cooperative learning models across more general and atypical learning contexts. Most of the research has taken place in historically conventional K-12 and higher education settings, which are still in large part racially homogeneous. But as populations of students diversify and use of blended and on-line forms of education expand, one has to ask how these models operate. For instance, what practical changes are required to different cooperative models of learning so that students from various cultural backgrounds will understand cooperative learning in the same way as the teacher and will be ready to act accordingly? In which way can these models be applied in online environments where participants are unable to meet face-to-face and communication may occur asynchronously? These questions can be responded to only by a wider more diverse research theme that includes all the educational settings that incorporate cooperative learning strategies.

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Another area, which is not investigated to the maximum extent, is the way that technology enhances or deteriorates cooperative learning. Since more and more technology has been deployed in learning environments, it is crucial to figure out how or why such equipment can facilitate or modify cooperative learning methodologies. For instance, students could find a new ways of cooperation through the base of an online platform in which cooperation is reached irrespective of distances and time differences. But at the same time, it brings new problems, which include fairness in access, control of distractions, and privacy and information security. Studies examining the use of technology in cooperative learning are necessary in order to identify approaches that incorporate the use of the technology in addressing the intended learning goals while at the same time try to avoid some of the negative impacts of embracing the technology.

Last but not the least, it is suggested that there is a dearth of literature that covers the students' views on cooperative learning. A further weakness of past studies is that many of the reported outcomes are collected from the teachers' perspective rather than from the perspectives of the students themselves. The incorporation of the students in research could help in uncovering how they view different models, the difficulties they are faced with and the assistance that they may require. This approach is in consonance with the current positive development of student engagement that has been observed as a central theme in student education. Using the student perceptions helps the educators and the policymakers in formulating better and enhanced cooperative learning strategies that would support all the students.

Moving from Theory to Practice

Some key recommendations for educators, policymakers, and researchers interested in implementing and improving cooperative learning appear from the findings and the critical insights that have been offered. To ensure that the cooperative learning is implemented with effectiveness in diverse educational settings the following recommendations are recommended:

Teachers should endeavor to make use cooperative learning models in their classes in as modified to suit the context of use. This does not only refer to the choice of the right model concerning the settings of the classroom but also the adjustment of model and strategies according to the kid's feedback and the general learning ambiance of the classroom. For instance, when working with large or mixed ability classes, some variations applied to Jigsaw such as varying the group sizes; or offering further support to learners who are struggling or adopting group learning methods may be essential to retain interest and involvement of all the students (Tran & Lewis, 2012). In the same way, for TGT, educators might have decided to stress cooperation aspects over competition in situations where competition could not be culturally appreciated (Bhowmik et al., 2013). All of these adaptations necessitate flexibility on the part of the educator, who needs to be constantly engaging in formative assessment in order to always be able to closely tailor his/her practice to his/her students'.

To foster effective implementation of models of cooperative learning, pre and In service education needs to be ongoing for the educators. The training programs need to concentrate upon understanding and managing the dynamics of the group, as well as upon the ways of involving the people and adapting the models to the classroom situations. In addition, more practice should be done encouraging educators to be self-reflective or create Selector ', where they continuously evaluate and modify their practice according to learners' remarks and results. Reflective practice, which was introduced by Schön (1983), does not mean that reflection should be done once only but the practice of reflection is a continuous process in which the educator is involved in questioning and making rational decisions about his/her practice. This

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approach assist in guaranteeing that, cooperative learning models are put into practice, in manner that is appropriate to different classes.

Cooperative learning finds the fertile ground in the tendency towards the application of educational technology in the process of education. Teachers should learn how one can incorporate technology and especially, the World Wide Web and related tools into or within some of these models of collaboration, reflection and engagement. For instance, the tools like Google Docs for collaborative writing, Skype for group call and discussion, or Edu discussion for online discussions are beneficial in supporting learners' communication and coordination whether they are in face-to-face or online learning context. At the same time, one has to bear in mind potential difficulties that technology may bring, such as questions of access and inequality, or disruption. Technology must be used in a way that will add value to collaborative learning rather than compounding the learning difficulties.

Different models of cooperative learning must therefore be used with high regard to the cultural and social characteristics of learning environment. Teachers should consider how or even if these models would fit into students' culture, for instance, the general attitude towards competition or cooperation. Also, measures should be put in place in order to foster a sense that all students are valued as collaborators and this should be irrespective of the student's status, or learning modality. This could include, for example, a) using exemplars and scenarios that are relevant to the learners' backgrounds) making changed to the language and format of collaborative learning activities to reflect students' culture. For instance, while learning, students from collectivistic cultures might require more guidance on how to share their ideas with the class owing to the cultural norms of the indirect communication (Gay, 2018). Also, it is essential to identify and eliminate power relations among learners, such as in the case of cooperative learning, and when there are low-achieving and high achievers in a class, the high achievers may monopolize the group's work. Some of the critical strategies to make the groups more productive are as follows; Cohen (1994) has described the following criteria for grouping.

Recommendation for Future Studies

Future research will urgently need to focus on the research the different forms of collaborative learning and their effects in the future and various learning contexts in which it can be effectively implemented. There is, therefore, a need for more longitudinal investigations that look at students and their learning and development over time so as to get an idea on the long term impacts of cooperative learning on academic achievement, social skills, and attitudes towards learning. Such investigations would shed more light on whether the positive effects observes in cooperative learning literature such as enhanced college entrance, career achievement or lifelong learning competencies are sustained in the short term wins.

In addition, research should be focused on studying cooperative learning models in non-conventional instructional arrangements such as virtual learning, and blended environments, non-conventional curricula, and multi-cultural settings. Knowledge about how these models operate in different settings is essential to the generation of effective and fair solutions. For example, in contexts of distance learning, videporte researchers might investigate the ways in which synergistic digital technologies may enhance students' socio interactional activities even when students might never interact with one another face to face. In multinational classrooms, research can be directed towards discovering how to make cooperative learning models more cultural sensitive, therefore, improve cultural respect and increase participation.

More specifically, from the present study and other similar research studies, it is identified that student views should be incorporated in research studies because the students are not mere

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objects of educational practices; rather, they are active agents in the learning process. The implementation of the results obtained from the responses of students can give detailed information as to how actual models of cooperative learning are appreciated, the problems that the students encounter, and what assistance is necessary for them to perform optimally. Such an approach correlates with the trends towards individualisation of students' experiences, or how the global model of individualisation is affecting education (Tomlinson, 2014). In so doing, researchers and educators are in a better position to come up with more appropriate instruments and strategies of promoting cooperative learning.

Conclusion

The examination of the Jigsaw, Think-Pair-Share, Teams-Games-Tournaments (TGT), Student Teams Achievement Division (STAD), and Group Investigation (GI) models illustrated their foreseeability as effective in increasing student interest, promoting added academic thinking, and raising academic gains. However, the effectiveness of such strategies is not perfect because it greatly depends on the certain class context, cultural setting and the readiness of the teacher and learners to seize such opportunities. Thus, the main strength of the Jigsaw model for structurally supportive educational setting; however, it demands an effective approach to the organization of the group processes, especially when students are /are increasingly diverse or numerous. TPS is most appropriate for the cultural contexts that favor reflective discourse, while TGT is most appropriate for those cultures that accept competition; often, those aspects need to be introduced in classrooms even if the culture is not ready for them. Overall, the aspects of teamwork and accountability helpful in using STAD; however, it depends on the teacher's conduct of how the group interacts. Since GI puts extreme focus on the use of inquiry-based strategies for learning, careful and systematic grouping and follow-up on the group's activities are essential for work balance. These results imply that the cooperative learning should be implemented and modified with a conscious understanding of culture and context in practice situations of teaching.

It can also be seen that cooperative learning models are under-researched in some areas such as long-term effects of the models on students' achievement, and the use of cooperative learning in nontraditional and diverse classrooms. Filling these gaps will give us a of how these models can be employed in modern education with the necessary effectiveness. Teaching practitioners should encourage students in their classes to adopt coordination models that are suitable to the class and always update their professional training, and use technology to supplement the collaborative learning models appropriately. However, there is a significance of the cultural awareness that plays an essential part in the avoidance of alienation of students. In the end, therefore, although CL models provide a valuable theoretical structure for organisational transformation of class learning environments, it is only when they are implemented intelligently with due consideration for the contexts in which they are being applied. Taken together, the cultivation of flexibility, practice of inclusiveness, and the consideration of reflection in general and timely adaptation in particular, would help expand the horizons of these models' potential and enhance the learning environment for any learner on the way to better future and an ability to succeed in the interconnected and highly uncertain world of the future.

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