

International Journal of Agriculture Extension and Social Development

Volume 8; Issue 11; November 2025; Page No. 61-76

Received: 08-09-2025
Accepted: 12-10-2025

Indexed Journal
Peer Reviewed Journal

Service-learners today, friends forever: Alumni communities of practice manifested through social media communication

¹Samuel Ikendi, ²Reagan M Mwenyi, ³Michael S Retallick and ⁴Donald R Kugonza

¹University of California Agriculture and Natural Resources, University of California - Merced, 5200 N. Lake Rd, Merced, CA 95343. United States.

²School of Special Education, Leadership and Professional Studies, Missouri State University, 901 S. National Ave, Springfield, MO 65897. United States

³Department of Agricultural Education and Studies, College of Agriculture and Life Sciences, Iowa State University, 513 Farmhouse Lane, Ames, IA 50011. United States

⁴Department of Animal and Range Sciences, School of Agricultural Sciences, College of Agricultural and Environmental Sciences, Makerere University, P.O BOX 7062, Kampala Uganda

DOI: <https://www.doi.org/10.33545/26180723.2025.v8.i11a.2621>

Corresponding Author: Samuel Ikendi

Abstract

In the current digital climate, social media platforms have become indispensable communication tools, enabling alumni to maintain meaningful connections with colleagues across geographical and temporal boundaries. Maintaining communication with alumni is an asset to both their primary educational institutions—affiliated alma maters and their host organizations. This study evaluates the role of social media communication—Facebook platform in our study, in creating and sustaining communities of practice among global service-learning alumni from Iowa State University of the United States and Makerere University, Kampala, Uganda. We examine how Facebook enhances alumni communication, promotes philanthropy, and encourages lifelong learning. Applying the principles of communities of practice and dual-process models of information processing—heuristic-systematic and elaboration likelihood models, we explore how these communities thrive over time and how various stakeholders can support them. Using qualitative content analysis in a case study approach, we reviewed 132 posts from the Center for Sustainable Rural Livelihoods (CSRL) Service-Learning Alumni Facebook page from 2013 to 2024. Our analyses revealed multiple emerging patterns, categorized under eight themes: seminars, family, academics, identity, awards, fundraising, travels, and ceremonies. Each theme illustrates how alumni create a strong sense of belonging through shared experiences. Family-related posts generated high emotional engagement, while academic achievements promoted motivation and pride. The dedicated Facebook group facilitated CSRL program events and fundraising campaigns, ultimately encouraging community engagement and alumni philanthropy. The findings highlight the importance of sustained engagement, showing how alumni maintain connections and encourage mentorship across global service-learning cohorts, reinforcing a sense of collegiality and comradeship. We also discuss the impact of external influences, such as government policies, on the sustainability of these communities of practice. Our recommendations focus on strategies to strengthen alumni networks and inter-institutional partnerships in facilitating global education programs. Future research should explore the varying degrees of alumni engagement, such as active versus meager participation, to help coordinators tailor communication strategies to improve alumni engagement.

Keywords: Alumni philanthropy, communities of practices, comradeship, Facebook communication, global service-learning, dual-process models of information processing, social media

Introduction

Student participation in high-impact programs such as global service-learning is a positive shift toward promoting lifelong learning ^[1-5]. As a form of experiential learning ^[6], global service-learning has shown the potential to nurture global citizen scholars and practitioners who can identify and tackle pressing global social issues, such as food and nutrition insecurity in communities where they get immersed during their academic career ^[7-11]. This approach to learning enhances academic knowledge and equips students with essential experiences that encourage active civic engagement in our interconnected world ^[8-9, 12].

Maintaining communication with alumni is an asset to both their primary educational institutions—affiliated alma maters and their host organizations. Alumni serve as ambassadors or public-facing personas, representing the values and ethos of their institutions ^[13-16]. Through their ongoing interactions, their engagement can encourage current and prospective students to participate in programs, thereby extending the reach and impact of these initiatives. In the current digital climate, social media platforms have become indispensable communication tools, enabling alumni to maintain meaningful connections with colleagues and host programs across geographical and temporal

boundaries^[14, 16]. Despite the proliferation of digital communication platforms, Facebook remains the most widely utilized social media network globally due to its stability^[14, 17-18].

The Facebook platform boasts over three billion active users, with daily usage statistics in the third quartile.^[19-20] However, recent restrictions on digital communication, such as Uganda's Facebook ban since January 2021 during the general elections, have created challenges for online communication, increasing our need to understand how alumni navigate these unprecedented changes.^[21-22] Nevertheless, continuous interaction may also strengthen personal connections.

Social Media Content Creation and Feedback Loops

In its simplest form, social media communication consists of posts and feedback on that content, reflecting varying levels of engagement and interaction^[16, 23]. On Facebook, posts can be created by group administrators or members and are visible on the group timeline for all members to see and respond to in the case of a public group.^[23] While public groups are open for any Facebook user to join, private groups have restricted access based on specific criteria and guidelines.^[24]

For group members, posts appear in their News Feed according to individual preferences and engagement levels.^[24] When a user follows, likes, joins, or is added to a group or page, they can adjust their notification settings to determine how and when they receive updates about new posts and interactions within the group. Facebook also allows its users to favorite the pages and groups they follow, allowing for tailored engagement with content that matters to them^[24].

Facebook posts include different forms of content, including "text", "photos", "videos", "links", "tags", and "hashtags," among others. In the context of this study, feedback are user responses that measure the effect, popularity, and members' engagement with the posted content.^[16, 23, 25] Feedback mechanisms on the platform, including emojis, comments, and shares, indicate how users engage with the content. Emojis are graphic facial and body expressions, for example, "like", "love", "wow", "care", "laugh", "angry", and "sad", indicating low-level engagement.^[25]

Comments are written text in response to a post on the timeline or another comment, and they reflect high-level engagement—composing a constructive verbal reply^[16, 23, 25]. When participants share or repost the content shared in the group, they reflect high-level engagement, as they spread the message to other members^[25]. The need for this study arises from the growing importance of alumni networks in higher education and the role of social media in facilitating and sustaining their communities of practice through communication. Our study was based on a case study of the Iowa State University and Makerere University service-learning alumni group^[3, 8-9].

CSRL Service-Learning Alumni Facebook Group

The service-learning program of our study is a crucial experiential learning component of the curriculum for the College of Agricultural and Life Sciences at Iowa State University, implemented through the Center for Sustainable

Rural Livelihoods (CSRL) to develop future responsible global citizens^[3, 8-9]. The CSRL program began in Uganda in 2004 in a tripartite partnership with Volunteer Efforts for Development Concerns (2004-2014), CSRL, and Iowa State University Uganda Program (2014 to date) and Makerere University^[15, 26-27].

The overall goal of CSRL is to end hunger by using the power of education to institute behavioral changes in soil management and crop production^[28-32], postharvest management technologies^[29, 33-36] livestock management^[37-38], nutrition and infant feeding^[39-41], food safety^[42-43], water and public health^[44], innovation programs.^[27, 45] Such livelihood programs seek to improve food security^[46-48] and nutritional security^[49] in the communities.

To institute the service-learning program, the CSRL conducted a needs assessment in 2005 to identify potential partners and beneficiaries, aiming to promote global experiential learning opportunities and inter-institutional collaboration.^[3] Following this assessment, stakeholders identified that school gardening would be the best learning approach that would help with reducing hidden hunger in schools by using school products in school lunch programs and also help students fulfill their college service-learning and internship requirements^[3, 8-9, 50-51].

The first student cohort participated in the summer school service-learning program in 2006^[3, 8-9]. Although the service-learning program began in 2006, the CSRL Service Learning Alumni Facebook page was created in 2013 to support communication within a growing global alumni network. Using the communities of practice^[52-53] and dual-process models of information processing^[54-59], this inquiry seeks to understand how alumni have maintained their communications across time and distance.

This integrated approach allowed us to understand how global service-learning alumni form and sustain both formal and informal communities through meaningful social media interactions. We build upon previous work centered on the evolution of online communities of practice^[60], using social media as an agricultural education tool^[61-67]. We aim to understand variations in participant engagement with shared content across different timelines^[56]. This integrated framework explores the dynamics of community engagement while examining the cognitive processes informing individual perceptions and responses to the shared content.

Communities of Practice Theory

Developed by Wenger^[52], the theory posits that a group of individuals with a shared interest comes together to engage in regular interactions, building an environment conducive to lifelong learning. Our proposition encompasses meaningful interactions, characterized by sustained communication, which is important for sustaining alumni engagement even after their formal service-learning experiences^[8-9]. Because they are founded on the principles of shared knowledge and interests, Ceran and Bahadir^[68] and Abedini *et al.*^[60] suggest that communities of practice dissolve when the motivation to continue learning from one another wanes, indicating the need for constant, reciprocal communication to ensure the continuity of online communities of practice.

Key Components of the Communities of Practice

The communities of practice framework is based on three key premises, including domain, community, and practice [52-53]. The domain represents shared areas of interest that unite members, which, in this case, is the collective experience of participating in global service-learning programs [8-9].

The community dimension emerges from the interactions and relationships formed among members due to ongoing communication and dialogue [16, 69]. On social media, this translates into interactions via posts, comments, and other feedback mechanisms [62, 65].

The practice premise involves shared activities and problem-solving efforts by community participants, including collaborative development and sharing of knowledge as well as support for program-related activities and initiatives, such as fundraising campaigns [15, 27, 70].

Developmental Phases of the Communities of Practice

The theory authors [52-53], also identify three developmental phases that animate the communities of practices: engagement, imagination, and alignment, all of which are relevant for sustaining online communities of practices. The engagement phase looks at the stage at which participants come together for common activities and conversations [52-53]. Engagement fosters sustained reciprocal participation by different community members, creating a sense of belonging due to their mutual interactions [16, 69].

The next stage focuses on imagination, where members envision possibilities that excite the group, as they think about what could be [52-53]. At the imagination stage, members develop collective narratives of achievements, future aspirations, and shared values [16, 69].

The final stage is alignment, which involves the creation of a unified purpose [52-53]. From the place of imagination, the community leader coordinates diverse member contributions and perspectives to advance common goals and reinforce a unified community [16, 68].

Recent studies on the theory of communities of practice point to their prevalence in agricultural education and extension, especially in the domain of service-learning. For example, a partnership between the University of Georgia and Spelman College creates an intercollegiate faculty-student community of practice aimed at community healing and transformation through agriculture [71]. This partnership exemplifies the role of inter-institutional partnerships in creating tangible change in rural communities by increasing access to useful agricultural information.

Similarly, in agricultural extension, Lee *et al.* [65] explained the engagement of local Indonesian farmers in in-person versus online communities of practice. The authors discovered that even during the COVID-19 pandemic, shrimp farmers in Indonesia preferred in-person interactions with their neighbors to ideas shared in online communities of practice. The farmers used their in-person interactions as a primary source and their online communities of practice as a complementary resource because they could compare region-specific results as opposed to information shared online, which might not always be transferable. [65] This study displays some of the questions surrounding the sustainability of online communities of practice, which we discuss later in this paper.

The Dual Process Theories of Information Processing

Complementing the communities of practice framework, this study also incorporated dual-process theories— heuristic-systematic and elaboration likelihood models. [54-59] The dual-process theories were sought to support our understanding of the cognitive processes behind how global service-learning participants interpreted, evaluated, and responded to the posts shared within their communities of practice through Facebook communication.

The Heuristic-Systematic Model

The heuristic-systematic model describes that message processing simultaneously occurs through two routes— heuristic and systematic processing. [54-59] While heuristic processing is less cognitively demanding due to its fast nature and reliance on simple cues, systematic processing is characterized by thoughtful judgment and critical evaluation of the shared content on the platforms [56].

Dual-process theories argue that heuristic and systematic processes occur simultaneously, and both influence decision-making, either independently or interdependently. [54-59] Based on this model, global service-learning alumni initially interact with shared content heuristically, leading to further discussion through systematic processing. In the practical sense, social media engagement first involves heuristic cues, such as reaction emojis, followed by substantive interaction through comments [16, 23, 25].

The Elaboration Likelihood Model

The elaboration likelihood model by Petty & Cacioppo [58] elaborates on the impact of message receipt on persuasion. According to the elaboration likelihood model, an individual's involvement and motivation influence their level of engagement with the shared messages [59, 72].

The model outlines two routes of influence: the central route—where attitude change results from the content of the message, and the peripheral route—where individuals' attitudes towards the message are influenced by indirect and sometimes non-essential factors such as the author— credibility and attractiveness of the message [72]. In the central route, high elaboration results from high motivation to critically scrutinize the content, while in the peripheral route, individuals express lower elaboration due to low motivation resulting from superficial cues in the message.

Unlike in the heuristic-systematic model, the elaboration likelihood model asserts that central and peripheral processes do not co-occur [59]. In this context, global service-learning alumni could either be motivated or discouraged to interact with content (captions) based on the information communicated in the pictures, or the author of the post on their group's Facebook timeline.

Purpose and Research Questions of the Study

The purpose of this inquiry was to provide insight into post-program interactions among Iowa State University and Makerere University alumni who participated in a service-learning program in Uganda. We aimed to understand the purpose, frequency of communication, and rate of engagement with the service-learning community. When conducting this investigation, we sought to answer three research questions:

1. What kind of posts have CSRL service-learning alumni

shared in their communities of practice through their Facebook page?

2. What levels of engagement have the CSRL service-learning alumni expended on their shared Facebook posts?
3. How has the CSRL service-learning alumni Facebook engagement changed over time?

Methodology

The theoretical orientation that founded this inquiry was social constructivism, informed by the notion that knowledge is socially constructed and meaning emerges inductively.^[73] Jackson and Mazzei^[74] emphasize the role of theoretical frameworks in qualitative research and show us how we can examine data through various theorists and concepts. The social constructivist epistemological orientation informed our approach to analyzing alumni interactions by emphasizing the importance of social settings in shaping individual experiences and perspectives, even in digital communication environments, such as Facebook interactions^[23].

We employed a case study design to conduct a content analysis^[75] on the CSRL Service-Learning Alumni Facebook page.^[76] We focused on the page's activity from 2013, when it was created, through December 2024. In this context, the alumni's Facebook timeline posts and feedback to their posts were our units of analysis. Data were derived directly from the content of these units. Each post on the alumni Facebook timeline provided a glimpse into the interactions, themes, and engagement levels within this community of practice.

Data Collection

To gather the data, we systematically reviewed all posts made on the alumni Facebook page between 2013 through 2024. We collected all posts that included "text", "photos", "videos", "links", "tags", "hashtags," among others. Also, concurrently collected the posts' associated feedback engagements, including emojis, shares, captions, and comments, ensuring a comprehensive understanding of the content and interactions. Inclusion of all contents in our dataset allowed us to capture both the formal messages shared and the detailed responses and engagement from alumni.

Both qualitative and quantitative data from the groups' timeline were collected. The qualitative data included the direct text posts and feedback comments to the various posts. All text were copied and organized in a Word document, aligned by year of posting. The quantitative data included counts of all posts and feedback to the posts. The quantitative data provided us with the numerical strength of the types of posts and feedback^[16, 23, 25].

Maxwell^[77] argues, qualitative research can also be done systematically and can help us understand the world around us—even causal relationships. Interpretivists are required to be transparent about their research procedures and acknowledge the boundaries of their study. Hesse-Biber *et al.*^[78] also discussed mixed methods research, argued that, in mixed methods, both quantitative and qualitative approaches should be equally valued.

Data Analysis

During analysis, we began with a naïve reading of the text posts and all captions, helping us to familiarize ourselves with the information. Following this initial engagement, we conducted an in-depth reading and analysis to uncover deeper meanings and patterns. Our analytical approach involved dialogue with the data, seeking to recognize and classify commonalities across cases while also identifying distinct narratives. We systematically followed a six-step approach from familiarization, coding, theme identification, review of themes, defining and naming themes, and write-up.^[79] Along this process, we wrote analytic memos to document unique ideas that supported our cross-theme comparisons.

With textual analysis, we also critically reviewed the artifacts and images captioned in each post. These visual datasets informed our understanding of the context of the data, solidifying our reflections on the themes.^[80] We took detailed notes and created memos based on our observations of the artifacts, and used our reflections to generate new themes as a form of triangulation. To further enhance the goodness and trustworthiness of our findings, we shared drafts of our analysis among the investigators for peer review, allowing us to give constructive feedback and refine our discussions and conclusions.

Data Presentation

In this study, we used both quantitative and qualitative analysis to provide a detailed understanding of alumni engagement on the designated CSRL Service-Learning Alumni Facebook page.^[76] The quantitative analysis enabled us to capture overall engagement in the form of the number of posts, likes, comments, and shares. This approach provided us with a statistical overview of interaction patterns within the alumni community. The extracted data pinpoints the level of activity while identifying specific themes that resonate most with the group participants. Data are presented as frequencies and percentages and through charts and tables.

The qualitative analysis facilitated a deeper exploration of the content and context of the posts. When we examined the themes and narratives within the alumni interactions, we understood the emotional connections, shared experiences, and communal values that define the community and shape its perseverance over time. Together, qualitative and quantitative analyses provide the full picture of how digital communication promotes relationship-building and sustains the community of practice among CSRL global service-learning alumni^[8-9]. Data are presented thematically along with extracts. All names used in the extracts are pseudonyms.

Researcher Positionality and Reflexivity

Researcher positionality focuses on the researcher's location within the study context and its influence on perceptions and interpretations of the data.^[81-82] Qualitative research is a combination of shared perspectives by the researcher and subject of study, such that our social identities and experiences influence our perspectives as researchers. In this study, the CSRL Service-Learning Alumni Facebook page serves as our case study^[76].

Three of the author team are directly connected to this CSRL Service-Learning Alumni Facebook page, actively engaging with the shared content—posting, liking, sharing, and/ or commenting. Rossman and Rallis^[83] mention how interpretivists are, in essence, social constructivists who make meaning of the worlds around them through the combination of their direct experience and their existing understandings.

Two of the author team are former service-learners, as alumni involved with the same global service-learning program, we have personal ties to the community and know most of the page contributors and post authors, which can influence our perspectives and interpretations of the data. While this familiarity enhances our understanding,^[83] it also raises the potential for bias in how we analyze and interpret the interactions and themes present within the Facebook page.

To provide a balanced analysis of the data, interpretivists engage in reflexivity about the influence of their identities and beliefs on their research.^[81] To address potential biases, we sought feedback from peers at another institution, both of whom are faculty familiar with the global service-learning program. Since they are not members of the above-mentioned Facebook group, their interpretations provided an outsider perspective that helped balance our interpretations. Additionally, since the lead author and co-lead author have different graduate academic concentrations, their interpretations of the data were different. Separately, we conducted an independent analysis of the data and wrote and shared analytical memos during the data collection and analysis phases. This approach allowed us to document our thoughts and reflections on the data, later identifying shared interpretations of the themes^[79].

We employed reflexive photographic interpretation skills^[80] when analyzing the data in the photos shared. This approach was done by including captions to identify members and contextualize the images, presenting a well-rounded analysis of the alumni's experiences while acknowledging our positionality as insiders within the global service-learning community of practice^[81-82].

Results

In this section, we present the results and findings from our analysis of the CSRL Service Learning Alumni Facebook page. We focus on the interactions and engagement among alumni from 2013-2024. Our results are organized around key themes that emerged from the raw data, i.e., posts, reactions, comments, and shares. From our reflection on the raw data, we discovered that each theme reflects the various ways alumni connect and support one another within the community. We also provide data on the changes in alumni engagement with the platform before and after the Facebook ban, signifying the impact of regulations on virtual communities of practice.

Facebook Posts on the CSRL Service-Learning Alumni Facebook Timeline, 2013-2024

The CSRL global service-learning group interacted on their Facebook timeline, leading to the eight key themes including seminars—orientations and presentations, identity—profiles and murals, academics—admissions and graduations, family—engagements, weddings, and

childbirths, awards—recognitions to faculty and students, fundraising—for programs and sickness, travels—for students and faculty, and ceremonies—anniversaries and celebrations. In total, there were 132 posts on their Facebook timeline, the majority of which were aligned with the seminars, identity, and academics. Figure 1 provides details of all posts.

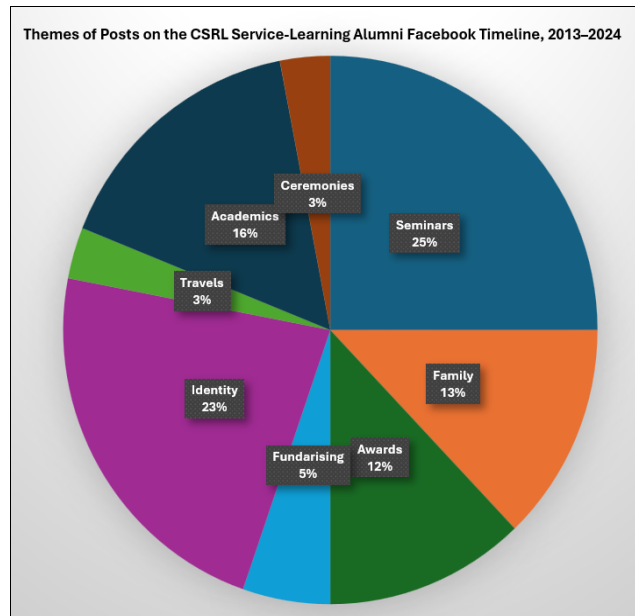


Fig 1: Themes of Posts on the CSRL Service-Learning Alumni Facebook Timeline, 2013-2024

Additionally, the 132 posts on the CSRL Service-Learning Alumni Facebook timeline were posted along with 239 photos (Figure 2), predominantly associated with seminars, identity, academics, and family.

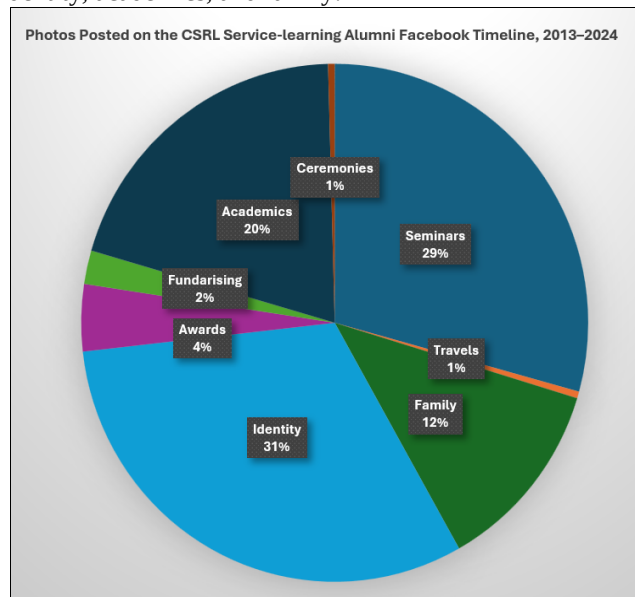


Fig 2: Photos Posted By Theme on the CSRL Service-Learning Alumni Facebook Timeline, 2013-2024

Similarly, among the 132 posts on their Facebook timeline, the majority were classified as “Texts only” and “Text+photos” (Figure 3). In the posts, T+at+#+IsWith—signifies texts and various tag forms (“at”—used to identify

location pins, “#”—allows users to track posts with related content, while “IsWith” —signifies profile tags for groups

or individuals at the said location pin).

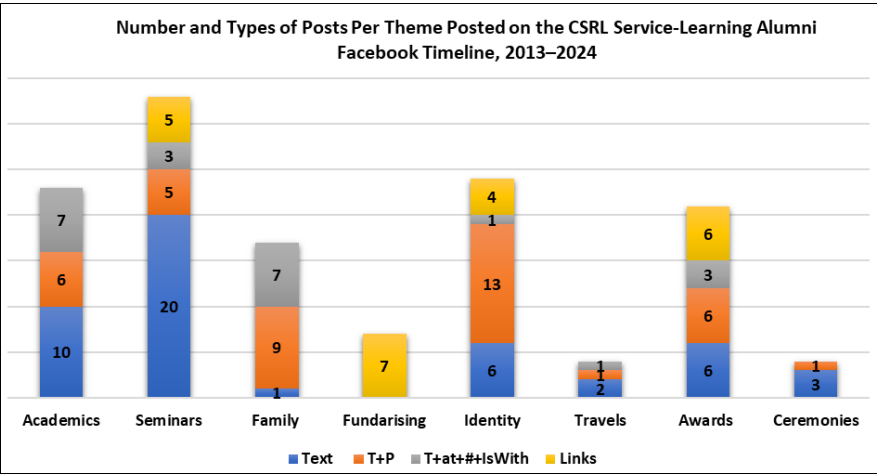


Fig 3: Number and Types of Posts Per Theme Posted on the CSRL Service-Learning Alumni Facebook Timeline, 2013-2024

Feedback Engagements by the CSRL Service-Learning Group

In feedback engagement, a total of 1,142 interactive feedback posts were posted and categorized as low-level and high-level engagement. Low-level engagement—interactions that require minimal cognitive effort and are primarily passive in nature; high-level engagement—

involves more active participation and deeper cognitive processing. In the context of this study, more than half of the posts were categorized as low-level engagement, most of which were “likes,” and the rest were either “love” or “wow” emojis (Figure 4). The family theme had the majority of the “likes”, “love”, and “wow” emojis, followed by academics, identity, and seminars.

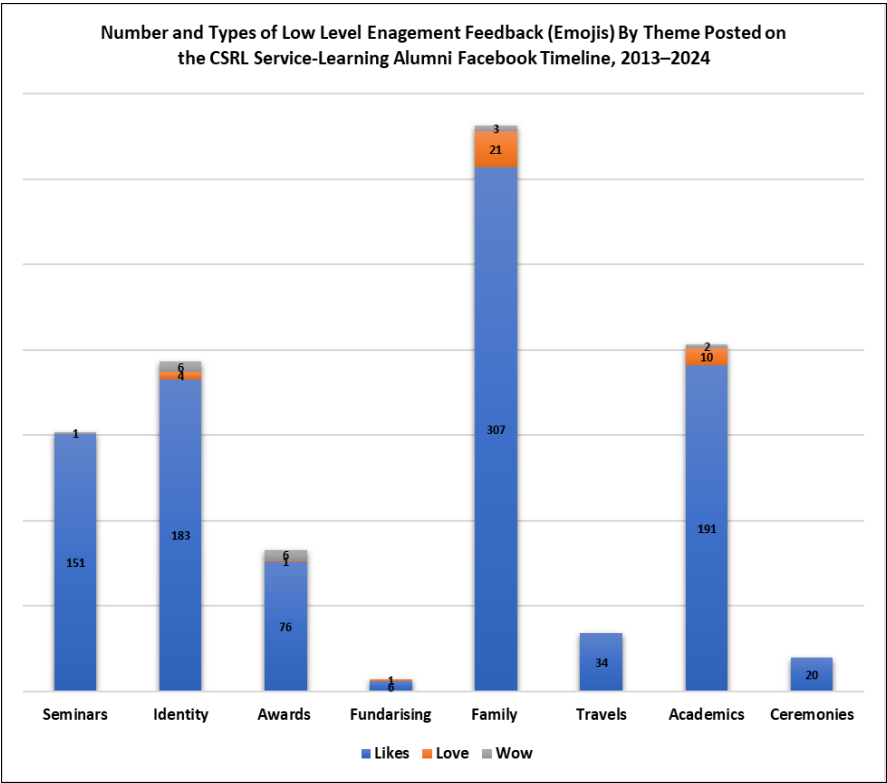


Fig 4: Number and Types of Low-Level Engagement Feedback (Emojis) By Theme Posted on the CSRL Service-Learning Alumni Facebook Timeline, 2013-2024

In the high-level engagements, more than half were “comments,” and the other feedbacks were “share” and “interested” (Figure 5). The family and academic themes had most of the “comments,” followed by seminars and

identity. Shares were mostly with academics, seminars, and identity, while “interested” was solely associated with seminars due to the nature of adding a calendar.

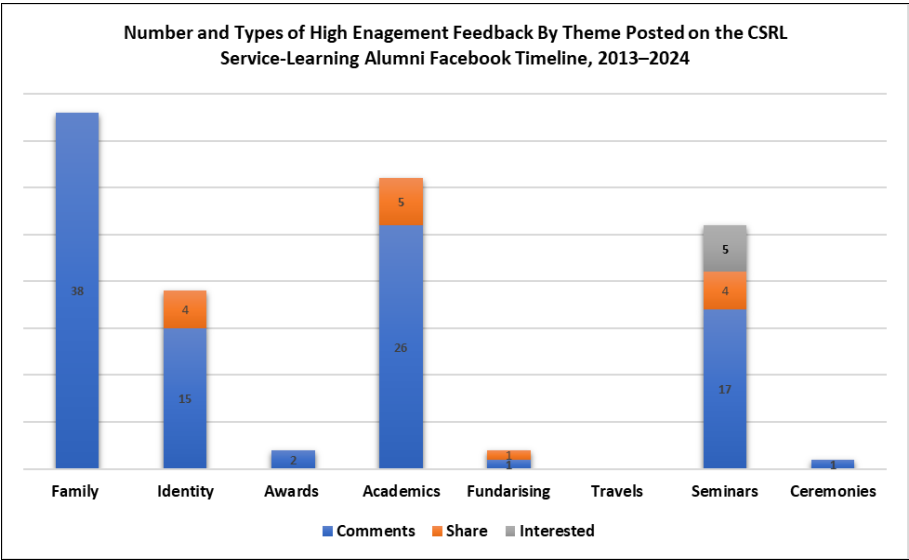


Fig 5: Number and Types of High-Level Engagement Feedback By Theme Posted on the CSRL Service-Learning Alumni Facebook Timeline, 2013-2024

Summary of the Relationship Between Posts and Feedback Engagement

Table 1 provides an analysis that enabled us to capture overall engagement in the form of the number of posts, likes, comments, and shares. This approach provided us

with a statistical overview of interaction patterns within the alumni community. The extracted data pinpoints the level of activity while identifying specific themes that resonate most with the group participants.

Table 1: Posts and Feedback on the CSRL Service-Learning Alumni Facebook Timeline, 2013-2024

Themes Developed	Total Posts		Types of Posts Per Theme				Facebook Feedback and Engagements					
							Emojis			Comments	Share	Interested
	Posts	Photos	T	T+P	T+at+#+IsW	Links	Likes	Love	Wow			
Seminars	33	70	20	5	3	5	151	-	1	17	4	5
Family	17	29	1	9	7	-	307	21	3	38	-	-
Academics	21	48	10	6	7	-	191	10	2	26	5	-
Identity	30	75	6	13	1	4	183	4	6	15	4	-
Awards	16	10	6	6	3	6	76	1	6	2	-	-
Fundraising	7	5	-	-	-	7	6	1	-	1	1	-
Travels	4	1	2	1	1	-	34	-	-	-	-	-
Anniversary	4	1	3	1	-	-	20	-	-	1	-	-
Totals	132	239	48	41	22	22	968	37	18	100	14	5

Notes: T+at+#+IsWith signifies texts and various tag forms (“at” is used to identify location pins, “#” allows users to track posts with related content, while “IsWith” signifies profile tags for groups or individuals at the said location pin).

The Qualitative Assessment and Interpretation of the Themes

Qualitative analysis facilitated a deeper exploration of the content and context of the posts. When we examined the themes and narratives within the alumni interactions, we understood the emotional connections, shared experiences, and communal values that define the community and shape its perseverance over time. Together, qualitative and quantitative analyses provide the full picture of how digital communication promotes relationship-building and sustains the Community of Practice among global service-learning alumni.

Seminars—Orientations and Presentations

The findings reveal that the seminar theme was the most active, with 33 posts accompanied by 70 photos, making it the highest category in both posts and photos. These posts mainly focused on programs such as orientations, presentations by alumni, and program advertisements. For

instance, one post proudly states, “2019 College Seminar @College of Agriculture. Long live service-learning. Long live Makerere University. Well done, team. @Service-Learning Forever” (November 02, 2019), which reflects a collective pride in post-baccalaureate professional development and institutional affiliation.

Another post noted “On Friday, July 18, 2014, [at] 10 a.m., all roads lead to Makerere University, School of Agricultural Sciences Conference room. [The] 2014 Service-Learners ... will be presenting their seminar. People who [shouldn’t] miss: All ex-service-learners” (July 12, 2014). This quote emphasizes the importance of continuous learning and community support.

The ex-service-learners as ambassadors of the global service-learning program are invited to support their peers who have recently participated in the program when presenting to prospective service-learners. As alumni, their testimonials and photovoice encourage future participants to sign up for the highly competitive program. From the

analysis of feedback, seminars generated 151 “likes”, 17 comments, and four shares, among other engagements.

Family Relations—Engagements, Weddings, and Childbirths

Family-related posts celebrate personal milestones such as engagements, weddings, and births, reflecting the strong emotional bonds formed during alumni participation in the service-learning program. This theme includes 17 posts and 29 photos, demonstrating how personal journeys are communally celebrated. One notable post states, “Congratulations, [Ann], on your marriage. Service-learning, yes!!! And happy birthday today! Double happening! WoW!” (April 25, 2018). This post illustrates the collective joy in personal achievements, promoting affective bonds within the community.

Another post from June 13, 2017, celebrates Heroes Day in Uganda in conjunction with a personal achievement, stating, “Our own service-learner, [Ben] got himself a hero on Heroes Day! We congratulate him and his wife on that achievement.” The hero’s achievement in the post refers to the subject’s newborn baby as their hero.

Similarly, a caption from a photo posted on October 14, 2019, reads, “Team Uganda 2019. Wonderful! Keep it up!” The image features nine service-learning alumni dining with the ISU-UP National Director at the home of an ISU faculty member in Iowa State, United States. The faculty member is also affiliated with the program. This post explains the enduring relationships built between staff, faculty, and alumni throughout their involvement with the global service-learning program. Among the alumni, four were students at ISU, three were volunteers, and two were actively involved in the agricultural sector. Posts within this family theme generated the highest emotional engagement, receiving 307 “likes,” 21 “loves,” along with 38 comments.

Academics—Admissions, Research, and Graduations

Academic posts focused on milestones such as research, graduation, and graduate admissions, featuring 21 posts and 48 photos. They celebrate the achievements of alumni and promote academic excellence within the group.

One reflective post on May 22, 2019, stated “Congratulations to our own service-learning alumni who just wowed the world, from my first son [Allan] (2010) to my daughter [Liz] (2010) to my baby brother [Issa] (2009), to the [last-born] son (in this team) [Joe] (2014). All the best in your endeavors. Fly high, always give a service, service for life”. This post demonstrated the community of practice’s pride in academic accomplishments, demonstrating the role of education as a unifying value among global service-learning alumni across different cohorts.

Additionally, a June 21, 2024, caption regarding research and agricultural extension initiatives by service-learners states, “The making of a scientist. Computer-assisted semen analysis taking pig artificial insemination technology to the sky and beyond, as in heaven”. This post explains a photo of a service-learning alumnus working at an animal genetics research lab at Makerere University. This quote reflects service-learning alumni’s continued participation in community transformation through scientific research.

Identity—Profiles and Murals

Posts focused on identity, such as profile pictures, team murals (Figure 6), and mentions of specific alumni team names, were the second most frequent, with 30 posts and 75 photos. These posts help affirm the community’s shared membership and individual participation. A post such as “Graduation Day 2016 Team. Good luck to you all—Team Kei-Apple” (August 6, 2016), demonstrates the importance of visual and nominal recognition in reinforcing shared identities. Along with the caption, a photo of the alumni during their time at the program is appended to remind them of their shared journey before, during, and after the formal global service-learning program.



Fig 6: Team Murals for CSRL Service-Learning Alumni, 2013-2016

The team names were inspired by alumni’s shared experiences, artifacts, or significant events encountered by the respective groups during their time in the service-learning experiences. For example, Team Diamond was inspired by Rihanna’s 2012 song, with the team slogan being, “Shine Bright like the 2013 Diamonds”. The team slogan is an excerpt from the song lyrics, signifying the participants’ aspirations for collective brilliance.

On the other hand, Team Tunga of 2014 drew its name from the popular Uganda love song of that time called *Ntunga* by artists Radio and Weasel, symbolizing a shared cultural connection to Uganda among learners from different national backgrounds. *Ntunga* is a [local dialect] word that translates as “Sew Me”. This love song references a lover’s request to their partner to mend their broken heart from the hurt and aches of previous relationships. This theme of healing and connection is reflected in the team mural featuring a crested crane—Makerere University mascot and Cy the cardinal—Iowa State University mascot, sewing the Uganda and American flags with thread made from individual team members’ names.

Team Rain in 2015 was inspired by the unexpected heavy rains in Namasagali, one of the sub-counties where the service-learning program operates, which rarely experiences heavy rains in the summer, inadvertently resulting in increased agricultural productivity in the summer school gardens for service-learning programs.

Similarly, Team Kei-Apple of 2016 was named after the Kei-apple trees, alive fence trees usually planted around the schools' gardens to protect them from animal encroachment.^[51] The selected team names demonstrate student involvement in defining their collective identity as well as how shared narratives and cultural references reinforce alumni connection to the program and host country.

Also, a caption to a photo of service-learners working with pupils at partner schools under the school gardening program states, "2022 service-learning team Makerere University is on the ground. Day 3 in Kamuli district. Building For the Future" (September 07, 2022). This caption describes the continued legacy of the global service-learning program after a yearlong pause due to the COVID-19 pandemic, which resulted in restrictions on global travel and physical contact.

Identity posts had substantial engagement, ranging from 183 "likes" to 15 comments and four shares. On June 8, 2024, while reflecting on the work and achievements made by the 2024 team, the author explained, "Team 2024 rolling off the season at the lake" and attached a photo of the service-learners at Lake Mburo National Park. These relaxation moments encourage members to recuperate and interact with one another, creating stronger bonds among the individuals.

Awards—Recognitions to Faculty and Students

Posts about awards recognize the achievements of faculty and students, creating a culture of appreciation and motivation within the community. Posts about recognition totaled 16 with 10 photos, emphasizing the role played by global service-learning stakeholders in promoting continued community transformation and engagement.

A post on May 16, 2024, celebrating the role played by global service-learning affiliated faculty to directly influence national agricultural policy, detailed, "The Animal Feeds Act 2023 is out. WoW. myself, I wrote the Parliamentary discussion paper, that is giving back to Uganda". The author added, "I am also on the Makerere University Team that submitted memoranda to the Parliamentary Committee on Agriculture. A very cordial engagement." Future prospects were also provided: "Now working on the Guidelines + Protocols for Genetic evaluation & Certification of bulls and bull dams—that is building the Uganda". This post recognizes the role that global service-learning alumni continue to play in community vitality and rural transformation through research and contributions to agricultural policies.

Similarly, another quote on October 19, 2018, recognizes an award received by a global service-learning faculty member, stating, "The World Food Prize presented the inaugural 'Inspiring the Next Generation' award to [Cole]". The author explained the worth of the award, "This award recognizes the tireless dedication [Cole] has shown in encouraging students, through the World Food Prize youth programs, to follow in the footsteps of Norman Borlaug".

This post recognizes the faculty member's commitment to developing future agricultural change agents through agricultural education.

With 76 likes and two comments, the interaction metrics reflect moderate but sincere engagement with the content. A related post on April 9, 2015, elucidates, "I'm reliably informed that our own, [Mary], a service-learner this year, won elections as President of the School of Agricultural Sciences [at Makerere University]. Congrats". Mutually, these acknowledgments of stakeholder excellence inspire action and strengthen the community's commitment to success.

Fundraising—For Programs and Sickness

Although fewer in number, i.e., seven posts, fundraising posts also played a role in promoting engagement among the alumni. For example, campaigns for a centralized training center and emergency sickness support were publicized, emphasizing community responsibility and collaboration. One of the posts explained, "I wanted you to know about a new adventure Iowa State is pursuing with our Uganda Service-Learning Program. The author added, "For the next seven weeks, we are hosting a crowdfunding campaign to help raise funds as a community for a training center to be built in Uganda" (December 1, 2015).

Another post on November 13, 2019, stated, "CSRL Growing Education Through School Lunches", highlighting the proactive role alumni take in supporting the sustainability of their program, reinforcing the values instilled in them during their participation in the global service-learning program.

Travels—For Students and Faculty

Travel-related posts (four posts and one photo) illustrate the participation of alumni in global engagement initiatives, reflecting their commitment to intercultural learning, inter-institutional collaboration, and educational exchange. A post on October 30, 2017, detailed, "Makerere University Professor visits Iowa State University." They added "The College of Agriculture and Life Sciences' Global Programs, along with [Leslie], are hosting Professor [John] from Makerere University". Professor [John] is the CSRL Service-Learning Coordinator at Makerere University. This statement illustrates the ongoing relationships and exchanges between the two partner universities, broadening the alumni network's international presence.

Ceremonies—Anniversaries and Celebrations

Posts about anniversaries and celebrations demonstrate the program's commitment to its history while acknowledging the role played by various stakeholders in building its legacy in the community. On one of the four posts notes, "4th July was the day to be at Kamuli. All service-learners, past and present, were here to witness the occasion of the 10th Anniversary" (July 4, 2015).

This theme contributes to group rituals and collective memories, thereby sustaining collective identity over time. The posts under ceremonies evoke emotions of nostalgia associated with shared experiences as various individuals reflect on their contribution to rural community transformation.

Changes in Facebook Interaction Before and After the Total Ban of Facebook in Uganda

This section answers research question three: How has the CSRL service-learning alumni Facebook engagement

changed over time? We noted a substantial reduction in posts and interactions (Table 2). The traffic on that Facebook page went down drastically by over 90% in posting and interactions.

Table 2: Changes in Facebook Interaction Before and After the Total Ban of Facebook in Uganda

Themes Developed	Total Posts		Types of Posts Per Theme				Facebook Feedback Engagements					
							Low Engagement			High Engagement		
	Posts	Photos	T	T+P	T+at+#+IsW	Links	Likes	Love	Wow	Comments	Shared	Interested
Years, 2013-2020												
Seminars	33	70	20	5	3	5	151	-	1	17	4	5
Family	17	29	1	9	7	-	307	21	3	38	-	-
Academics	18	45	10	3	5	-	175	9	2	26	5	-
Identity	24	63	5	10	1	4	160	3	5	15	4	-
Awards	12	7	5	3	2	5	59	1	5	2	-	-
Fundraising	7	5	-	-	-	7	6	1	-	1	1	-
Travels	4	1	2	1	1	-	34	-	-	-	-	-
Anniversary	3	-	3	-	-	-	16	-	-	1	-	-
Totals	118	220	46	31	19	21	908	35	16	100	14	5
Years, 2021-2024												
Seminars	-	-	-	-	-	-	-	-	-	-	-	-
Family	-	-	-	-	-	-	-	-	-	-	-	-
Academics	3	3	-	3	2	-	16	1	-	-	-	-
Identity	6	12	1	3	-	-	23	1	1	-	-	-
Awards	4	3	1	3	1	1	17	-	1	-	-	-
Fundraising	-	-	-	-	-	-	-	-	-	-	-	-
Travels	-	-	-	-	-	-	-	-	-	-	-	-
Anniversary	1	1	-	1	-	-	4	-	-	-	-	-
Totals	14	19	2	10	3	1	60	2	2	-	-	-
Grand Total	132	239	48	41	22	22	968	37	18	100	14	5

Note: 2013 to 2020—before the ban, and 2021 to 2024—after the ban on Facebook. -

Discussion

The findings from this study reveal the role played by intentionally created digital spaces in maintaining connections and building community among global service-learning alumni. The analysis of the CSRL service-learning alumni Facebook page revealed eight distinct communication themes, which included: seminars, family, academics, identity, awards, fundraising, travels, and celebrations, reflecting common findings in alumni engagement research. The prevalence of posts regarding seminars, family, and academics aligns with existing literature, which shows that most alumni networks focus on academic milestones, social bonding, and information sharing as key drivers for continued participation in online communities of practices^[84].

These themes highlight the importance of sharing achievements while reinforcing collective identity and connections within the alumni community. Facebook, therefore, serves as a crucial platform for creating and maintaining online communities of practice among global service-learning alumni. The platform allows group participants to ask each other questions or reach out to other alumni who might have participated in the formal service-learning program much earlier, thereby promoting intergenerational knowledge exchange.

Seminars—Orientations and Presentations

The first theme of seminars emphasizes the need for continued professional development and community learning among alumni, thereby strengthening a community founded on the principle of commitment to life-long

learning. In the context of academic communities of practice, Ceran and Bahadir^[68] assert that when the need to learn seizes, the motivation to continue participating in the group diminishes. This stance also aligns with current literature on the stages of team development, which suggests that when the common goal of the team is met, the group is either formally or informally adjourned.^[85]

Posts about seminars, orientations, and presentations also encourage knowledge sharing, a crucial aspect of continuous learning and professional networking, which can enhance career opportunities for participants. The level of engagement under the seminars also signifies that seminars play a key role in promoting community support and developing a collective identity among alumni of the program.

According to the elaboration likelihood model^[72], alumni may engage more deeply with seminar content based on the perceived significance of the information shared to their professional growth, prompting thoughtful discussions. More importantly, in such global education programs, seminars help prepare students for their experiential learning through prereflective orientations which also reduce cultural shocks^[8-9, 70, 86]. Also, post-program reflections seminars help reduce reverse cultural shocks upon the re-entry of students back to their communities^[8-9].

Family Relations—Engagements, Weddings, and Childbirths

The second finding cites the prominence of family-themed communications, including marriage engagements, introductions, weddings, babies born, and other family

milestones, reflecting the role of familial relationships and engagements, demonstrating a sense of community and support among alumni. These posts also reflect the strong emotional bonds formed during service-learning experiences, reinforcing a sense of belonging^[9].

When group participants get to this level of trust, they start to view each other as a part of a larger extended family, creating a supportive network. Notably, this approach also encourages peer mentorship due to the establishment of social capital between different generations of global service-learning alumni. Posts cited under the family theme also reflected how alumni share their joys with the community, re-emphasizing collectivization and support for community members.

Ultimately, the family theme reveals the social aspect of global service-learning, extending beyond academic and professional interests, and strengthening trust and solidarity among members from different cohorts. Considering the heuristic-systematic model^[59], family-themed communication received high levels of interaction because initial engagement from group participants heavily relies on emotional cues, resulting in deeper discussions. People are more likely to engage with content that evokes emotion and reinforces communal attitudes^[16].

Academics—Admissions, Research, and Graduations

The findings also suggest that sharing **academic**-related content encourages intellectual engagement among alumni, thereby promoting knowledge exchange. Celebrating graduations, publications, and alumni graduate school admissions indicates the pride that alumni take in their academic achievements and the collective success of the community. This theme emphasizes the role of education as a shared value in the communities of practice, promoting motivation and encouragement among peers.

Alumni contribute to a culture of academic excellence and mutual support by publicly recognizing these achievements. Besides, engagement with academic content also displays a commitment to knowledge development and dissemination towards community vitality. Academic posts elicited significant engagement with 191 “likes”, 26 comments, and five shares, symbolizing the domain aspect of the communities of practice framework as the tapestry that holds the group together^[16, 68]. The academic theme also reflects the practice dimension of communities of practice by promoting knowledge development and recognition of scholarly milestones^[60, 68].

In connection with the elaboration likelihood model^[72], alumni’s pride in academic achievement encourages active participation and discussion because shared motives influence engagement. Likewise, the heuristic-systematic model^[56] suggests that alumni may initially interact with academic posts based on emotional resonance, later resulting in in-depth engagement with the shared content on their Facebook timeline, evoking further discussions.

Identity—Profiles and Murals

The theme of identity displays the expressions held by alumni towards their connections with the global service-learning program and to each other as individuals. Posts with mentions of team names and references to the team murals (Figure 6) solidify group identity and solidarity.

Peruta and Helm^[16] explain that “Without touching on the memories that tie alumni to their institutions, they begin to feel disconnected” (p. 133). The identity theme indicates that social media is a powerful tool for identity formation, allowing individuals to reflect on their personal experiences within the larger picture of the alumni community^[68].

Besides, alumni strengthen their bonds to the broader community by sharing aspects of their identity within the group, which is essential for the maintenance of long-term connections. Evidently, concerning social identity theory, sharing identity-related content affirms group membership and personal connection, promoting social cohesion.^[63, 87] Interactions quoted under this theme demonstrate the role of collective identity reaffirmation in sustaining member commitment and community cohesion within the community of practice.^[68]

The identity theme also illustrates how alumni celebrate their collective journeys and shared experiences as part of a larger community despite differences in their backgrounds and experiences in the program.^[8-9, 70] In this instance, the elaboration likelihood model^[72] indicates that identity posts will encourage alumni engagement based on the perceived collective experiences, which elicit an emotional connection to the shared content on their social media timeline^[16].

Awards—Recognitions to Faculty and Students

Posts that **celebrate** faculty, students, and alumni achievements, such as scholarships, awards, and professional recognitions, serve as acknowledgments of exceptional contributions and individual excellence, thereby inspiring pride within the community. Acknowledging the successes of peers reinforces the idea that hard work and dedication are valued, creating an environment where members are motivated to strive for excellence. From our findings, awards and recognitions also highlight alumni identification with their affiliate institutions, thereby creating institutional goodwill.^[15]

Like identity- and family-themed communication, awards promote group esteem and encourage ongoing participation in community development through affirming and re-emphasizing members’ contributions and successes. While the elaboration likelihood model^[59] suggests that recognition enhances alumni’s motivation to engage with shared content, the heuristic-systematic model^[56] elaborates that the emotional impact of these posts often prompts further interactions and discussions among members in the communities of practice.

Fundraising—For Programs and Sickness

The theme of **fundraising** illustrates global service-learning alumni’s enduring commitment to social responsibility, philanthropy, and community support. Posts related to fundraising initiatives demonstrate a willingness to give back to the program while reinforcing the values instilled during their service-learning experiences. This theme reflects the broader outcome of college education supporting civic engagement among graduates who continue to demonstrate their dedication to the communities they lived and served in^[9, 15, 70, 87]. Additionally, this theme emphasizes the practice dimension in the communities of practice framework^[69], where alumni engage in collaborative efforts to sustain their programs^[16].

With visible evidence of alumni contributions resulting from social media campaigns, the heuristic-systematic model ^[56] suggests that alumni may respond to fundraising posts based on heuristic cues such as the credibility of the author. On the other hand, the elaboration likelihood model ^[59] indicates that alumni would respond to the message after careful thought and judgment of the impact of their financial contributions to the communities they once worked with and lived in during their global service-learning experience.

Travels—For Students and Faculty

The travels abroad theme emphasizes the mindset shift due to involvement in global service-learning activities as individuals become more open to engagement with diverse others and the need for intercultural learning. ^[9,70,87] Posts related to academic exchanges, conferences, or study abroad programs indicate that alumni are engaged both locally and globally, reflecting a commitment to lifelong learning and cultural understanding. Global experiences also enhance the affiliated institutions' international presence as alumni remain ambassadors of their respective alma maters and the global service-learning program within which they participated.

When group participants share their travel abroad experiences, group discussions are enriched by diverse experiences from different cultures and practices, creating an environment of curiosity and exploration. ^[8-9, 70] In this instance, the elaboration likelihood model ^[59] posits that initial reactions to shared content in the form of pictures of trips might encourage further engagement to understand the trip's contribution to the creation and dissemination of shared knowledge in the communities of practice to which members subscribe.

Ceremonies—Anniversaries and Celebrations

The **celebrations**, ceremonies, and anniversaries theme represents the need to reflect on the evolution of the global service-learning program and the individual milestones reached over the program's development. ^[15] Posts related to the program's 10th anniversary commemorated the participants' collective history, its legacy, and the impact it has had on alumni and their communities, and similar sentiments were echoed on the 20th anniversary (p. 15). ^[15] This theme highlights the importance of maintaining connections to the past while looking forward to future opportunities for growth and collaboration.

Anniversary-related posts can generate engagement by evoking nostalgia and renewing individual commitments to the common cause. Therefore, this theme emphasizes the importance of collective memory in sustaining community identity, as outlined in the communities of practice framework. ^[16] While the elaboration likelihood model ^[59] indicates that commemorations can influence alumni's motivation to participate in the communities of practices, the heuristic systematic model. ^[56] suggests that emotional resonance in these posts often prompts alumni to interact more with the content posted on the timeline.

Changes in Facebook Interaction on the CSRL Service-Learning Alumni Group

Engagements on the CSRL service-learning alumni group have reduced by over 90% since 2021, and several factors

can account for these reductions. Generally, studies recognize the challenges and conditions for success in online communities of practice, such as maintaining leadership, managing participation levels, and balancing privacy and trust within virtual environments. ^[68,87] The digital climate in various national settings continues to evolve, influenced by various factors that affect the effectiveness of social media in facilitating communication and collective action.

In Uganda, the political events revealed the fragility of online engagement, as seen on January 13, 2021, during the general elections that included Parliamentary and Presidential elections. The government, through the Uganda Communications Commission (internal memo Ref: OED/299), directed all internet service providers to disable social media access to all their respective subscribers until further notice. This move was in response to Facebook's suspension of pro-government accounts linked to the ruling National Resistance Movement party ^[22, 88].

The 2021 action of the Uganda government is also mirrored by a similar earlier directive that led to a five-day internet shutdown (from February 17 to 22) during the 2016 Presidential Election, aimed at curbing the proliferation of digital activism in the country. ^[21] Later that year, during the inauguration of the President, there was another directive to terminate social media access from May 11 to 14.

Such social media restrictive measures negatively affect the virtual communities of practices, including the CSRL service-learning alumni group, whose survival heavily relies on free online interactions with members spread across continents. Moreover, at the time of this publication, Facebook is still suspended in Uganda, limiting interactions to mainly alumni who are outside Uganda. This scenario explains the low posts and engagement with the posts between 2021-2024 (Table 2).

Yet, the global average usage data revealed a rise in online engagement during the COVID-19 pandemic due to the need for continued communication during a period of global travel restrictions. There was a 61% increase in global social media usage, with Facebook and Twitter (now X) experiencing a 40% boost between February and March 2020. ^[90] In Uganda, there was a similar trend with an increase in social media engagement and digital activism, coinciding with a year of active political campaigns in preparation for the January 2021 elections ^[22, 89].

Conclusion

This study explored the differences in CSRL service-learning alumni engagement, providing an understanding of various approaches to creating stronger connections between current and prospective participants. The study reveals that the CSRL service-learning alumni use Facebook to share academic achievements and family milestones, creating a sense of belonging through shared experiences. The dedicated Facebook group also serves to promote program-related events and run fundraising campaigns for community development initiatives and emergencies, such as sickness among alumni, which promotes philanthropy.

Using the community of practice framework, we see how these interactions sustain connections and encourage mentorship across different service-learning cohorts. Alumni engage by sharing information about seminars,

successes, and anniversaries, which strengthens their collective identity. The sense of comradeship is especially evident when newer alumni reach out to older alumni on the page for academic and career advice.

Employing theories of information processing—heuristic-systematic and elaboration likelihood models—showed how alumni balance quick emotional responses with deeper engagement when interacting with the shared content on their group Facebook timeline. This dedicated Facebook group allows alumni to support each other, share knowledge, and feel part of a larger family, even after their formal service-learning experiences end. Schools and program leaders can use these insights to strengthen their alumni communities and encourage lifelong involvement in global service-learning.

In a digital global economy, this study illustrates the role played by social media in maintaining relationships among global service-learning alumni across diverse backgrounds. Examining the impact of social media on alumni interactions helps institutions understand how to support contemporary stakeholder networks for mentorship, lifelong learning, and community building. As virtual communication has evolved from simple text to multimedia sharing, Facebook's position remains strong due to its adaptability to emerging trends and contemporary user feedback. The platform has transformed from a simple networking site to a dynamic tool for global communication, marketing, and collaboration.

Synergistically, the identified themes illustrate the diverse ways CSRL service-learning alumni engage on Facebook. Through their posts on affective, informational, and social-engagement content, alumni celebrate achievements and reinforce community values of support and lifelong learning.^[8-9,70] These findings contribute to understanding how social media platforms like Facebook can be strategically utilized to create and sustain online communities of practice through intentional, multi-level interactions. When program coordinators understand the motivating factors and patterns behind alumni participation in philanthropy and community initiatives.^[15,27] they would develop effective strategies for mobilizing and allocating resources.

Implications and Recommendations

Engaging alumni through social media helps create ambassadors for their former institutions and respective global service-learning programs. Through engagement with the shared content on their social media timeline, alumni promote their service-learning experiences and the impact of the initiatives they were involved in. This practice of engagement enhances program visibility and encourages further investment in global service-learning programs and future activities. Schools can also utilize social media platforms to strengthen connections with alumni.

Dedicated Facebook groups allow institutions to share updates and market events while facilitating communication without requiring participants to divulge personal contact information. The National Future Farmers of America, for instance, frequently utilizes Facebook as an educational platform for developing their chapters and linking students with the extension educators.^[67] This setup seamlessly encourages current students to interact with alumni,

providing valuable support and mentorship during their academic and professional journeys.

Although alumni service-learners were more likely to comment on the experiences of their cohort mates and not the posts of those who had come earlier or in later years, these aspects point to the need to have more alumni engagements so that the benefit of integration can be actualized. The alumni could form an entity through which physical interactions and team social activities can strengthen the cohesion between the cohorts.

Current students benefit from connections with alumni, as these relationships offer motivation and guidance. Engaging with alumni can help students navigate challenges and explore the transferability of their global service-learning-gained skills and experiences to diverse academic and career pathways. The communities where service-learners once participated can benefit from joint fundraising initiatives organized through social media campaigns. These efforts can garner alumni support for local projects, strengthening community partnerships while addressing specific needs.^[15,27]

Policy analysts should evaluate the impact of digital policies and regulations on alumni engagement in community development. Insights into these factors are crucial for promoting global connections and supporting collaborative learning. Future research should explore how environmental factors, such as government policies on social media, affect the sustainability of communities of practice.

Additional qualitative research is also needed to understand why some members engage actively while others participate less frequently after participation in their formal global service-learning program. Insights from such studies can help tailor communication strategies and improve the effectiveness of alumni engagement efforts with their former institutions and programs.

References

1. Bringle RG, Hatcher JA, Clayton PH, editors. Research on service learning: Conceptual frameworks and assessments: Volume 2A: Students and faculty. Taylor & Francis; 2023.
2. Moran M, Miles S, Martin P. Australian rural service learning student placements: a national survey. *Medical Education*. 2024;24(1):216.
3. Nonnecke G, McMillan DE, Kugonza D, Masinde D. Leaving the doors open to new beneficiaries. In: Butler LM, McMillan DE, editors. *Tapping philanthropy for development: lessons learned from a public-private partnership in rural Uganda*. Sterling (VA): Kumarian Press; 2015. p. 165-189.
4. Ribeiro Á, Aramburuzabala P, Paz-Lourido B. Research report on the institutionalization of service-learning in European higher education: research procedures and main findings. Madrid: European Association of Service-Learning in Higher Education; 2021.
5. Tapia MN, Giorgetti D, Furco A, Weigert KM, Vinciguerra A, González A, *et al*, editors. *Towards a global history of service-learning*. Buenos Aires: CLAYSS; 2021.
6. Kolb DA. *Experiential learning: experience as a source of learning and development*. Pearson; 2015.

7. Bramley HT, Nolley LD, Goodell LS, Cooke NK. The impact of an online service-learning framework on students' understanding of the complexity of community food security and development of professional skills. *J Serv Learn High Educ.* 2023;17.
8. Ikendi S, Retallick MS, Nonnecke GR, Kugonza DR. Influence of school garden learning approach on academic development of global service-learners. *J Agric Educ.* 2023;64(4):159-79.
9. Ikendi S, Retallick MS, Nonnecke GR, Cooper TN, Owusu F. Intergroup contact fosters intercultural competence among global service-learners through appreciation of differences and awareness of structural inequalities. *J Agric Educ.* 2025;66(4):16.
10. Petersen N, Maseko J, Nthimbane K, Cancelliere S. Addressing issues of food insecurity in a service-learning gardening project. In: *Embedding social justice in teacher education and development in Africa.* London: Routledge; 2021. p.93-114.
11. Schichtl R, Carroll K, Sartain K. Factors influencing food insecurity empathy: the role of service-learning. *Int J Home Econ.* 2022;15(2):151-9.
12. Lin S, Ngai G, Kwan KP, Chan SC, Lo KW. The impact of mandatory academic service-learning on university graduates' continual civic engagement: evidence from a curriculum reform. *High Educ Res Dev.* 2025;44(1):1-5.
13. Ding F, Riccucci NM. The value of alumni networks in responding to the public administration theory and practice: evidence from the COVID-19 pandemic in China. *Adm Theory Prax.* 2020;42(4):588-603.
14. Gallo ML, Adler KF. Facebook fatigue? A university's quest to build lifelong relationships with students and alumni. In: Kent M, Leaver T, editors. *An education in Facebook? Higher education and the world's largest social network.* London: Routledge; 2014. p.207-16.
15. Ikendi S, Retallick MS. Strategic leadership and management of multistakeholder organizations. *J Agric Educ.* 2025;66(2):9.
16. Peruta A, Helm C. Engaging university alumni through social media: strategies for creating community. *J Soc Media Soc.* 2018;7(1):123-50.
17. Gil-Clavel S, Zagheni E. Demographic differentials in Facebook usage around the world. *Proc Int AAAI Conf Web Soc Media.* 2019;13(1):647-50.
18. Olorunlana TJ. The history of Facebook and its impact on humanity. *Int J Sci Archit Technol Environ.* 2025;2(4):39-47.
19. Adishree W. Top social media platforms by numbers in 2025. *The Tagembed.* 2025 Jan 22.
20. Ch D. Facebook statistics (2025). *Send Short, PXCH Holding I, LLC.* 2025 Jan 7.
21. Maracotho EC. Social media, internet shutdowns and elections in Uganda: the case of 2016 and 2021 electoral campaigns. In: Omanga D, Mare A, Mainye P, editors. *Digital technologies, elections and campaigns in Africa.* London: Routledge; 2023. p. 121-40.
22. Nagawa EJ. Mainstreaming the internet shutdown question into the right to carry out lawful business. *WordPress.* 2021 Feb 12.
23. Franz D, Marsh HE, Chen JI, Teo AR. Using Facebook for qualitative research: a brief primer. *J Med Internet Res.* 2019;21(8):e13544.
24. Facebook. What does it mean to follow a profile or page on Facebook? Facebook Help Center. 2025 Apr 24.
25. Cho M, Schweickart T, Haase A. Public engagement with nonprofit organizations on Facebook. *Public Relat Rev.* 2014;40(3):565-7.
26. Butler ML, Acker GD. Epilogue: the partnership today and looking towards the future. In: Butler LM, McMillan DE, editors. *Tapping philanthropy for development: lessons learned from a public-private partnership in rural Uganda.* Sterling (VA): Kumarian Press; 2015. p.255-68.
27. Ikendi S, Mwenyi RM, Retallick MS. Love for humanity and universal goodwill: reflections on philanthropy through theory of change and the United States land grant values in Uganda. *Int J Philos Human Sci.* 2025;8(9):322-36.
28. Akitwine F. Pedology of typical soils of Kamuli District and pedotransfer functions to predict cation exchange capacity in limited-resource settings [master's thesis]. Ames (IA): Iowa State University Digital Repository; 2021.
29. Ikendi S, Owusu F, Masinde D, Oberhauser A, Bain C. Assessment of agronomy, agroforestry, orchards, grain storage, and postharvest education programs on empowerment of farmers in rural Uganda. *J Agric Educ.* 2024;65(1):99-125.
30. Wokibula RA, Akitwine F, Mtama JG, Burras LC. Cation exchange capacity within and between pedons of the Kamuli catena, Busoga sub-region, Uganda [online presentation]. Presented at: ASA Annual Meeting; 2024 Nov 10-13; San Antonio, TX.
31. Kwikiiriza S. Evaluation of horticultural practices for tropical squash production and marketing among smallholder youth farmers in Kamuli, Uganda [master's thesis]. Ames (IA): Iowa State University; 2022.
32. Tusiime SM, Nonnecke GR, Masinde DM, Jensen HH. Evaluation of horticultural practices for sustainable tomato production in Eastern Uganda. *HortScience.* 2019;54(11):1934-40.
33. Bbosa D, Brumm TJ, Bern CJ, Rosentrater KA, Raman DR. Evaluation of hermetic maize storage in 208-liter (55 gallon) steel barrels for smallholder farmers. *Trans ASABE.* 2017;60(3):981-7.
34. Brumm TJ, Bern CJ, Webber DF. Hermetic storage of maize grain in repurposed food oil containers to control maize weevils. *J Stored Prod Postharvest Res.* 2021;12(2):42-6.
35. Mayanja IK, Kigozi J, Kawongolo JB, Brumm TJ. Design, fabrication and testing of a pedal operated maize grain cleaner. *J Adv Food Sci Technol.* 2018;5(3):105-11.
36. Tumutegyereize P, Oluk I, Kigozi J, Mayanja I, Buyinza T, Mbeiza M. Assessing the effect of access on the use of improved seed cleaning technologies: challenges and opportunities among farmers in the Kamuli District, Uganda. *Int J Postharvest Technol Innov.* 2022;8(2-3):243-56.
37. Ikendi S, Owusu F, Masinde D, Oberhauser A, Bain C. Livestock extension education: a livelihoods revitalization strategy in rural Uganda. *J Agric Educ.*

- 2025;66(1):50.
38. Walugembe M, Nadiope G, Stock JD, Stalder KJ, Pezo D, Rothschild MF. Prediction of live body weight using various body measurements in Ugandan village pigs. *Livest Res Rural Dev*. 2014;26(5):96.
 39. Ikendi S, Owusu F, Masinde D, Oberhauser A, Bain C. Nutrition education centers: a community-based approach to management of malnutrition. *J Agric Food Syst Community Dev*. 2023;13(1):9-15.
 40. Masinde D, McMillan ED, Rothschild M, Nonnecke G. Leaving the door open to emerging needs and opportunities. In: Butler LM, McMillan DE, editors. *Tapping philanthropy for development: lessons learned from a public-private partnership in rural Uganda*. Sterling (VA): Kumarian Press; 2015. p.145-64.
 41. Ikendi S, Owusu F, Masinde D. Fostering behavioral change in maternal practices through nutrition and infant feeding education programs in rural Uganda. *Int J Obstet Gynecol Nurs*. 2025;7(10):118-33.
 42. Nabwiire L, Shaw A, Nonnecke G, Talbert J, Muyanja C, Boylston T, *et al.* Compliance with food safety standards by beef vendors at butcheries in Kamuli District, Uganda. *Afr J Food Sci*. 2023;17(9):192-206.
 43. Ssabika G, Buyinza T, Brumm T, Byakika S, Mukisa IM. Microbiological safety and nutritional adequacy of composite porridge flour used in a selected school feeding program in Kamuli District, Uganda. *Eur J Agric Food Sci*. 2024;6(2):60-6.
 44. Ikendi S, Masinde D, Owusu F. Toward sustainable community health through participatory water and public health education programs in Southeastern Uganda. *Int J Health Sci Res*. 2025;15(1):284-304.
 45. Martin T. Individual capacities (human capital) of the Tusubila crafts group. Ames (IA): Iowa State University Digital Repository; 2018.
 46. Ikendi S, Owusu F, Masinde D, Oberhauser A, Bain C. Does participation in livelihood education programs impact household food security? A comparative study in rural Uganda. *J Agric Food Syst Community Dev*. 2023;13(1):235-65.
 47. Ikendi S, Owusu F, Masinde D, Bain C, Oberhauser A. Food insecurity coping strategies among households with average dietary diversity and caloric intake scores in rural Uganda. *J Agric Food Syst Community Dev*. 2025;14(4):245-78.
 48. Sseguya H, Mazur RE, Flora CB. Social capital dimensions in household food security interventions: implications for rural Uganda. *Agric Human Values*. 2018;35(1):117-29.
 49. Masinde D, Ikendi S, Nabwiire L, Nambafu C, Owusu F, Bain C, *et al.* Towards nutrition security among children and their primary caretakers through livelihood education programs in rural Uganda. *Int J Agric Nutr*. 2025;8(2):Part B.
 50. Byaruhanga LA, Masinde DM, Nonnecke GR, Lutwama D, Kimiywe J, Nyangaresi DM. Effect of school garden food production on nutrient adequacy of school meals for children attending Namasagali primary school in rural Kamuli District, Uganda. *Int J Food Sci Nutr*. 2017;2(4):114-8.
 51. Ikendi S, Retallick MS, Nonnecke GR. Implementing global service-learning through school gardens. *Agric Educ Mag*. 2023;95(6):25-8.
 52. Wenger E. *Communities of practice: learning, meaning, and identity*. Cambridge: Cambridge University Press; 1998.
 53. Wenger-Trayner E, Wenger-Trayner B. *Learning to make a difference: value creation in social learning spaces*. Cambridge: Cambridge University Press; 2020.
 54. Chaiken S, Liberman A, Eagly A. Heuristic and systematic information processing within and beyond the persuasion context. In: Uleman JS, Bargh JA, editors. *Unintended thought*. New York: Guilford Press; 1989. p.212-52.
 55. Einwiller S, Bohner G, Chaiken, Liberman & Eagly (1989): heuristisch-systematisches Modell. In: *Schlüsselwerke für die strategische Kommunikationsforschung*. Wiesbaden: Springer Fachmedien Wiesbaden; 2024. p.341-51.
 56. James TL, Ziegelmayer JL, Schuler SA, Fox G. A multiple-motive heuristic-systematic model for examining how users process Android data and service access notifications. *ACM SIGMIS Database Adv Inf Syst*. 2021;52(1):91-122.
 57. Koh YJ, Sundar SS. Heuristic versus systematic processing of specialist versus generalist sources in online media. *Hum Commun Res*. 2010;36(2):103-24.
 58. Petty RE, Cacioppo JT. The elaboration likelihood model of persuasion. In: *Adv Exp Soc Psychol*. 1986;19:123-205.
 59. Srivastava M, Saini GK. A bibliometric analysis of the elaboration likelihood model (ELM). *J Consum Mark*. 2022;39(7):726-43.
 60. Abedini A, Abedin B, Zowghi D. Adult learning in online communities of practice: a systematic review. *Br J Educ Technol*. 2021;52(4):1663-94.
 61. Bourke NF, Shelley T, Shumack KA, Lewis TD. Utilizing social media to foster communities of practice in college classrooms. *J Excell Coll Teach*. 2023;34(3):45-63.
 62. Kenney J, Kumar S, Hart M. More than a social network: Facebook as a catalyst for an online educational community of practice. *Int J Soc Media Interact Learn Environ*. 2013;1(4):355-69.
 63. Lawson C, Doerfert DL, Filson C. State FFA association use of Instagram to promote membership diversity. *J Agric Educ*. 2021;62(2):97-118.
 64. Lamanna M, Muca E, Buonaio G, Formigoni A, Cavallini D. From posts to practice: Instagram's role in veterinary dairy cow nutrition education—how does the audience interact and apply knowledge? A survey study. *J Dairy Sci*. 2025;108(2):1659-71.
 65. Lee G, Pratiwi A, Farikhah, Suzuki A, Kurosaki T. Online communities of practice as agricultural information platforms: a case study of Indonesian shrimp farmers during the COVID-19 pandemic. *Bull Indones Econ Stud*. 2025;61(1):123-58.
 66. Nwoye EG, Ndubuisi BN, Onu DO, Okafor NP. Constraints and enhancement measures in the use of social media platforms in teaching and learning of agricultural education in tertiary institutions in Enugu State, Nigeria. *Int J Vocat Stud Libr Sci*. 2024;5(1):1-9.
 67. Taylor R, Ruth TK, Robison B, Conner NW, Reiling B. An exploration of Nebraska agricultural educators' use

- of social media to promote their local FFA chapters. *J Agric Educ.* 2025;66(1):39.
68. Ceran O, Bahadır H. Online communities of practice: sustainable leadership model. *J Learn Teach Digit Age.* 2019;4(1):25-33.
 69. Nicolini D, Pyrko I, Omidvar O, Spanellis A. Understanding communities of practice: taking stock and moving forward. *Acad Manag Ann.* 2022;16(2):680-718.
 70. Ikendi S. "I had no idea of what we were going to do:" reflecting on prelective learning, the architectural foundation of learning in global service-learning programs. *Int J Literacy Educ.* 2025;5(2):219-32.
 71. Park J, Olaoye F, Jackson KM, Barr W, Thompson JJ. From awareness to action: building a community of practice for equity in food systems education. *Agric Human Values.* 2025;42(3):1-6.
 72. Shahab MH, Ghazali E, Mohtar M. The role of elaboration likelihood model in consumer behaviour research and its extension to new technologies: a review and future research agenda. *Int J Consum Stud.* 2024;45(4):664-89.
 73. Crotty M. The foundations of social research: meaning and perspective in the research process. London: Sage; 2020.
 74. Jackson AY, Mazzei L. Thinking with theory in qualitative research: viewing data across multiple perspectives. London: Routledge; 2012.
 75. Creswell JW, Poth CN. Qualitative inquiry and research design: choosing among five approaches. Thousand Oaks (CA): Sage Publications; 2017.
 76. Center for Sustainable Rural Livelihood (CSRL). CSRL Service-Learning Alumni Facebook page. https://www.facebook.com/slalumni/?ref=page_internal
 77. Maxwell JA. Using qualitative methods for causal explanation. *Field Methods.* 2004;16(3):243-64.
 78. Hesse-Biber SN, Rodriguez D, Frost NA. A qualitatively driven approach to multimethod and mixed methods research. In: Hesse-Biber SN, Johnson RB, editors. *The Oxford handbook of multimethod and mixed methods research inquiry.* Oxford (UK): Oxford University Press; 2015. p.3-20.
 79. Saldaña J. An introduction to themeing the data. In: Wolgemuth JR, Guyotte KW, Shelton SA, editors. *Expanding approaches to thematic analysis: creative engagements with qualitative data.* London: Routledge; 2024. p.11-26.
 80. Leavy P. Method meets art: arts-based research practice. New York: Guilford Publications; 2020.
 81. Ozano K, Khatri R. Reflexivity, positionality and power in cross-cultural participatory action research with research assistants in rural Cambodia. *Educ Action Res.* 2018;26(2):190-204.
 82. Savvides N, Al-Youssef J, Colin M, Garrido C. Journeys into inner/outer space: reflections on the methodological challenges of negotiating insider/outsider status in international educational research. *Res Comp Int Educ.* 2014;9(4):412-25.
 83. Rossman GB, Rallis SF. An introduction to qualitative research: learning in the field. Thousand Oaks (CA): Sage Publications; 2016.
 84. Irianto WG, Idrus SA, Gumilar L, Wibawa AP, Kurubacak G, Wahyuningtyas EP, *et al.* Social media utilization for alumni interaction. In: *Proc 7th Int Conf Electr Electron Inf Eng.* Malang (Indonesia); 2021 Oct 2. p. 510-15.
 85. Young SP. The stages of team development: examples from the real world. *Manag Teach Rev.* 2024;9(2):175-85.
 86. Ikendi S, Mwenyi RM, Somers R, Sikdar S, Kakungulu BA. National anthems and flags: strategic tools for global citizenry and cross-cultural competence development in global educational programs. *Int J Literacy Educ.* 2025;5(2):307-21.
 87. Renn KA, Reason RD. College students in the United States: characteristics, experiences, and outcomes. London: Routledge; 2023.
 88. McLoughlin C, Patel KD, O'Callaghan T, Reeves S. The use of virtual communities of practice to improve interprofessional collaboration and education: findings from an integrated review. *J Interprof Care.* 2018;32(2):136-42.
 89. Matsiko A, Kersting N. The integrity of digital policies and political participation in Uganda: a tale of dissent and digital repression. *Commonw Comp Polit.* 2023;61(1):2-9.
 90. Azer J, Blasco-Arcas L, Harrigan P. #COVID-19: forms and drivers of social media users' engagement behavior toward a global crisis. *J Bus Res.* 2021;135:99-111.