



The Relationship between Online Learning Communities and Academic Performance of Grade 11 IGCSE Learners in Nairobi County

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Abstract: *The integration of online learning communities into education has transformed the interaction, collaboration and knowledge sharing among learners. However, empirical evidence on their relationship with academic performance among learners under the International General Certificate of Secondary Education (IGCSE) curriculum in Kenya remains limited. This study seeks to determine the relationship between online learning communities and the academic performance of Grade 11 IGCSE learners in Nairobi County, Kenya. The study was anchored on the Transactional Distance Theory. The study adopted a correlational research design. The target population was 1,760 teachers, 44 administrators, 44 ICT officers, 44 Deans of Studies, and 11,088 Year 11 learners from international schools offering the IGCSE curriculum. Purposive and stratified random sampling techniques were used to select a sample comprising 176 teachers, eight administrators, eight ICT officers, eight Deans of Studies and 96 learners. Quantitative data was collected using structured questionnaires. Qualitative data was obtained through interviews and focus group discussions. Quantitative data was analyzed using descriptive statistics and simple linear regression; qualitative data was thematically analyzed. The findings indicated that online learning communities were utilized to a great extent in most schools. Regression analysis further established a significant positive relationship between online learning communities and academic performance ($B = 0.420, p < .001$). The study concludes that online learning communities enhance learner collaboration, engagement, and knowledge sharing, thereby improving academic performance. It is recommended that schools should strengthen structured online learning communities to promote collaborative learning and enhance learners' academic outcomes.*

Keywords: *Online Learning Communities, Academic Performance, IGCSE Learners, Online Instructional Strategies, Collaborative Learning*

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1. Introduction

The integration of information and communication technologies into formal education has given rise to various online instructional strategies. Among these include online learning communities which according to Mendoza *et al.*,

(2025) promote peer collaboration and reflective interactions within virtual learning environments. Online learning communities promote the interaction of learners with teachers and peers beyond the traditional classroom, foster construction of collaborative knowledge, continuous communication and learner engagement (Fabriz *et al.*, 2021).

Global evidence demonstrates the importance of online communities towards enhancing academic outcomes. According to Levin (2024), active participation in online educational communities enhances motivation, collaboration and academic performance of learners. In China, national initiatives during the COVID-19 pandemic prioritized large-scale adoption of asynchronous platforms, such as recorded lessons and discussion boards, complemented by targeted synchronous interactions to foster engagement (Su *et al.*, 2021). A Study by Hung and Wang (2023) found that online learning communities in China strengthened collaboration and reflection among learners when instructors actively moderated discussions, thereby enhancing the quality of learning experiences.

In Germany, research has also emphasized the importance of collaborative online environments in supporting meaningful learning experiences. According to Fabriz *et al.*, (2021), a balanced combination of online learning communities with other online instructional strategies contribute to improved learning outcomes. In the Philippines, Ramos and Malucay (2025) found that online learning communities support learners' academic performance and engagement. However, their effectiveness was found to be highly dependent on adequate instructional support and digital infrastructure.

In Africa, similar trends have been observed, though with context-specific challenges. In Nigeria, Ajagbe *et al.*, (2023) while investigating the impact of the Hybrid Active Learning Strategy (HALS), a model where online learning communities are incorporated, found significant improvement in students' understanding of physics concepts compared to those taught through traditional lectures. In East Africa, studies from Tanzania and Uganda show that blended online instructional strategies combining online learning communities with other online instructional approaches improve learner participation and motivation. However, the success of these interventions depended heavily on teachers' digital competence and institutional support structures (Kenyangi, 2024). This finding underscores the potential of integrated online instructional approaches to improve academic outcomes in resource-limited settings.

In Kenya, the Ministry of Education has encouraged the adoption of digital learning platforms through initiatives such as the Kenya Education Cloud and the ICT in Education and Training Policy (2021) (Ndiangui *et al.*, 2025). Despite these efforts, access remains uneven, with reports indicating that only about 30-40% of secondary schools have reliable internet connectivity and functional ICT infrastructure (Bariu, 2020). Nonetheless, many schools offering international curricula, particularly those implementing the International General Certificate of Secondary Education (IGCSE), have adopted online

learning communities to facilitate peer support and collaborative learning. These online communities are intended to enhance learner engagement and academic achievement. However, disparities in teacher preparedness, learner access and infrastructure continue to influence their effectiveness (Wanyonyi, 2022).

Despite the growing integration of online learning communities in secondary education, empirical evidence linking these collaborative platforms to measurable academic outcomes among Year 11 IGCSE learners in Kenya remains limited. Existing studies have largely examined online instruction broadly or focused on higher education. This has left limited understanding of how online learning communities relate to academic performance within the IGCSE context. As a result, this study seeks to determine the relationship between online learning communities and the academic performance of Grade 11 IGCSE learners in Nairobi County, Kenya.

2. Literature Review

Online learning communities (OLCs) refer to virtual networks of learners and educators who engage collaboratively in academic activities through technology-supported platforms. These communities allow learners to share knowledge, exchange ideas, and support one another toward achieving shared academic goals. Types of learning communities include interest-based, action-based, location-based, and profession-based communities. Of these, the current study focuses on interest-based and action-based learning communities because they directly relate to secondary education, particularly in fostering motivation, collaboration, and peer-to-peer learning, which influence learners' academic performance within the IGCSE framework (Fisher *et al.*, 2020).

Under interest-based learning communities, students gather around common interests or passions, such as literature clubs, science groups, or digital forums discussing IGCSE subjects (Jones *et al.*, 2021). Action-based learning communities, on the other hand, are formed by learners committed to advancing specific academic or social goals, such as STEM-focused or language-improvement teams (Liu & Ye, 2021). For Grade 11 IGCSE learners, such communities provide opportunities to collaborate, discuss complex topics, and share academic resources, which strengthen understanding and enhance academic performance.

With technology and internet advancement being increasingly adopted in education, online learning communities have become integral to modern learning. Narciso (2022) outlines OLCs as comprising project-based teams that make learning more practical, interactive, and learner-centered. Similarly, Bennett and McWhorter (2020) highlight that learning communities foster proactive

digital collaboration, enhancing holistic learning experiences, an aspect that this study explores in the context of IGCSE online classes.

Online learning communities take diverse forms, including blogs, chat rooms and bulletin boards where learners exchange ideas within virtual environments (Sultana *et al.*, 2022). Fazza and Mahgoub (2021) describe OLCs as safe virtual spaces that promote active engagement and confidence in self-expression, critical elements for IGCSE learners' academic growth. In the United States, Dennis (2017) investigated the impact of an online learning community within a blended Advanced Placement English Language Arts (AP ELA) course. The study found that blended online discussions improved students' communication and argumentation skills. While these findings highlight the communicative benefits of OLCs, the study did not measure direct performance indicators, leaving a gap in understanding how OLCs influence academic achievement, a gap that the present study seeks to fill within the IGCSE setting.

In the United Kingdom, Producers *et al.*, (2023) surveyed 309 learners to conceptualize the meaning of learning communities in the digital age. The study revealed that online learning communities promote connection, inclusion, and shared experiences-factors that enhance learner engagement and subsequently improve learning outcomes. However, while this study confirmed improved engagement, it did not empirically test the relationship between OLC participation and measurable academic performance, creating a methodological gap that this research intends to bridge.

In Taiwan, Chen *et al.*, (2023) examined the use of social media in forming OLCs and found that such communities enhanced knowledge sharing, team bonding, and efficacy, which positively affected learners' performance. These findings directly relate to the current objective, supporting the notion that collaborative learning through OLCs contributes to improved performance outcomes. Nonetheless, the study's focus on university students limits its generalizability to the secondary-level IGCSE context. Similarly, Lai *et al.*, (2019) found that learners using an online English learning community via Facebook achieved better performance than those in a traditional system, underscoring the value of peer collaboration and digital engagement in enhancing academic outcomes. However, the reliance on a single subject area (English) narrows the scope, warranting further exploration across subjects, as this study intends.

2.1 Theoretical Framework

This study was anchored on the Transactional Distance Theory (TDT) by Moore (1970). The theory explains the

psychological and communication space that exist between learners and instructors when they are separated by physical distance (Gorsky & Caspi, 2005). According to the theory, transactional distance is not just geographical but pedagogical and psychological; if not effectively managed, it may result in misunderstandings, reduced engagement, and feelings of isolation among learners.

Three key variables that influence transactional distance are identified by the theory: structure, dialogue and learner autonomy (Moore, 1970). Out of these, dialogue is the most relevant to the current study due to its emphasis on meaningful communication and interaction between teachers and learners. In online learning communities, dialogue is promoted through collaborative discussion forums, peer interactions and continuous communication among learners and instructors. Such interactions strengthen collaboration and reflective learning, thereby creating an environment that supports meaningful learning experiences. Learner autonomy is also emphasized by the theory. Under online learning communities, learner autonomy is enhanced through students' engagement in collaborative activities, sharing of ideas, and access to learning resources as they manage their own learning pace. Therefore, the theory provides an appropriate foundation for explaining how online learning communities may influence the academic performance of Year 11 IGCSE learners by promoting interaction, collaboration, learner engagement, and independent learning.

3. Methodology

3.1 Research Design

The study adopted a correlational research design. Creswell and Creswell (2017) noted that a correlational research design is appropriate when the study aims at examining the strength of relationships between two or more variables. Therefore, the design helped in determining the extent to which online learning communities are associated with the academic performance of Year 11 IGCSE learners in Nairobi County.

3.2 Target Population

The target population included 1,760 teachers, 44 administrators, 44 ICT officers, 44 Deans of Studies and 11,088 Year 11 learners from international schools offering the IGCSE curriculum.

3.3 Sample Size and Sampling Techniques

Purposive sampling was used to select eight schools based on their established use of online instructional strategies

and technological infrastructure. From these schools, stratified random sampling was used to select 176 teachers. Additionally, eight administrators, eight ICT officers, eight Deans of Studies and 96 Year 11 learners (12 from each school) were selected as key informants and focus group discussion (FGD) participants respectively. The sample size represented 10% of the total population as guided by Mugenda and Mugenda (2003) who noted that a sample of between 10% and 30% of the accessible population is adequate for correlational studies.

3.4 Data Collection Tools

A structured questionnaire was used to gather quantitative data from the teachers. An interview guide was used to collect qualitative data from the administrators, ICT officers, and Deans of Studies, as well as Focus Group Discussion guides for learners. Further, a FGD guide was used to gather qualitative data from the learners.

3.5 Data Collection Procedure

Prior to data collection, ethical clearance was obtained from the Ethical Review Committee (ERC), Mount Kenya University. This was followed by an introductory letter from the University's Postgraduate School. Authorization to conduct the study was subsequently obtained from the National Commission for Science, Technology and Innovation (NACOSTI) and the management of the selected international schools in Nairobi County. The researcher personally administered questionnaires to teachers, conducted interviews with administrators, ICT officers, and Deans of Studies, and moderated focus group discussions with learners. Three trained research assistants supported logistical activities, including coordinating appointments, distributing, and collecting research instruments under the researcher's supervision. Data were collected over a period of two months while ensuring adherence to ethical principles, including informed consent, confidentiality, voluntary participation, and the integrity of the research process.

3.6 Data Analysis

Quantitative data were analyzed using the Statistical Package for Social Sciences (SPSS), version 26.0. Descriptive statistics, including frequencies and percentages, were used to summarize the data. The relationship between online learning communities and academic performance was examined using simple linear regression analysis. Qualitative data from interviews and FGDs were organized into themes and used to complement the quantitative findings.

3.7 Ethical Considerations

Ethical clearance for the study was obtained from the ERC, Mount Kenya University. Research authorization was granted by NACOSTI and the management of the participating international schools. After explaining the purpose, objectives, procedures, and expected benefits of the study informed consent was obtained from all participants. Participation was voluntary, and respondents were free to withdraw from the study at any stage without any consequences. Anonymity and confidentiality were maintained by ensuring that no identifying information was collected. All data were used solely for research purposes. Participants were treated with dignity, respect, fairness, and without any form of discrimination throughout the study.

4. Results and Discussion

4.1 Response Rate

In this study, 176 questionnaires were distributed to the teachers, 8 FGDs were conducted with the learners and 24 interviews were conducted with the school administrators, Deans of Studies and ICT officers of the select schools. Out of the total distributed questionnaires, 171 were returned from which seven (7) were discarded for being not duly completed for consideration in the final analysis. Five (5) were not retrieved. The non-return of these questionnaires was mainly due to teachers' tight schedules and their unavailability during the follow-up visits for data collection. This represented a return rate of 97.2% and a response rate of 93.2%. All the FGDs were successfully conducted while 22 interviews were successfully done because two key informants (one Dean of Studies and one ICT officer) were unavailable due to official engagements and scheduling conflicts at the time of the interviews. This represented 91.7% and 100.0% response rates for the FGDs and interviews respectively. The respective response rates were more than adequate since according to Wu *et al.*, (2022), response rates of 80% and above are considered optimal.

4.2 General Information of the Teachers

Teachers indicated their general information such as gender, age in years, highest education level, and area of specialization. The results as shown in Table 4 indicate that 54.3% (89) of the respondent teachers were male; 45.7% (75) were female. The findings further show that 68.9% (113) of the respondents held a Bachelor's degree as their highest level of qualification followed by those with postgraduate qualifications (21.9%), and college diplomas (9.2%). In terms of specialization, all subject areas were

represented, with nearly equal proportions in STEM-related disciplines (27.4%), Arts (26.8%), Languages (28.0%), and Technical subjects (17.8%). The age distribution indicated that 71.3% of respondents were aged between 30 and 49 years. Therefore, the demographic

characteristics of respondents enhance the validity of the findings, as they reflect a diverse and competent pool of teachers whose perceptions align with the study's purpose of examining the relationship between online instructional strategies and learners' academic performance.

Table 1: Demographics of Teachers

		f	%
Gender	Male	89	54.3%
	Female	75	45.7%
Highest education level	College Diploma/Certificate	42	25.6%
	Bachelor's Degree	113	68.9%
	Postgraduate	9	5.5%
Area of specialization	STEM related specialization	45	27.4%
	Arts related specialization	44	26.8%
	Languages	46	28.0%
	Technical related specialization	29	17.7%
Age of the Respondents	20-29 years	6	3.7%
	30-39 years	61	37.2%
	40-49 years	56	34.1%
	50-59 years	34	20.7%
	60-69 years	7	4.3%

4.3 Utilization of Online Learning Communities

Respondents were required to indicate the extent to which various online learning communities were applicable in teaching and learning in their respective schools. The findings are as presented in Table 2.

Table 2: Extent of Utilization of Online learning Communities

	To no extent at all	To a moderate extent	To a great extent	To a very great extent
Blogs	31 (18.9%)	59 (36.0%)	53 (32.3%)	21 (12.8%)
Education groups based on shared interests or passions such as sports	22 (13.4%)	51 (31.1%)	51 (31.1%)	40 (24.4%)
Action-based learning groups such as groups promoting STEM learning and language acquisition	26 (15.9%)	43 (26.2%)	50 (30.5%)	45 (27.4%)
Location-based learning community based on learners'/teachers' location	39 (23.8%)	34 (20.7%)	34 (20.7%)	57 (34.8%)
Learning communities based on parents' profession	55 (33.5%)	50 (30.5%)	25 (15.2%)	34 (20.7%)
Project-based learning communities	38 (23.2%)	44 (26.8%)	25 (15.2%)	57 (34.8%)

According to Table 2, varying levels of utilization of online learning communities among IGCSE teachers in Nairobi County were demonstrated. For blogs, 36.0% indicated moderate use while 32.3% noted their utilization to a great extent. This implied that, while blogs are fairly common, their full instructional potential remains underutilized. Regarding education groups based on shared interests or passions such as sports, 31.1% of the teachers indicated moderate utilization; 31.1% reported great use and 24.4% reported very great use. This suggest that such interest-based communities are becoming integral to collaborative learning practices. In the case of action-based learning groups, such as those promoting STEM or language

acquisition, 26.2% reported moderate use while 30.5% and 27.4% indicated great and very great utilization respectively. This highlights their growing importance in encouraging applied, hands-on learning. For location-based learning communities, 23.8% of respondents reported no use, 20.7% reported moderate use, and 20.7% and (34.8%) indicated great and very great use respectively. This demonstrates a gradual shift toward contextualized, geographically relevant learning engagement. Responses regarding learning communities based on parents' profession revealed relatively low adoption, with 33.5% reporting no use, 30.5% moderate use, 15.2% great use and 20.7% very great use. This is an

implication that these communities are less prominent in school-based digital learning ecosystems. Finally, for project-based learning communities, 23.2% reported no use, 26.8% moderate use, 15.2% great use and 34.8% very great use. This pattern suggests that project-oriented collaborations are widely accepted as practical tools for enhancing student participation and real-world application of knowledge.

The overall extent of utilization of online learning communities was determined. This was achieved by

Table 3: Overall Extent of Utilization of Online Learning Communities

	To no extent	To a moderate extent	To a great extent
Overall extent of utilization of online learning communities	13 (7.9%)	56 (34.1%)	95 (57.9%)

From the interviews and FGDs, there was only evidence of action based online learning groups as an instructional strategy used in learning and teaching. This is evident from the following response by Respondent N (a Dean of Studies):

“Groups are created based on subject interests where learners discuss and exchange educational ideas. For example, music and STEM WhatsApp groups are very active in this school”

Action-based online learning communities were also evident from the FGDs where participants indicated belonging to subjects’ online groups such as Music groups, STEM groups and other subjects’ online groups. For example, the following response from a participant (a female aged 14 years) in FGD 4 demonstrates existence of online learning communities:

“I am a member of Music and IT online groups where we discuss ideas related to the subjects such as upcoming projects. We also

computing the mean of the responses in the table above and then recoding the mean into three categories: mean scores of 2.5 and above were recoded into “to a great extent”, mean scores between 1.5 and less than 2.5 were recoded into “to a moderate extent” and mean scores below 1.5 were recoded “to no extent”. From the results in Table 3, 57.9% (95) of the respondents generally implied that the overall extent of utilization of online learning communities as instructional strategies was to a great extent.

share resources such as textbooks in these groups”

Another participant (a female aged 15 years) in FGD 3 reiterated the following in relation to existence of online learning communities:

“In our school, we refer to them as clubs. They are several but I only belong to Science Club”

4.4 Influence of Online Learning Communities on Academic Performance of Learners

Using Likert scale items, respondents were asked to indicate their level of agreement/disagreement regarding the influence of online learning communities on performance of learners. The results are as tabulated in Table 4.

Table 4: Likert Scale Responses on the Influence of Online Learning Communities on Performance of Learners

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
Online communities lead to groups where members get feedback which enhances performance.	19 (11.6%)	22 (13.4%)	37 (22.6%)	49 (29.9%)	37 (22.6%)
Online communities enhance active and rich engagement among learners with shared interests thus improving performance.	12 (7.3%)	33 (20.1%)	36 (22.0%)	51 (31.1%)	32 (19.5%)
Online learning communities help address learners’ needs in solving specific problems which improves their performance.	15 (9.1%)	28 (17.1%)	28 (17.1%)	50 (30.5%)	43 (26.2%)
Online learning communities help learners share knowledge thus increasing their content acquisition which helps improve performance.	12 (7.3%)	24 (14.6%)	36 (22.0%)	33 (20.1%)	59 (36.0%)
Learning communities enhance bonding among members which helps improve performance.	7 (4.3%)	16 (9.8%)	46 (28.0%)	64 (39.0%)	31 (18.9%)

From the results in Table 4, a total of 29.9% (49) and 22.6% (37) of the respondents agreed and strongly agreed respectively that online communities lead to groups where members get feedback which enhances performance. Also shown by the findings is that 31.1% (51) of the respondents agreed that online communities enhance active and rich engagement among learners with shared interests thus improving performance; 22.0% (36) neither agreed nor disagreed, 20.1% (33) disagreed and 19.5% (32) strongly agreed. The findings demonstrate that 30.5% (50) and 26.2% (43) of the respondents agreed and strongly agreed respectively that online learning communities help address learners' needs in solving specific problems which improves their performance. From the results as shown in Table 4, 36.0% (59) of the respondents strongly agreed that online learning communities help learners share knowledge thus increasing their content acquisition which helps improve performance; 22.0% (36) neither agreed nor disagreed and 20.1% (33) agreed. Further, the findings show that 39.0% (64) of the respondents agreed that learning communities enhance bonding among members which helps improve performance; 28.0% (46) neither agreed nor disagreed and 18.9% (31) strongly agreed.

From the interviews, two themes arose on the effect of online learning communities on performance of learners:

Table 5: Performance of Year IGCSE Learners

	Neither improving nor declining	Improving
Indicate the performance of year 11 IGCSE learners in regional based exams	73 (44.5%)	91 (55.5%)
What is the performance of year 11 IGCSE learners in externally organized academic contests	59 (36.0%)	89 (54.3%)

Based on Table 5, 55.5% (91) of the respondents indicated that performance of Year 11 IGCSE learners in regional-based exams was improving; 44.5% (73) indicated that performance was neither improving nor declining. Moreover, 54.3% (89) of the respondents opined that performance of Year 11 IGCSE learners in externally organized academic contests was improving while 36.0% (59) indicated performance in this context to be neither improving nor declining.

4.6 Simple Linear Regression Modeling

Table 6: Model Summary for Regression between Online Learning Communities and Academic Performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.716 ^a	.512	.509	.27715

a. Predictors: (Constant), Online learning communities

The ANOVA results (Table 7) showed that $F(1,162) = 169.967$, $p\text{-value} < 0.0001$. Therefore, the regression model was a significant predictor of academic performance of learners from utilization of online learning communities.

active discussion and interaction; and provision of feedback. On active discussion and interaction, the following comment by Respondent N (a Dean of Studies) is in support:

"The online groups enable active discussions that add value to normal classroom content. This has led to wider scope in learning which helps improve performance of learners"

In terms of enabling performance through feedback provision, Respondent Q (an Administrator) was of the following opinion:

"Learners benefit from online communities from regular feedback and support from other learners and teachers"

4.5 Performance of Year 11 IGCSE Learners

The dependent variable for this study is Performance of Year 11 IGCSE Learners. The performance as assessed on performance in regional exams and externally organized academic contests is illustrated in Table 5.

Simple linear regression analysis was carried out to determine the relationship between online learning communities and the academic performance of Year 11 IGCSE learners. The model summary results showed that $R = 0.716$ (Table 6); a strong positive relationship between online learning communities and academic performance. Further, Table 5 shows that $R\text{-Square} = 0.512$; an indication that online learning communities explained 51.2% of the variation in academic performance of learners.

Therefore, online learning communities were statistically significant in predicting the academic performance of Year 11 IGCSE learners.

Table 7: ANOVA Results for Regression between Online Learning Communities and Academic Performance

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	13.056	1	13.056	169.967	.000 ^b
	Residual	12.444	162	.077		
	Total	25.500	163			

a. Dependent Variable: Performance

b. Predictors: (Constant), Online learning communities

The regression coefficient results in Table 8 showed that $B = 0.420$, $t = 13.037$ and $p\text{-value} < 0.0001$. Therefore, online learning communities had a positive and statistically significant relationship with academic performance. The regression coefficient of .420 indicates that a one-unit increase in online learning communities leads to an

estimated increase of .420 units in academic performance of Year 11 IGCSE learners. The regression between online learning communities is therefore:

$$\text{Performance} = 1.250 + 0.420 \text{ Online learning communities}$$

Table 8: Regression Coefficients for Regression between Online Learning Communities and Academic Performance

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.250	.112		11.161	.000
	Online learning communities	.420	.032	.716	13.037	.000

a. Dependent Variable: Performance

4.7 Discussion of Findings

Slightly more than half of the respondents were of the opinion that online learning communities' instructional strategies were utilized to a great extent. However, some online learning communities such as blogs, learning communities based on parents' profession and project-based learning communities were not utilized to a large extent. Further, regression analysis demonstrated a significant relationship between online learning communities and academic performance of Year 11 IGCSE learners. The findings concur with Narciso (2022) who found that online learning communities make learning to be more interactive and learner-centered therefore affecting performance positively. According to Bennett and McWhorter (2020), learning communities help get members involved in advancing collective knowledge.

Through online learning communities, members are free to express themselves and active and rich engagements are enhanced which positively affects performance. Brouwer *et al.*, (2022) also agree with the findings of the study by claiming that online learning communities ensure members access information and are active participants in learning thus addressing different problems and gathering different opinions. When learners share what they have learnt amongst themselves there is improvement of knowledge through social mechanisms (social constructivism) which contributes to better performance.

According to Producers *et al.*, (2023) who conducted a study in the UK, online learning communities connect learners

from different locations, lead to inclusion of learners whose motives are the same and enhance sharing of experiences in education. Such themes foster learners' engagement leading to positive outcomes in learning such as performance. In a study conducted in Taiwan by Chen *et al.*, (2023), online learning communities enhance knowledge sharing, bonding and efficacy which positively impact performance of learners. In another Taiwanese study by Lai *et al.*, (2019) that is in agreement with our findings, learners in an online English learning community were found to perform better than those learning under the traditional English learning system.

These finding support the 'dialogue' component of Transactional Distance Theory, as online learning communities foster frequent and multidirectional communication among peers and between learners and instructors. The sense of **transactional presence** is enhanced when learners collaborate, engage socially, and build shared meaning, thereby reducing psychological distance and improving performance.

5. Conclusion and Recommendations

5.1 Conclusion

Based on the findings of the study, it can be concluded that online learning communities, particularly education groups based on shared interests, action-based learning groups, and location-based learning communities, were moderately adopted. The study concludes that participation in these communities supports collaborative learning, peer

engagement, and knowledge exchange, which are positively related to improved learner motivation and academic outcomes. However, the limited use of blogs and profession-based learning groups indicates the need for broader adoption to maximize their learning benefits. The study revealed that online learning communities contribute positively to learner collaboration, motivation, and knowledge exchange.

5.2 Recommendations

The study therefore recommends that teachers and schools should encourage the formation of structured online learning groups, particularly interest-based and action-oriented learning communities, to facilitate peer learning, academic discussions, and continuous interaction among Grade 11 IGCSE learners.

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