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Exploring YouTube as a collaborative learning platform for accounting education in Ghana: A social capital theory approach

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Abstract

Recognizing the limitations of traditional teaching methods in accounting education, this paper advocates for innovative strategies, such as integrating social media to enhance peer collaboration and engagement. Accordingly, we examined students' perspectives on using YouTube as a collaborative learning platform for accounting education. Grounded in social capital theory, data were collected from 141 accounting students in Ghanaian higher education institutions regarding their experiences with YouTube for collaborative learning. Using Partial Least Squares Structural Equation Modeling (PLS-SEM), the study found that diversity, peer support, and user trust significantly influence students' intentions to use YouTube for collaborative accounting learning. These findings highlight YouTube's potential to foster meaningful academic interactions. Furthermore, user trust was found to be shaped by personal, environmental, and behavioral factors. The study recommends that learners critically assess YouTube videos by evaluating the source's credibility, the creator's expertise, and the content's purpose to ensure the reliability of accounting resources. Future research could explore initial adoption factors and the role of educator training in facilitating content-based collaboration.

Keywords: YouTube, collaborative learning, accounting education, social capital, education

Introduction

Accounting education in developing countries faces persistent challenges, including limited resources, shortages of qualified instructors, and restricted access to updated materials (Mosbah et al., 2022; Lubbe & Coetzee, 2018). These constraints have prompted educators to explore technology-enhanced learning (TEL) solutions that can bridge gaps in accessibility and quality. In view of the various approaches to improving accounting

education, this study explores how YouTube can promote collaborative accounting learning in developing countries by enhancing accessibility, quality, and interactivity.

The rapid growth of digital technologies has indeed created new opportunities for educational innovation (Apostolou et al., 2017; Kroon et al., 2021). Among these, YouTube has emerged as a crucial platform for both informal and formal learning, offering visual and practical demonstrations that enhance understanding of complex accounting concepts (Holtzblatt & Tschakert, 2011; Egiyi, 2022; Yildirim, Elban, & Yildirim, 2018). Its on-demand format, user-generated content, and broad accessibility make it a particularly valuable, affordable tool in resource-constrained settings, helping to democratize education and promote digital inclusion (Chung et al., 2015; Maziriri et al., 2020). It allows content to be created in local languages with subtitles, ensuring quality and supporting language diversity. The platform's low cost and broad accessibility help promote digital inclusion, reducing the educational access gap for more students (Lubbe & Coetzee, 2018).

Given the global importance of digital learning technologies, social network (SN) technologies are increasingly integrated into academic curricula, with policies designed to provide the essential knowledge and literacy needed for effective social network learning (Bakir, 2016). In digital learning, social network tools are web-based platforms that support communication, collaboration, and information sharing (Rodríguez-Moreno et al., 2021). These tools are crucial for connecting people and enabling user-generated content to support communication and teamwork (Shriver et al., 2013). According to Williamson (2021), the educational landscape is undergoing significant changes due to the growth of various social networking platforms. For example, bookmarking services, professional networking sites, microblogging tools, and video-sharing platforms such as YouTube are transforming how education is delivered and experienced (Bønnelykke et al., 2013; Buzzetto-More, 2014). Since its launch in 2005, YouTube has become a vital tool in higher education, enriching academic experiences and helping address challenges in accessing quality educational resources, especially in developing countries (Gan et al.,2015).

While prior research highlights YouTube's role in content delivery and informal learning (Jackman, 2019; Maziriri et al., 2020), its potential as a collaborative learning platform remains underexplored, particularly in resource-constrained contexts. Despite the growing use of YouTube in higher education, research on its role as a collaborative learning platform in accounting education in developing countries is rare. Existing studies have focused on content delivery rather than the social dynamics that drive engagement. This gap is significant because collaborative learning is critical in accounting education, as it fosters higher-order thinking, teamwork, and communication skills essential for professional practice (Oosthuizen et al., 2021; Millis, 2023). Social networking tools, including YouTube, can inherently support these interactions by enabling peer engagement and knowledge sharing (Greenhow & Lewin, 2019). As the accounting field advances,

there is a growing need for accountants who can collaborate, understand business situations, identify informational needs, meet those needs, and communicate the implications of financial data to nonexperts (Winfield, 2021). As a platform for collaborative learning, YouTube can help address these needs by preparing students for the dynamic, cooperative nature of modern accounting practices.

Consequently, this study applies Social Capital Theory (SCT) to explain how relational assets shape collaborative engagement on YouTube, thereby contributing to the TEL literature. Understanding how diversity, peer support, and user trust influence collaborative learning is critical for designing effective technology-enhanced learning strategies in resource-constrained environments. These constructs, such as trust, diversity, and peer support, shape students' perceptions of YouTube as a collaborative learning platform in accounting education. Hence, this research provides empirical evidence on the social factors driving engagement, based on survey data from Ghana. In doing so, it makes three key contributions to the field of technology-enhanced learning (TEL). First, it moves beyond examining YouTube as a mere content repository to investigate its role as a collaborative platform that fosters social learning networks. Second, it extends SCT to digital learning environments, providing a theoretical framework for understanding how relational assets drive adoption. Third, it addresses a critical gap by focusing on the realities of a developing country, where infrastructural constraints significantly shape technology use. The success of TEL initiatives depends not only on resource availability but also on the social capital that underpins collaborative engagement.

Drawing on survey data, this research examines the factors shaping students' perceptions of YouTube as a collaborative learning platform in higher education in Ghana. This investigation is timely and relevant for educators and curriculum developers seeking to design inclusive, trust-based, and socially supportive learning environments. Ultimately, by understanding these dynamics, this study aims to inform strategies for integrating YouTube into accounting education, ensuring that technology adoption is not merely a matter of access but a catalyst for meaningful collaboration that prepares students for successful careers.

Literature Review

YouTube for accounting education

Technology plays a crucial role in education, as evidenced by its importance during the COVID-19 pandemic (Mustapha et al., 2021). Ali (2020) and Boruzie et al. (2022) underscore the need to integrate technology into educational curricula, emphasizing its vital role in both teaching and learning. The UNESCO Report on Education (2023) identifies five ways in which technology affects education: inputs, delivery methods, skills

development, planning tools, and the social-cultural context (Antoninis et al., 2023). The report advocates using digital learning tools effectively to increase student engagement, enhance lesson plans, and support personalized learning, demonstrating that technology is a powerful educational resource for modern teaching.

Many studies highlight the transformative role of technology, especially YouTube, in accounting education. These studies emphasize the importance of including video content and interactive features to actively engage students (Almobarraz, 2018; Fynn at al., 2021). According to Doran (2022), YouTube not only enhances higher education but also fosters inclusive learning environments that promote collaboration, communication, creativity, and critical thinking among students and teachers. McKnight et al. (2016) support this idea, suggesting that educators should use educational technology strategically to meet their students' diverse needs, emphasizing the importance of providing optimal support.

In addition to the studies mentioned above, Jill et al. (2019) examined how instructor-created YouTube videos affect student performance in principles of accounting classes. They reported that using videos improved student performance, engagement, motivation, and perceptions. Students primarily watched the videos to review for exams and found them helpful, believing they should be used in class. However, they did not necessarily want video classes to replace traditional classes. This study provides valuable insights into how instructor-produced videos can effectively deliver course content.

According to Hund and Getrich (2015), traditional learning has recently been challenged by virtual learning platforms, including YouTube and other social learning platforms, which offer engaging, rich content. For example, a study by Topps et al. (2013) found that learning tutorials shared on YouTube are widely regarded as effective and convenient ways to share information with peers, faculty, and colleagues. Additionally, Jackman (2019) argued that YouTube is one of the best electronic academic resource platforms used by students in modern higher education institutions in developing countries. Therefore, in some developing nations with resource constraints and limited access to high-quality educational materials, YouTube offers a cost-effective way to close this gap. Access to numerous accounting-related YouTube videos helps students grasp complex concepts and enhance traditional classroom learning. While YouTube offers numerous advantages, it also faces challenges, including a lack of quality control, concerns about the accuracy of information, and potential distractions from noneducational content. Furthermore, limitations in internet connectivity and infrastructure, particularly in developing countries, may restrict the effective use of YouTube as an educational tool.

YouTube and Collaborative Learning in Accounting Education

Collaborative learning is an educational approach in which students work together in groups to achieve shared learning objectives (Hmelo-Silver & Chinn, 2015). It fosters

active participation, interaction, and cooperation among students, who exchange perspectives, knowledge, and skills to solve problems, complete tasks, or discuss course materials. According to Espey (2018), collaborative learning enhances students' critical thinking, communication, teamwork, and leadership skills while deepening their understanding of the subject through peer interaction and shared exploration.

In accounting education, collaborative learning involves students working with peers and course materials to explore accounting principles, solve problems, and complete assignments together (Millis, 2023). This approach transforms accounting educators into facilitators who foster active student participation and critical thinking. By working in groups, students develop the skills needed for a professional accounting environment, where teamwork is crucial (Misseyanni et al., 2017). Collaborative learning in accounting thus prepares students for the field's demands by emphasizing real-world problem-solving and communication skills within the framework of accounting principles and practices.

YouTube plays a crucial role in improving collaborative learning in accounting education in developing countries, as noted by Jackson et al. (2023). According to their research, the YouTube platform provides free access to a wide range of accounting-related educational content, including tutorials, lectures, and explanatory videos. This accessibility helps close the gap in formal education and provides valuable learning opportunities for those who lack access to quality accounting programs. Using visual aids, animations, and interactive demonstrations, YouTube effectively makes complex and abstract accounting concepts easier to understand, even when supported only by traditional textbooks (Holtzblatt & Tschakert, 2011; Ong & Djajadikerta, 2019).

Furthermore, YouTube serves as a global hub for accounting knowledge, providing diverse perspectives on accounting practices, standards, and international contexts, as noted by Boritz and Stoner (2014). This exposure enhances students' understanding and prepares them for the evolving nature of the accounting profession. Additionally, YouTube offers tutorials on prestigious accounting certifications and covers soft skills essential to well-rounded accounting professionals, as highlighted by Olugbade et al. (2023). However, learners should practice critical thinking and verify information from reputable sources to ensure a balanced approach when using YouTube as an educational resource. Therefore, accounting education in developing countries can help students understand the profession's challenges and opportunities by leveraging YouTube resources to promote collaborative learning.

Theory and Hypothesis Development

Theory

In the field of social networks in education, various theoretical frameworks, such as the Technology Acceptance Model (TAM), Social Constructivism, Connectivism, Social

Capital Theory, Community of Practice (CoP), and Diffusion of Innovation Theory, are commonly used to understand the complex dynamics and effects of social networks on learning and teaching. These theories, as shown by studies from Boruzie et al. (2022), Ibrahim et al. (2017), and Kamal et al. (2020), offer valuable insights into the multifaceted interactions within educational social networks.

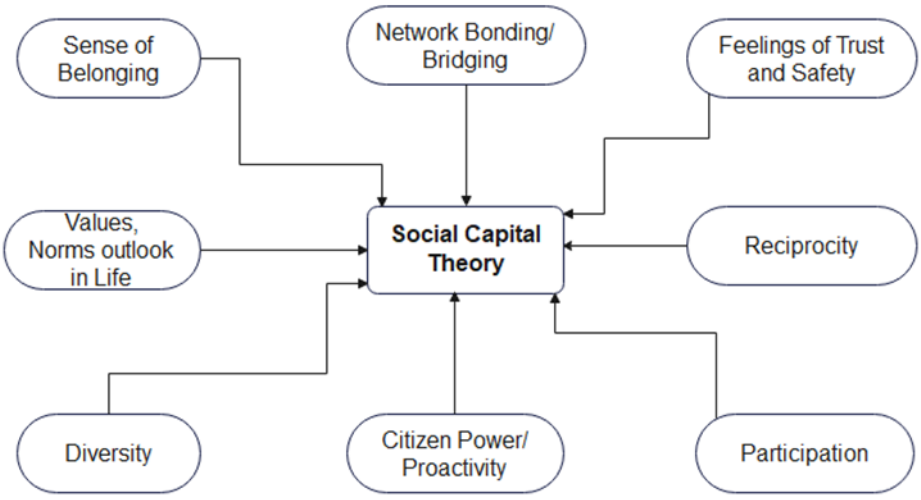
Therefore, this study uses social capital theory (SCT) as a framework to examine the factors influencing the use of YouTube for collaborative accounting education in developing countries. The rationale for selecting SCT over models such as the TAM lies in its relevance to the interpersonal and communal aspects of learning. While the TAM focuses on individual adoption behaviors, SCT offers a richer lens for understanding how social dynamics influence engagement on platforms such as YouTube. SCT emphasizes the role of resources and benefits derived from social connections in shaping individual and societal outcomes (Lin, 2002). Several factors affect SCT, including history and culture, social structures, family, education, the built environment, residential mobility, economic inequalities, social class, the strength and traits of civil society, and patterns of individual consumption and personal values. These factors are essential for understanding how social capital functions.

In this study, we examine the factors that influence education, social structures, and individual consumption patterns and values. Education is crucial because it provides the foundation for acquiring and sharing knowledge, which is essential for collaborative learning (Chen, Chen & Kinshuk, 2009). Social structures, especially digital platforms such as YouTube, support the development and nurturing of learning networks. Personal consumption habits and values also affect learners' motivation to participate in collaborative learning. As Warren et al. (2001) note, by leveraging and nurturing social capital, communities and institutions can promote cooperation, build trust, and create opportunities for collective growth and well-being.

This study extends SCT by incorporating the dynamics of digital learning platforms, particularly YouTube. It updates SCT's traditional view of social structures to include digital frameworks that support online collaborative learning. The study also recognizes the evolving patterns of individual content consumption in the digital age, where learners actively seek knowledge from diverse online sources. As a result, this research emphasizes the social capital formed through collaborative learning networks on YouTube, highlighting access to diverse perspectives, information, and peer support, which can improve students' academic performance.

Figure 1

Social capital framework (Halpern, 2005)



Hypothesis development

As a global platform, YouTube naturally reflects diversity. Learners from diverse backgrounds, cultures, and experiences contribute to the richness of content and perspectives available (Wrench, 2016). This variety is reflected in the teaching methods, examples, and even the languages of instruction used in the videos. As a result, a learning environment that values diversity promotes inclusivity, helping learners from different backgrounds feel welcome and represented (Sanger & Gleason, 2020). Such an inclusive atmosphere may attract individuals who feel marginalized in traditional learning settings to participate actively on YouTube. This participation can foster a dynamic, culturally aware learning community (Luna Scott, 2015).

H1: A relationship exists between diversity and social influence on users' decisions to use YouTube for collaborative learning in accounting education.

Trust, a fundamental element of online interactions, plays a crucial role in shaping social influence and the decision to use YouTube for collaborative accounting learning. As Chang et al. (2017) emphasize, trust strongly influences how learners engage with YouTube content. In collaborative accounting learning, users are more likely to be influenced by and interact with content creators perceived as knowledgeable and credible in accounting (Harper et al., 2023). Consistently providing accurate, valuable, and reliable accounting information helps build trust and attract a larger audience for collaborative learning.

H2: There is a relationship between user trust and social influence in the use of YouTube for collaborative learning in accounting education.

Reciprocity, defined as the social norm that obliges individuals to repay favors, gifts, or assistance received (Belmi & Pfeffer, 2015), is a crucial factor in social influence and in

the use of YouTube for collaborative learning in accounting education. This norm significantly influences people's behaviors and attitudes, especially in collaborative learning environments. Social media platforms, including YouTube, facilitate collaborative learning by providing opportunities for knowledge sharing and acquisition and by strengthening social presence and trust among learners (Mohammed et al., 2021).

H3: There is a relationship between reciprocity and social influence in the use of YouTube for collaborative learning in accounting education.

Social norms strongly shape how social interactions unfold and how individuals choose to participate in collaborative accounting learning on YouTube. These norms are unwritten rules or expectations within a society or community that guide individual behavior and interactions (Chung & Rimal, 2016). When learners see many peers, respected individuals, and experts using YouTube for collaborative learning, they are more likely to follow suit (Ansari & Khan, 2020; Allen, 2016).

H4: A relationship exists between social norms and the social influence of using YouTube for collaborative learning in accounting education.

Peer support plays a vital role in shaping social interactions and encouraging individuals to engage in collaborative accounting learning on YouTube. This support can take many forms, such as participating in discussions, sharing insights, and offering explanations to peers (Barber et al., 2015). Active participation fosters a supportive learning environment and increases motivation among learners (Rachman et al., 2022).

H5: A relationship exists between peer support and the social influence of using YouTube for collaborative learning in accounting education.

The availability of accounting educational resources strongly influences individuals' decisions to engage in collaborative accounting learning on YouTube. These resources include various types of support, materials, and opportunities that enhance learning and interaction on the platform (Balbay & Kilis, 2017). Channels such as "Executive Finance," "Accounting Stuff," and "Farhat Lectures" offer high-quality tutorials and lectures that motivate learners to use YouTube for collaborative learning (Maziriri et al., 2020). Therefore, it is hypothesized that learners are more likely to be influenced by the platform's value when it provides high-quality materials, expertise, interactivity, opportunities for collaboration, and personalized learning experiences.

H6: There is a relationship between access to resources and social influence in using YouTube for collaborative learning in accounting education.

Active participation is essential to shaping social influence and motivating individuals to engage in collaborative accounting learning on YouTube. Participation demonstrates the platform's value, builds a sense of community, and improves the overall learning experience (Berry, 2017; Kapur, 2018; Nortvig et al., 2018). Fully immersing oneself in

the learning process, by participating in discussions, commenting on videos, and sharing insights, lays a strong foundation for developing hypotheses.

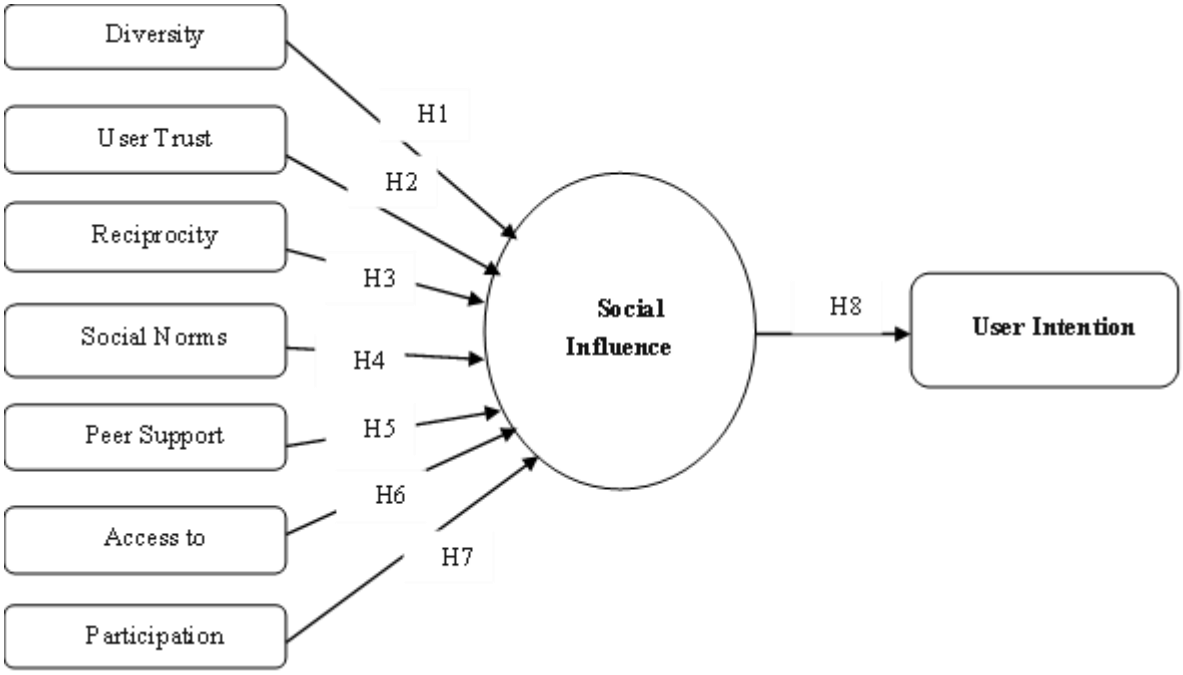
H7: A relationship exists between participation and social influence in the use of YouTube for collaborative learning in accounting education.

Social influence refers to the impact of others' actions, opinions, recommendations, and behaviors on an individual's decisions and actions. In collaborative accounting learning on YouTube, social influence plays a crucial role in shaping users' intentions (Munaro et al., 2021). Positive recommendations and endorsements from peers who have benefited from using YouTube for collaborative accounting learning can significantly influence an individual's intention to use the platform (Harrigan et al., 2021). These constructs are presented in Figure 2.

H8: A relationship exists between social influence and user intention to use YouTube for collaborative learning in accounting education.

Figure 2

Conceptual framework of the research



Methodology

Sampling and data collection

This study employed a questionnaire-based survey to collect data from accounting students in Ghanaian higher education institutions who have experience using YouTube for learning. The questionnaire was designed in line with the study's conceptual framework (Figure 1) and the hypotheses derived from the SCT. The questionnaire was divided into two sections:

Section A, which collected demographic and general information, and Section B, which focused on the constructs relevant to the objectives. Section B questions were closed-ended items measured on a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree).

The participants were selected via purposive sampling through a snowball technique, which was appropriate given the dispersed nature of the target population and the specificity of the inclusion criteria. This approach facilitated efficient access to students who actively use YouTube for collaborative accounting learning. Due to the nature of snowball sampling, the exact number of individuals invited to participate could not be determined, as participants were encouraged to share the survey with eligible peers. Ultimately, 141 students completed the survey, exceeding the minimum sample size required by the "10-fold rule" in partial least squares-structural equation modeling (PLS-SEM). According to this rule, the minimum sample size should be 10 times the number of indicators for the most significant construct. With the construct "User Trust" comprising six indicators, the minimum required sample size was 60 (6 × 10).

Ethical considerations were prioritized throughout the data collection process. Informed consent was obtained from all participants, and participation was voluntary, anonymous, and without coercion. The questionnaire clearly outlined the study's purpose, ensuring that respondents understood the context and provided honest, informed responses. A pretest involving 24 students was conducted to validate the questionnaire's clarity and reliability before full deployment.

Method of Data Analysis

The data were analyzed using partial least squares structural equation modeling (PLS-SEM), a multivariate technique that integrates factor analysis and multiple regression to assess relationships among observed and latent variables (Olaleye et al., 2019; Agbo et al., 2020; Boruzie et al., 2022). PLS-SEM is a variance-based approach to SEM and was deemed appropriate for this study because of its robustness, predictive orientation, and suitability for exploratory research grounded in theoretical frameworks such as SCT. The analysis followed a two-step procedure comprising measurement model assessment and structural model evaluation. The measurement model assessed the reliability and validity of the constructs, whereas the structural model examined the relationships among the constructs as specified in the research questions. This analytical approach provides a comprehensive understanding of how SCT components influence social interactions and students' intentions to use YouTube for collaborative accounting learning.

Results

Descriptive

Table 1 presents the demographic characteristics of the respondents. Of the 141 valid responses collected, 63.12% were male and 36.88% were female. As shown in Table 1, most respondents (63.12%) used Android phones for collaborative learning through social networks. YouTube was the most popular social platform for this purpose (65.25%), followed by WhatsApp Messenger (17.02%), whereas LinkedIn was the least common. Most participants had less than six years of experience with social networks for collaborative learning. When challenges related to using YouTube for accounting education are considered, the primary issue (53.90%) is the need for a reliable internet connection, which aligns with Roodt and Peier's (2013) findings. Although Bećirović and Dervić (2023) raised concerns about the cellular data costs associated with extended YouTube use, 68.79% of respondents cited YouTube's user-friendly interface, clarity, and diverse voices as reasons for its popularity in accounting learning.

Table 1
Descriptive statistics of the respondents

Category	Variables	Frequency (N=141)	Percentage (%)
Gender	Male	89	63.12
	Female	52	36.88
Age Range	18-24	39	27.66
	25-34	80	56.74
	35-44	20	14.18
	45-54	2	1.42
	Above 54	0	0.00
Qualification	HND/Diploma	65	46.10
	Bachelor	62	43.97
	Master's degree	6	4.25
	Doctorate	2	1.42
	Others	6	4.25
Level of current study	Year 1	25	17.73
	Year 2	31	21.98
	Year 3	22	15.60
	Year 4	9	6.38
	Completed	54	38.30
Device used for online learning	Android Phone	89	63.12
	Apple Phone	24	17.02
	Computer	2	1.42
	Tablet	25	17.73
	Others	1	0.71
Social Networking site used for learning	Facebook	3	2.13
	YouTube	92	65.25
	WhatsApp	24	17.02
	LinkedIn	2	1.42
	Twitter	20	14.18
Have you used YouTube for Accounting learning before?	Yes	141	100
	No	0	0.00
How long have you used YouTube for Accounting learning?	Less than 2 years	77	54.61
	Between 2-5 years	54	38.30
		10	7.09

	Between 5-10 years	0	0.00
	More than 10 years		
Motivates you to use YouTube for accounting learning	Rich content	14	9.93
	Diversity of video voices	23	16.31
	Easy to use and understand.	97	68.79
	Peer support	2	1.42
	Frequent participation in YouTube videos	5	3.55
What challenges did you face in using YouTube for accounting learning?	Inaccurate accounting information	8	5.67
	The need to review multiple videos to find good educational content	35	24.82
	You need a good internet connection		
	Not every video is reliable	76	24.82

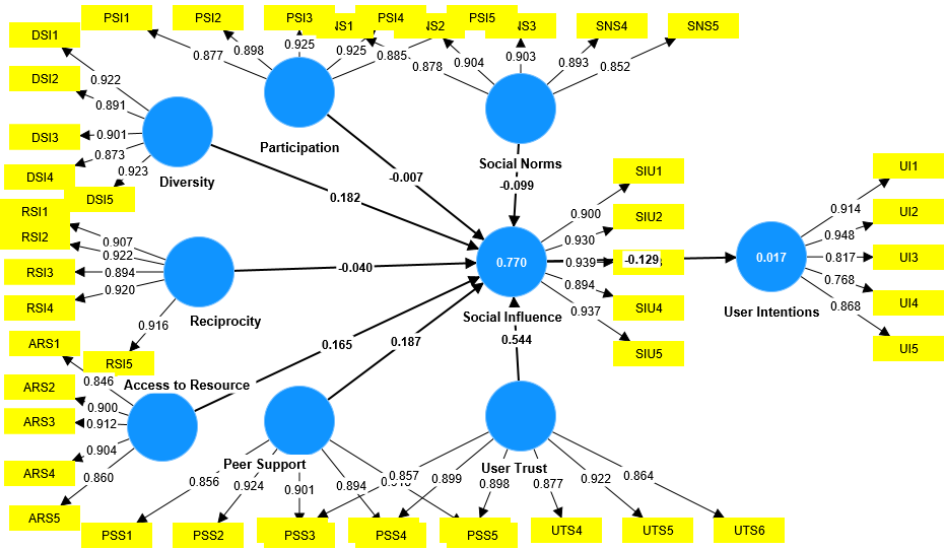
Measurement Model Assessment

Indicator Reliability

The reliability of an indicator is defined as "the degree to which a variable or set of variables is consistent with what it aims to measure" (Urbach & Ahlemann, 2010, p. 18). According to Hair et al. (2019), indicators with loadings of 0.708 or higher are considered acceptable for assessing construct reliability. All indicators in this study exceeded this threshold, demonstrating strong relationships with their respective latent variables. This indicates that all variables effectively measure the corresponding latent constructs. The results were then used to evaluate both the measurement and structural models, as shown in Figure 3.

Figure 3

Measurement model of indicators



Internal consistency

In Table 2, all variables, excluding the hidden variables, exceed the minimum Cronbach's alpha threshold of 0.70, indicating strong internal consistency (Taber, 2018). Composite reliability values (0.837 to 0.914) affirm data reliability, and values between 0.70 and 0.95 are considered good indicators. Values exceeding 0.95 can compromise model reliability. The observed composite reliability values fall within the specified range, indicating robust data. Rho_A, an alternative reliability measure, is reliable when variables achieve values of 0.70 or higher. Table 2 supports this, as all Rho_A values exceed the 0.70 threshold, providing confidence in the model's reliability.

Table 2

Construct reliability and validity

Variable	Cronbach's alpha	Rho_A	composite reliability	Average variance extracted (AVE
Access to Resources	0.931	0.931	0.948	0.783
Diversity	0.943	0.945	0.956	0.814
Participation	0.943	0.946	0.956	0.814
Peer Support	0.941	0.943	0.955	0.808
Reciprocity	0.949	0.951	0.961	0.932
User Trust	0.945	0.949	0.957	0.786
Social Influence	0.955	0.956	0.965	0.847
Social Norms	0.931	0.933	0.948	0.785
User Intention	0.926	1.116	0.937	0.749

Convergent Validity

Convergent validity is a crucial aspect of construct validation and refers to the degree to which individual items reflecting a construct converge with items measuring other constructs (Urbach & Ahlemann, 2010). In assessing convergent validity, outer loadings

and the average variance extracted (AVE) are key metrics, as Alhassan et al. (2020) indicated. High outer loadings indicate commonality among associated indicators; Fornell and Larcker (1981) propose a rule of thumb that all outer loadings should exceed 0.708 to ensure significance. This rule is based on the correlation between the squared outer loading of a standardized indicator and the commonality of indicators across all constructs. With a minimum threshold of 0.50 to explain a substantial part of each latent-variable indicator's variance, it follows that outer loadings below 0.708 should prompt the elimination of the corresponding indicators from the construct (Bagozzi et al., 1991; Sarstedt et al., 2019). This meticulous evaluation helps ensure the robustness of the measurement model's convergent validity.

Discriminant Validity

Researchers have traditionally used two primary methods, cross-loadings and the Fornell–Larcker criterion, to assess discriminant validity in a model. The cross-loading approach holds that outer loadings should not be lower than the construct's correlations with other constructs; violations of this rule indicate inadequate discriminant validity. By contrast, the Fornell–Larcker criterion compares correlations between latent variables and the square root of the average variance extracted (AVE), stipulating that each construct's AVE should exceed its correlations with other constructs in the model. The criterion posits that discriminant validity is achieved when a construct accounts for more variance among its indicators than among indicators from other constructs in the model. However, recognizing critiques of the Fornell–Larcker criterion, Henseler, Ringle, and Sarstedt (2015) proposed an alternative method, the heterotrait–monotrait ratio (HTMT), to enhance discriminant validity assessment, providing researchers with an alternative and potentially more robust approach.

Structural Model Assessment

Assessing multicollinearity statistics

Multicollinearity occurs when two or more indicators are correlated, and perfect collinearity occurs when formative indicators with identical values are placed in the same indicator block (O'Brien, 2007). While high collinearity is common in many analyses, perfect collinearity is rare but has a substantial impact. The issues caused by high collinearity are serious because they can distort the estimation of weights and the statistical significance of formative indicators. Hair et al. (2012) suggested a minimum threshold of 5 or below to reduce collinearity problems. This means that indicators at or below this threshold have a perfect linear correlation with their independent variables. As shown in Table 3, the present study does not face collinearity issues, as all values remain within the recommended threshold, consistent with prior research (Hair et al., 2012).

Table 3
Multicollinearity Statistics (Inner VIF Values)

Variable	Social Influence	User Intention
Access to Resources	4.737	
Diversity	4.813	
Participation	4.021	
Peer Support	4.426	
Reciprocity	4.556	
Social Influence		1.00
Social norms	4.727	
User Trust	3.544	

Assessing Structural Model Path Coefficients

In PLS-SEM, the relationships among constructs, known as path coefficients, are essential for understanding the structural model. These coefficients, usually standardized and ranging from -1 to 1, indicate the strength and direction of the relationships. Strong positive correlations are observed when path coefficients are close to 1, whereas weaker, statistically significant relationships occur when path coefficients exceed 1. As noted by Sarstedt et al. (2016), bootstrapping is used to obtain both t-values and p-values for all path coefficients. If, after bootstrapping, t-values exceed the critical value, this suggests a significant reduction in the coefficient's errors within the model. The study adopted a t-value threshold of 1.90, as recommended by Hair et al. (2021). The results, shown in Table 4, indicate that all hypotheses except H1, H2, and H5 were rejected at the 0.05 significance level, suggesting significant relationships among the examined constructs.

Table 4
Path coefficients

Hypotheses	Path	Std_beta (β)	Std_error	T statistics	Decision
H1	DVT -> SIF	0.337	0.152	2.290**	Accepted
H2	UTS -> SIF	0.532	0.090	6.016**	Accepted
H3	RPC -> SIF	0.001	0.119	0.066	Rejected
H4	SNS -> SIF	0.004	0.112	0.062	Rejected
H5	PSP -> SIF	0.317	0.121	2.506**	Accepted
H6	ATR -> SIF	0.205	0.173	1.229	Rejected
H7	PPT-> SIF	0.017	0.094	0.090	Rejected
H8	SIF-> USI	0.137	0.125	1.033	Rejected

β denotes the path coefficient; t denotes two-tailed t statistics at the ** 0.05 significance level.

ATR = Access to Resources, DVT = Diversity, PPT = Participation, PSP = Peer Support, RPC = Reciprocity, SNS = Social Norms, UTS = User Trust, SIF = Social Influence, USI = User Intention.

Specifically, the observed relationships between hypotheses DVT (β = 0.337, t = 2.290), PSP (β = 0.317, t = 2.506), and UTS (β = 0.532, t = 6.016) were significantly related to social influence (SIF) in the use of YouTube for collaborative accounting learning. These

findings support hypotheses H1, H2, and H5. The remaining hypotheses, however, do not support the model, as their t-values were below the minimum threshold of 1.90.

Coefficient of determination (R2 value)

The R2 value is a prominent metric for assessing the adequacy of a structural model, representing the proportion of variance in the endogenous constructs that is explained by the model's relationships with exogenous constructs (Hair et al., 2015). This composite indicator influences both exogenous and endogenous latent variables, with higher values indicating greater predictive accuracy and lower values indicating the opposite within the range of 0--1. While standardized acceptable rules for R2 are challenging due to model complexity and diverse research disciplines, Hair et al. (2011) and Henseler et al. (2009) suggest benchmarks of 0.75, 0.50, and 0.25 for endogenous variables, denoting significance, moderate, and weak relationships, respectively, with a preference for values exceeding 0.75. In the field of information systems research, Chin (1998) proposed thresholds of 0.190, 0.333, and 0.670 to characterize R2 values as weak, moderate, and substantial, respectively, and to provide nuanced insights for researchers evaluating model fit.

Table 5
R-square

Variable	R-square	R-square adjusted
Social Influence	0.770	0.757
User Intention	0.017	0.009

Goodness of fit (SRMR criterion)

The standardized root mean square residual (SRMR) criterion was used to evaluate the model's goodness-of-fit (DoF) in this study. According to the SRMR rule of thumb, lower values indicate a better fit, whereas higher values suggest a poorer fit. As Fassott et al. (2016) state, SRMR values of 0.10 or lower are considered acceptable for a good fit, whereas values above this threshold indicate a poor fit. Given the values in Table 6, this model is well-fitted, with an SRMR of 0.044 that falls well below the thresholds of 0.10 and 0.08.

Table 6
Model fit

Item	Saturated model	Estimated model
SRMR	0.045	0.044
d_ULS	2.730	2.085
d_G	2.453	2.457
Chi-square	1693.146	1695.809
NFI	0.801	0.801

Discussion

This study found that peer support, diversity, participation, social norms, user trust, access to resources, and reciprocity influence students' intentions to use YouTube for collaborative learning in higher education. However, the most influential factors were diversity in the learning environment (H1), peer support (H2), and user trust (H5). These findings suggest that when students experience a diverse and inclusive learning space, receive encouragement from peers, and trust the platform, they are more likely to engage actively. Diversity brings multiple perspectives and richer content, fostering curiosity and participation. Peer support creates a sense of belonging and emotional security, motivating learners to contribute. Trust in the platform ensures that students perceive the content as credible and reliable, reinforcing their willingness to use YouTube for academic collaboration. These results support previous studies (Luna-Scott, 2015; Rachman et al., 2022; Habes et al., 2019; Karampampas, 2020), which highlighted the positive impacts of diversity, peer support, and user trust on active participation and the ongoing use of YouTube for collaborative learning. Jarvis's (2023) findings also showed that learners who receive support from peers and actively participate in discussions on YouTube-based collaborative learning platforms are more likely to develop a sense of belonging and attachment, which encourages them to continue using the platform. That is, through encouragement, shared experiences, learning exchanges, and emotional support, peers can influence learners' perceptions and decisions to engage with YouTube for collaborative learning.

User trust emerged as a critical factor shaping learners' perceptions of YouTube as a credible learning resource. When students believe that content creators are knowledgeable and reliable, they feel confident using the platform for learning. Personal attitudes, perceived usefulness, and ease of use influence this trust. In other words, students are more likely to adopt YouTube for collaborative learning when they find the platform intuitive and beneficial for their academic goals (Chang et al., 2017; Habes et al., 2019; Zhou et al., 2021; Maziriri et al., 2020). Additionally, Harper et al. (2023) reported that, in the context of YouTube for collaborative learning, users are more likely to engage with the platform for learning if they perceive YouTube content creators as reliable, knowledgeable, and credible in accounting. However, these studies also show that user trust in YouTube for learning depends on various personal, environmental, and behavioral factors, including perceptions of YouTube's usefulness and ease of use, users' attitudes and intentions toward using YouTube, and their actual use and adoption of the platform.

Interestingly, factors such as reciprocity, participation, social norms, and access to resources did not show a strong direct influence on students' intentions, as their estimated t-values were below the minimum threshold of 1.90. These findings are confirmed in Table 4 by hypotheses H3, H4, H6, H7, and H8. This does not mean these constructs are irrelevant;

rather, their influence may be indirect. For example, access to resources can enhance the learning experience by providing high-quality tutorials and materials, but without trust and peer support, these resources alone may not drive engagement. Similarly, social norms and reciprocity may create a supportive environment and a sense of community, which can indirectly encourage learners to stay engaged, yet they require complementary factors such as diversity and trust to translate into active participation (Mohammed et al., 2021; Rahman & Sathi, 2020); Youens et al., 2014). Further studies (Belanche et al., 2020; Olasina, 2017) have demonstrated that social norms play a crucial role in shaping social dynamics and students' decisions to participate in collaborative accounting learning on YouTube. According to Khan et al. (2020) and Allen (2016), when learners observe many of their peers, respected individuals, and experts using YouTube for collaborative learning, they are more likely to follow suit. These findings highlight the complex interplay between social and technical factors in digital learning environments (Maziriri et al., 2020; Berry, 2017). Hence, diversity, user trust, and peer support are key drivers of collaborative learning on YouTube. These results reinforce the relevance of SCT in explaining how environmental and social factors shape learning behaviors. For educators and platform designers, creating inclusive spaces and ensuring content credibility are essential strategies for promoting collaboration.

Implications

The study highlights the transformative potential of using YouTube as a collaborative learning platform in accounting education in developing countries. Drawing on the study's findings on diversity, peer support, and user trust, educators in higher education institutions can encourage active engagement with YouTube to enhance collaborative learning. Additionally, expanding access to resources and strengthening social influence can further enhance the perceived usefulness of YouTube for collaborative accounting learning. These insights are essential for shaping policy frameworks that include curriculum development, teacher training, infrastructure upgrades, and internet access, thereby facilitating the smooth integration of YouTube into educational practices.

Furthermore, the study's contributions extend to TEL and accounting education research by clarifying how YouTube can support collaborative learning in accounting. Educators can use these findings to stay current with the latest features and tools of learning platforms, ensuring adaptability and enhancing collaborative learning experiences. Additionally, practitioners are encouraged to create engaging, interactive YouTube content that aligns with learners' preferences to foster a sense of community and active participation. The research also provides a foundation for future empirical studies on the effectiveness of YouTube-based collaborative learning in developing countries, offering evidence-based insights to improve educational practices and enhance the quality of accounting education.

Finally, this study refines and expands social capital theory by introducing three new variables: peer support, access to resources, and social influence. This expansion aims to strengthen the broader field of educational research and instructional design. It also offers theoretical insights into online learning communities, knowledge-sharing dynamics, and the evolving role of technology in educational environments, contributing to the development of educational theories and guiding future instructional strategies. Therefore, this study's implications offer a comprehensive framework for enhancing collaborative learning through YouTube, influencing the future of accounting education in developing countries and beyond.

Conclusion

This study examined how social dynamics shape technology-enhanced learning (TEL) in accounting education in Ghana. Specifically, it validated a collaborative learning model that prioritizes trust, diversity, and peer support over mere resource availability.

Our findings show that the success of a TEL platform such as YouTube depends not only on the quantity of resources but also on the quality of the social capital it enables. The significant influence of user trust, diversity, and peer support indicates that effective TEL in such contexts must be designed and facilitated with these social dimensions in mind. Using PLS-SEM, we confirmed strong positive relationships among user trust, diversity, and peer support in shaping learners' intention to use YouTube for accounting education.

This study contributes to TEL discourse by providing a validated instrument and a refined theoretical model tailored to developing contexts. This underscores the importance of context-specific factors, suggesting that models developed in technologically advanced environments may not apply directly elsewhere. For practitioners and educators, our findings offer a clear directive: simply directing students to online videos is insufficient. To truly harness the power of TEL, educators should actively guide students in building trust, seeking diverse perspectives, and forming supportive peer networks around digital content.

The findings of this study suggest areas for future research on collaborative learning with YouTube in accounting education. First, future research should examine how social factors, such as diversity, user trust, and peer support, interact with initial adoption and the role of instructors in guiding engagement. Second, future research should explore how personal, environmental, and behavioral factors influence learners' intentions to use YouTube for collaborative learning. Furthermore, there is also a need to examine how educators can be trained to create engaging content, facilitate meaningful discussions, and monitor student participation on YouTube. Additionally, comparative analyses of different social network platforms in the context of accounting education could provide more

informed recommendations on the most effective learning platforms, especially in developing countries.

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Author's contributions
All authors contributed to the conception and design of the study. Paschal Kpimekuu Boruzie performed material preparation, data collection, and analysis. Paschal Kpimekuu Boruzie wrote the first draft of the manuscript, and all authors commented on previous versions. All authors contributed to the discussion of the results and contributed to the final drafting of the paper. All the authors read and approved the final manuscript.

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Declarations

Competing interests
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