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**MUSTAPHA ALMASI**

Vrije Universiteit Brussel, Belgium

**CHANG ZHU**

Vrije Universiteit Brussel, Belgium

## **STUDYING TEACHING PRESENCE IN RELATION TO LEARNER PERFORMANCE IN BLENDED LEARNING COURSES IN A TANZANIAN UNIVERSITY: A MIXED DESIGN APPROACH**

### **Abstract:**

Teaching presence influences student learning, motivation, satisfaction and performance in blended learning courses. Many studies have focused on understanding teaching presence using quantitative measures only. This study explores perceptions of teaching presence (TP) in relation to academic performance among instructors and students in blended learning (BL) courses in Tanzania. Six instructors and 651 students were involved in the study. We examined student perception of TP, the role of the instructor, and how TP relates to performance. Data were obtained using a TP scale, interviews and focus group discussion. The results of the qualitative data show that all instructors involved in the study regard content delivery as their main teaching presence. Instructors also viewed provision of notes, assignments, and questions (facilitation) as their second main role of TP. Students report a high teaching presence in all BL courses studied. Also, students regarded group discussion as the main teaching presence. They described their instructors as playing roles in facilitating the lessons, delivering content, directing and organizing courses they taught. The study finds no significant gender differences in students' performance. The student reported TP significantly predict their performance scores. While students' characteristics such as gender have shown no influence on students' performance, course type and teaching presence influence students' performance. Instructors favour traditional teaching roles in BL courses and exalt a high teaching presence as reported by students. The implications of the study are discussed.

### **Keywords:**

teaching presence, student performance, blended learning, mixed method, community of inquiry

**JEL Classification:** A00

## Introduction

Though teaching presence is a major area for research in blended learning, there are still divergences as to its effect on student academic performance (Almasi & Zhu, 2017; Vo, Zhu, & Diep, 2017; Thomas, 2018; Kwak, Menezes, & Sherwood, 2014). Research shows that how learners perceive a learning activity cannot be predicted in advance (Petraglia, 1998a, 1998b) cited in Woolf & Quinn (2009). Consequently, it cannot be assumed that learners will perceive the value of an activity as intended by course designers (Woolf & Quinn, 2009). Still, other researchers have echoed that instructors' perception of what teaching is and what role they think they play has influence on the way they teach (Morgan, 2011; Almasi, Zhu, & Machumu; 2018a). Therefore, due to the introduction of e-learning and learning management systems (LMS) in education, researchers have highlighted the need for studying students' and instructors' perceptions about e-learning and blended learning (Cobanoglu et al, 2009).

Moreover, the need to investigate students' and instructors' perceptions about teaching presence arise from the fact that perceptions have an influence on actual behavior, i.e. whether and how one will use or not use e-learning. Various studies have confirmed this. For instance, in a study on instructors' conceptualization of teaching presence, Morgan (2011) found that instructors conceptualized teaching presence in various ways ranging from community based, activity space, online graduate seminar, student centred online classroom, community in the making to teacher directed classroom. These conceptualizations were directly related to how the instructors viewed the object and outcomes of the activity, or the purpose and goals of the interaction spaces indicating a possibility of approaching teaching differently (ibid).

Previous studies have mostly used quantitative measures to study perceptions. Morgan (2011) warned of reliance in quantifying measures of studying teaching presence. Taking this view board, this study used a combination of qualitative and quantitative approach to study teaching presence among both students and instructors and relate the perceptions with student performance. This study also links perception of teaching presence and students' performance obtained through continuous assessment scores, coursework. Also, most previous studies done on teaching presence have examined the concept mainly in the online settings. In this study we approach teaching presence from a blended learning perspective. While in online learning, there is absence of the "physical human feel and touch" in blended learning the instructor is available in both settings, physical and virtual. Consequently, we investigated six blended learning courses taught at Mzumbe University, Morogoro, Dar Es Salaam and Mbeya Campuses, Tanzania in the period of semester 1 (about 4 months) of 2017.

Teaching presence is conceived as an element of the community of inquiry (CoI) which functions to organise the course content, facilitate learning and direct the process of teaching (Vaughan and Garrison, 2008). It is among the three elements which make up the community of inquiry put forward by Anderson and associates in 2000. Subsequently, this paper draws insights from the CoI Model to illustrate the concept of teaching presence and uses it to analyse students' and instructors' qualitative data. In this paper, blended learning is defined as a combination of classroom face-to-face instruction supplemented by provision of elearning based activities such as online tests, chats, videos and assignments.

## Instructor and Student Perceptions of Teaching Presence

Studying teaching presence in online learning was made famous and possibly initiated by the study of Anderson et al., (2000) who examined texts of computer conferencing courses. Following introduction of blended learning, the study of teaching presence has even become more

important due to the role that teaching presence plays in enabling learning. Studies show that different perceptions about teaching presence may lead instructors to approach teaching differently (Morgan, 2011). In their study, Jeffrey, Milne and Suddabay (2014) found that teachers perceived that certain learning functions were best suited for particular medium, therefore, they valued particular face-to-face classroom activities more than online components. Their study shows that perception of what constitutes learning has an impact on the way one approaches teaching or learning.

Teaching presence functions as a link between students and content. It sustains the social presence and provides cognitive presence, in turn influencing students' learning (Vaughan and Garrison, 2008). It establishes the curriculum, approaches, and methods; it also moderates, guides, and focuses discourse and tasks. The principal focus of teaching presence is to increase social presence and student learning (Lowenthal & Parscal, 2008). Teaching presence has three elements are known to have independent existence and yet influence each other (Vaughan & Garrison, 2008). These elements are course design and organisation, facilitation and direct instruction. Teaching presence is not the function of the instructor alone, things such as interactions among peers in the lesson do facilitate the teaching presence (Swan, 2004).

### ***Elements of Teaching Presence***

Interaction and discourse play a key role in student learning but not without structure (design) and leadership (facilitation and direction). This means student interaction needs to be facilitated through instructor presence (teaching presence) something which relates to how the course has been designed (Garrison, 2008).

Teaching presence in this paper is described having three main elements as in Vaughan & Garrison, 2008). The first element is the design and organisation. This is the part of teaching presence which occurs mostly before the course starts. It includes activities such as preparing curriculum material, course content, teaching notes, personal insights, presentation slides, and other customized views of course content (Anderson et al., 2001). The second element is facilitating discourse during the course is critical to maintaining the interest, motivation and engagement of students in active learning (Anderson et al. 2001). In facilitating the discourse, the instructor regularly reads and comments on student postings, constantly searching for ways to support the development of the learning community (ibid). Direct Instruction is the third element. In this element, the instructor provides guidance and share their subject matter knowledge with students (Anderson et al. 2001). The role of the instructor involves direct instruction that makes use of the subject matter and pedagogical expertise of the teacher (ibid).

### **Teaching presence and student performance**

Student performance is influenced by multiple factors ranging from nature of the course, student characteristics, learning environment, learning beliefs, social presence and teaching presence among others. This study is focused on teaching presence and students' performance. The performance of the learner is the ultimate learning experience which is the result of the interactions of the teacher presence, social presence and the person presence in a blended learning course. Students' learning performance describe what students should know, be able to do, and value by the end of their educational program.

McKerlich et al., (2011) studied students' perceptions of teaching, social and cognitive presences in a virtual world. The authors used a modified version of the Col survey to study 26 adult students taking a higher education course. The findings of their study showed that students

experienced a community of inquiry in the virtual world, a high rate of teaching presence ( $M=3.9$ ) with design and organization highly valued, followed by cognitive presence ( $M=3.77$ ) with resolution having a high score, and lastly social presence ( $M=3.66$ ). Arbaugh (2007) found teaching presence to be a strong predictor of perceived learning and satisfaction with the delivery medium. The main objective of this study is to examine instructors and students' perceptions and actual practice of teaching presence in relation to learner performance in blended learning courses. The following three main research questions were addressed.

1. What is the teaching presence in BL courses as perceived by students and instructors?
2. What role do instructors play in the teaching of the BL courses?
3. What are the important teaching presence elements according to instructors and students in the BL courses?
4. Does student report of teaching presence predict their academic performance in BL courses?

## **Methodology**

This study uses a mixed design approach in which both qualitative and quantitative data were collected from students and instructors. Quantitative data included teaching presence ratings and student continuous assessments scores (coursework). Quantitative data were collected using the Teaching Presence Scale measuring students' perceptions of instructor teaching presence. Students' coursework was obtained from course instructors at the end of semester. The researcher observed teaching presence activities in the elearning system (Moodle). Qualitative data were collected using focus group discussions for students and interviews for instructors.

### **Instrument and Procedure**

#### *Teaching Presence Scale*

We used a teaching presence scale to obtain student ratings of TP. The TP scale contained 13 items which were rate at a 5-point scale ranging from (1, Strongly Disagree, to 5, Strongly Agree). The surveys were issued to 651 students in all the three campuses by the researcher and two assistant researchers. The surveys contained student background characteristics, age, gender, course studied, degree programme and name of the university or campus. Consent was sought by asking the respondents if they wanted to participate in the study. In some classes, instructors helped to collect the surveys after the students had finished filling in. We carried out reliability of the TP scale. The results of reliability analysis showed that the TP scale was highly reliable ( $\alpha = .851$ ).

### **Student Performance**

Students' performance in terms of grade scores were obtained from their coursework which included individual assignment, group presentation, two tests, written group assignment and or term paper for master's students. The two tests made up 25 and remaining 25 marks came from assignments (individual and group) making a total of 50 marks. The descriptive analysis for course work scores shows the mean of ( $M = 28.4$  and  $SD = 6.9$ ). This means in all courses studied, the students scored above average (over 25) in their coursework.

### **Focus Group**

Focus group discussion (FGD) was used to obtain students' perceptions of teaching presence. This method helped to obtain depth opinions about students' perception of teaching presence. It enabled the researcher to observe the interactions occurring in the group. The FGD took an average of 1 hour and 20 minutes. To ensure effectiveness of the data collection, only two focus groups were conducted per day. Together with tape recording, two assistant

moderators took notes. These moderators were trained for a week to provide them with the general knowledge of the research topic and the ways to take notes. During the FGD, the researcher introduced the topic. Students were given pseudo names during the FGDs. Such names are used in the analysis. Some ground rules were set to allow students to be free and interact in a discussion in natural manner. *The major questions were such as how do you define your teaching presence in the course you are learning? What role did the instructor play in terms of teaching presence in this course? What did you find to be the most important TP element that stimulated your learning?*

### Interviews

Interviews were used to collect data from the six instructors involved in the study. Instructors were visited in their offices and requested to schedule interview time. Interviews were done with the help of research assistants who took notes and recorded the interviews following consent of the interviewee. The total time for interviews lasted between 25 and 35 minutes. To maintain anonymity and confidentiality, instructors are referred by numbers as instructor 1,2, 3,4, 5 and 6. The main questions asked were, *what is your role in the BL course that you are teaching? What do you take as your main teaching presence in the course that you are teaching?*

### Participants

Participants of this study were university instructors and students from the three campuses of Mzumbe University, Main Campus-Morogoro, Dar Es Salaam Campus (DCC), and Mbeya Campus. Six BL courses taught in BL Mode were studied. Initially, students involved in the BL courses were provided with questionnaires to gauge their teaching presence. Semi structured interviews were used to obtain data from instructors. Courses selected were those taught in BL mode for a semester. The experience the participants had with BL provided the basis for studying their perceptions. This study involved 651 students. Age wise, students aged 20 – 27 were 523 (80.3%), 28 – 35 were 60 (9.2%), 36 – 43 were 25 (3.8%), 44 – 51 were 4 (.6%) making a total of 612, missing were 39. Male participants were 339 (52.1%), and female were 312 (47.9%). Students were distributed in the following ways based on their courses. Those studying Comparative Education were 160 (24.6%), *Introduction to Economic* were 221 (33.9%), Micro and macroeconomics were 174 (26.7%), Comparative Education MA were 23 (3.5%), Introduction to ICT were 46 (7.1%) and Business Entrepreneurship skills were 27(4.1%). First year students were 392 (60.2%), third year were 160 (24.6%), Diploma students were 76 (11.7%), and MBA were 23 (3.5%). Mu Main Campus were 183 (28.1%), MU Mbeya Campus were 468 (71.9%), and Dar es Salaam Campus were 23 (3.5%).

**Table 1.1 showing dependent and independent variables**

<i>Dependent Variables</i>	<i>Mean</i>	<i>SD</i>
Student performance	28.4	6.9
<i>Independent Variable</i>		
Teaching presence	4.13	6.925
<i>Independent variables</i>	<i>Frequency</i>	<i>Percentage</i>

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<b>Age</b>		
20-37	523	80.3
28-35	60	9.2
36-43	25	3.8
44-51	4	6.0
<b>Total</b>	<b>612</b>	<b>100</b>
<b>Gender</b>		
Male	339	52.1
Female	312	47.9
<b>Total</b>	<b>651</b>	<b>100</b>
<b>Course name</b>		
Comparative ED	160	24.6
Comparative ED for MA	23	3.5
Business Entrepreneurship	27	4.1
Introduction to ICT 46	46	7.1
Introduction to Economics	221	33.9
Micro and Macro ECO	174	26.7
<b>Total</b>	<b>651</b>	<b>100</b>

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### Data Analysis

Data analysis involved quantitative and qualitative analysis. The key variables were teaching presence ratings, and student performance scores. Analysis involved the use of descriptive statistics, reliability, non-parametric analysis, t-test, and regression analysis. Qualitative analysis was based on themes developed from instructors' interviews, and students' FGDs. Qualitative data were first recorded in audio and noted down during interviews and FGDs. Then, they were transcribed by the researcher and compared with the notes taken by the assistant researchers. A template containing key indicators of teaching presence served as a guide in identifying and developing key concepts that emerged from the data. Data on instructor role for example, were put in a table that helped to show the comparison (See table 1.2). A search

for key concepts/words was done by the help of Nvivo software. Notes on key themes/concepts were written as summary for each main research question asked. Initial letters of students' pseudo names are used in describing quotes in the findings. For instructors, numbers are used to refer them.

**Table 1.2: What do you regard as your main teaching presence element**

Instructor 1 Instructor 6	Instructor 2	Instructor 3	Instructor 4	Instructor 5	
<p>What I pay more attention to is <b>clarifyin g the concept (DI)</b>, because once they have mastered an understanding they can explain everything</p>	<p>I give much weight to <b>direct face to face</b> approach <b>(DI)</b> as students who lack the study's background, information through direct thus feedback <b>(FT)</b> semester.</p>	<p>To me teaching is to <b>create conducive (FT)</b> environment where learning can take place, and to <b>assist (FT)</b> students when they face problems, to give them feedback, to <b>encourage (FT)</b> them, to ensure that the learning process is going smooth</p>	<p>All the three are important. Also providing objectives, and course outline makes students follow up <b>CDO</b></p>	<p>For me <b>teaching is about telling others</b> what they don't know <b>(DI)</b> We need to use <b>assessment, feedback (FT)</b> to make them understand, to get the knowledge</p>	<p>The weight might be the same or different especially for a teacher the big issue is to <b>prepare course content (CDO)</b>, when you have the course outline, you need to know which materials you must prepare, Deliver the content <b>(DI)</b></p>

DI=direct instruction, FT=Facilitation of discourse, CDO=course design and organisation

**Context and procedure**

This study involved seven BL courses of diploma, undergraduate and postgraduate students in the three Campuses of Mzumbe University in Morogoro, Dar Es Salaam and Mbeya. The courses were Introduction to Economics, Micro and Macro Economics, Business Entrepreneurship, Comparative Education, Introduction to ICT(Diploma) and Comparative Education and International Business for master's which were taught in semester one of the 2017. However, coursework results for students of International business were not obtained, therefore the course was excluded in quantitate analysis. These courses were taught in face-to-face instruction and supplemented by online learning through Moodle. The Moodle was used mainly for provision of teaching notes, announcements, assignments, tests, provision of course outlines, videos (only one case), online discussions (only one course), coursework feedback in some few cases. Student coursework combining individual and group written assignments, group presentation, two tests (some were done online), and term paper (for Masters) were used as assessment tools.

The instructors involved in the study were those teaching the studied courses only. Four of these instructors had more than three years of teaching experience, having master's degree as

the lowest qualification. One instructor had a PhD and one had a bachelor's degree (teaching diploma course).

## 2 Findings

### Perceived Teaching Presence

The first objective of the study was to examine students' perception of instructor teaching presence. Students reported their ratings of instructor TP using TP scale. The TP scale contained 13 items which were rate at a 5-point scale ranging from (1, Strongly Disagree, to 5, Strongly Agree). The overall mean of the TP was found to be ( $M=4.13$ ,  $SD=6.925$ ) which shows a high teaching presence. Therefore, students reported a high TP in all courses. Further analysis shows that though all the three TP elements were almost equally valued, course design and organisation had a slight higher mean ( $M=4.2$ ), compared to other aspects, direct instruction ( $M=4.0$ ), and facilitation of discourse ( $M= 4.02$ ). However, *the results of the qualitative analysis show that, generally, students preferred group discussion both online and offline, as their main teaching presence*. However, they found online discussion forum to be more important than face-to-face class discussion. This was especially true for students in undergraduate comparative education course. Students mentioned reasons such as easy access to material when one is online, having much time, lack of face-to-face cues which hinder discussion. The instructor also might have an influence on this as he had well organised online forum and used to lead discussion in class. Students differed on what worked for them, some preferring online discussions while others preferring face-to-face discussions. One FGD respondent who was in favour of online/eLearning forum remarked,

*"I prefer online discussion because I can get easy access to materials online, while in face to face group discussion, people only speak from experience with no authority (GR, Education III)"*.

Agreeing with GR and VG, JM, remarked

*"Online platform gives me a chance to flow and give ideas freely as opposed to class discussion. It's good for those who are shy in the class"*

The other respondent who was in favour of face-to-face discussion remarked, *"it's not true that in class discussion we argue out of nowhere, we read books in the library, so, for me, the main TP element is group discussion". Working in groups give us peace, because in the elearning there are no facilities. (CL, Education III)*.

Students in introduction to Economics preferred participation in discussions, and online learning. However, they felt a challenge in the use of English language by the instructor. One student remarked, *"through online platform was the best because it gave me my own time to trust on my knowledge"*. Meanwhile diploma students, almost every student preferred *instructor physical presence, direct instruction*. They mentioned that they liked the instructor who explains and clarifies concepts in class, asks many questions and provides practice in the computer. The students in Micro and Macro Economics valued all the three TP elements, direct instruction and course organization, the course content organisation and delivery, the way the instructor explained, and the way he taught. A representative statement from this group was:

*"The instructor impressed me on how he arranged and prepared his slides (course organisation), he used different colours to emphasize points and make us understand"*.



## Instructors' Role in Teaching

### *Students' response*

The study further investigated actual roles that instructors played in the courses they taught. Overall, students described their instructors as playing mainly four roles, *facilitating* the lessons, *delivering content*, *directing and organising* courses they taught. Differences were found in the way students in Education, Economics, Business and ICT courses emphasized certain roles. For instance, majority of students in Education described their instructors as playing the following roles, a *guide*, *negotiator*, *provider*, *manager*, *director*, *facilitator* and an *involving instructor*. This was due to the reason that the instructors allowed them to give their opinions on when they should have a test/assignment. The instructor guided them to discuss, what and which materials to read, and involved them in both class and online discussion forums.

One respondent in the FGD mentioned, "*his main role was providing work to students and let them discuss and **involve** students directly in the course activities (MJ, Education)*".

The other respondent testified this, "*the instructor used videos and links for us to follow up and see the application of something in its real situation (LE, Education)*". However, though students were pleased with an instructor who is a facilitator and democratic, they would also prefer him "to be pressing them", meaning, to use a combination of the two.

Students in ICT described their instructor as the *content deliverer* who was charming, friendly, close to students, practical oriented and serious. Though the course was taught in BL mode, students seemed to prefer face to face contact with the instructor. This is evidenced in several statements made in FGD, for instance, one female student mentioned, "*he was a director, when he teaches, he made sure you understand*". However, students also liked the practical session of the course where they could practice the use of MS Excel, and different keyboard shortcuts. Those in micro and macroeconomics, described their instructor as playing the roles of a *facilitator*, a *teacher* and *course organiser*. The students preferred what they called, "the whole package" from the way the course outline was organised, the interactive nature of the class and the way the instructor taught the course in face-to-face and how he organized the content in the elearning.

"*The instructor is very kind and approachable, he is very organized and very interactive. I like the whole package, course outline, having it online, group discussion, and a combination of method*" BN, Economics.

Another respondent who was in favour of the direct instruction and course organization, remarked. *He goes deeper in the lesson (direct instruction), strategic learners find it hard to understand. But, the way the slides(notes) have been prepared, is enough for me, I don't need the teacher.*

### *Instructors' response*

Qualitative data analysis shows that all the six instructors mentioned *direct instruction*, specifically, **content delivery**, as their main role of their teaching presence. This is evidenced by their first mentioning of terms such as, *teaching* (Inst1, Inst2), *deliver the content* (Inst2, Inst4), *deliver as per objectives* (Inst5, Inst6), which denote the traditional role of a teacher. Though the courses were taught through BL mode, yet instructors maintained the traditional view of teaching with a teacher as the center of learning. Further analysis shows that the second role was *providing notes, assignments and questions (facilitation)* mainly through the elearning platform. Differently one instructor regarded course **design** and **organisation** as his main role when he first mentioned and emphasized that, that is main role. The instructor remarked,

*“To me, providing course outline helps students to track the lesson as you may have forgotten something. Course objectives help students to follow up and know if the objectives have been achieved or not”.*

Furthermore, when asked which TP element they found important, instructors described **facilitating discourse** as the most important teaching element but almost all the instructors practiced lecture method (*content delivery*), an aspect of direct instruction most compared to any other element when came to classroom setting. In the data, words which show facilitation (*such as clarifying concepts (MB), reminding students (PO), create conducive environment, assist, encourage (JM), assessment and feedback (OM)*), were used by four instructors. This is evidenced in their first response in which every instructor showed **teaching** (content delivery to be their main role. Here we see the discrepancy between what teachers think is important and what they do. Unpredictably, *course design and organisation* and *direct instruction* were least mentioned. Only one instructor regarded course design as the main teaching presence element. One instructor said, *I give much weight to **direct face-to-face** approach due to the nature of my students who lack the study’s background in Economics (DR)* while another made a similar remark, *I pay more attention **in clarifying the concept**, because once they have mastered an understanding, they can explain everything (MB)*. However, observation of what instructors did most in the LMS showed that many activities were directed to *course design and organisation* and facilitation of learning as indicated in the table 2.2.

Regarding whether instructors think their teaching presence activities enhance students’ learning, response from the qualitative analysis show that instructors relate that such is the case. They relate that different learning activities they provided such as *prior course information, instructions, guidance, tests, practical activities, and assignments*, helped students to learn and improve their performance. They further related that they were able to confirm students understanding of the course content through feedback (assessment), questions and answers in the face-to-face sessions, changes in students’ performance and practical activities students did.

One instructor remarked, *“I have seen changes in students’ performance in this second semester” (Inst3), and yet another testified, “I confirm their understanding in the way they participate in the Q and A sessions in class.”* Interestingly, a business course instructor, reported a case in which he gave students assignment of making companies to generate capital, and start business.

*“I gave students assignments in groups to make companies, and they were able to formulate business that operated in the University, generated, shared profits and wrote their reports applying concepts such as business plan, and environmental analysis that they had learnt in the course”.*

### **Gender, course type and performance**

The second objective was to determine whether students’ characteristics such as gender and course studied had any influence in their performance, we conducted several analyses. As for gender and student performance, we conducted independent sample t-test. The results if the t test show that there were none significant gender differences in students’ performance as indicated by the results, Male (M = 28.89, SD = 6.89) and Female (M = 27.98, SD = 6.93),  $t(628.402) = 1.649, p = .749$

Along the same line, our study examined whether there were any differences in students’ performance scores across different courses, we conducted a Kruskal Wallis test. The results of

the Kruskal Wallis tests show that there were significant differences students' performance across different courses. Generally, students in education courses performed better than those in Economics, Business or ICT courses. Students in Comparative Education had the highest mean rank (N=157, Mean Rank = 502), followed by Comparative Education for MA (N=23, Mean Rank= 500), Entrepreneurship skills (N=26, Mean Rank = 465), Introduction to ICT (N=45, Mean Rank = 423), Micro and Macroeconomics (N=172, Mean Rank = 288), and lastly, Introduction to Economics (N=214, Mean Rank = 149).

### Students' performance and teaching presence

The third objective of the study was to examine whether reported teaching presence predicts students' performance. To establish this, we conducted a regression analysis. The results of regression analysis show that teaching presence scores significantly predicted student performance scores,  $\beta = 21.083$ ,  $t(10.165) = 3.556$ ,  $p < .001$ . Teaching presence also explained a significant proportion of variance in student performance scores,  $R^2 = .020$ ,  $F(1, 625) = 12.644$ ,  $p < .001$ . see table 2.1

Variable	Unstandardized B	Standardized Coefficients beta	t	sig
constant	21.083		10.165	.00
Teaching presence	1.768	.141	3.556	.00
R square	.020	F value	12.644	.00

*Predictor (constant): Teaching Presence. Dependent variable: Student Performance*

**Table 2.1. Results of regression analysis predicting student performance from teaching presence**

## Discussion

### Perceived teaching presence among students and instructors

From the quantitative findings, students perceived teaching presence to be high in the courses they studied. This is evidenced by the overall mean of TP ( $M=4.13$ ,  $SD=6.925$ ). Further analysis of the quantitative data show that all the three elements of TP, *course design and organization* ( $M = 4.2$ ), *facilitation of discourse* ( $M = 4.0$ ), and *direct instruction* ( $M = 4.02$ ) were almost equally valued as indicated in small mean differences obtained. In a study by Mckerlich et al (2011), it was found that there was high rate of TP (3.9 overall mean score,  $SD=.07$ ) in the virtual world studied. Like our study, the authors also found course design as more valued than the other two TP elements. Therefore, based on the quantitative data, students seem to give high value to the aspect of course design. In the previous study, Almasi, Zhu & Machumu, (2018a) on conceptions of teaching presence among medical students and instructors, the overall perceived mean for TP was 3.9,  $SD = .06$ , in which also an aspect of course design was highly valued (Mean=4.7). A study by Noteboom and Claywell (2010) among health professionals also found a very high teaching presence (over 85% agreement) along the other two elements of the Col.

However, qualitative analysis of the students FGDs showed that students found *group discussion* to be the main TP element they liked and used most. This suggests that students preferred to learn through interaction with both peer students and their instructor led classroom and online discussions. Presence of course outlines, notes and learning activities (aspects of course organization and design) were also mentioned to be influential in stimulating students' learning. Almost in every FGD, students mentioned how important "the way the course was taught, and learning materials were shared" was in their learning process. Nonetheless, all students in FGDs mentioned group discussion to be important, Education students preferred it most, while ICT students preferred face to face lecture sessions (physical presence of the instructor), Economics and Business students preferred a combination of the three TP elements. Student preference of the physical presence of the instructor have also been found in other studies. For instance, in a study by López-Pérez et al., (2010) students considered face to face classes to constitute a more useful teaching method than e-learning for understanding and learning the subject content. This means, students saw elearning as complementing face-to-face class.

Group discussion can be regarded as an aspect of *direct instruction*, *facilitation* or both. This is to say that *direct instruction* and *facilitation* were highly valued. This was evidenced by students in all education courses, and those in Economics (Introduction to Economics). Students in Diploma (Introduction to ICT), preferred the *physical presence* of the instructor in class who explained things clearly. Interestingly, clarity instruction has also been found to be an important factor in student learning compared to the kind of platform used (Henrie, Bodily, Manwaring & Graham, 2015). Meanwhile, those in Macro and Micro Economics, preferred a combination of the three TP elements. It seems the *role* of instructor had an influence on the choice of TP elements that students preferred. For instance, the instructor in the Micro Economics course had a well-organized course outline which was presented well in class, provided several books, had a warm welcoming language online, and delivered the content well in class. This possibly, made students in the FGDs, to give preference to all the TP elements of the course. Similarly, the instructor in Education course, guided discussion in class and online, in a way that students tended to prefer discussion. In a study by Kupczynski et al., (2010) among undergraduate students in South Texas College, they found that were students placing a higher value, on the instructional design and organization and direct instruction components as compared to facilitation of discourse.

### **Roles of instructors in teaching**

We further asked students to describe what actual roles that they thought instructors played in the courses they taught. While on the one hand, students described instructors' roles as *facilitators*, *delivering content*, *directing and organising* courses they taught. Although instructors were described as *facilitators* and *directors*, but they mainly practiced *content delivery* as their main role. For instance, while all the instructors used the elearning system to support students' learning (mainly providing notes, links, books, and assignments), only one instructor was observed to use discussion and chart forums to facilitate students' learning. However, even in that course, the instructors' intervention in the discussion was barely minimal though he discussed the same concepts with students in the class sessions as found out in the interview. There were marked differences in the way students perceived instructor roles in different courses, for instance students in Education mostly viewed their instructor *facilitating* and *directing* the lesson, ICT students viewed him as content delivery, while those in Economics saw their instructors as *teachers* who were interested in clarifying concepts, organizing the course, and facilitating it. In a similar study by Almasi, Zhu and Machumu (2018) instructors were also found to be playing roles such as facilitator, guides and demonstrators.

On the other hand, though instructors described *facilitating learning* as role in teaching presence, during the interview, further analysis show that all instructors involved in the study, *practiced content delivery (direct instruction)* as their main teaching presence *element compared to the rest (facilitation and course organization)*. Instructors also viewed provision of notes, assignments, and questions (*facilitation*) as their second main role of TP. Instructors maintained that *facilitation of discourse* is their important TP element, yet, they all practiced *direct instruction* in their actual teaching most. Contrary to this, our previous study on medical students and instructors, found that both valued course design and facilitation more than direct instruction (Almasi, Zhu and Machumu, 2018).

### **Gender, Course types and students' performance**

This study found no significant gender differences in students' performance in the BL courses studied. This shows that gender is not an influential factor in the performance of students in these BL courses. Gender has not been an important factor in students' performance in many others other studies such as Almasi, Zhu and Machumu (2018b; López-Pérez et al., 2010; Goodyear et al., 2005). On the contrary other studies found gender as a significant variable in influencing students learning (Huon et al., 2007; Paechter et al., 2010; Shea and Bidjerano, 2009). Also, students' performance differed significantly across the BL courses, with students in education performing higher than those in other courses. Similar findings were made in the study by Almasi & Zhu (2017). In contrast, Deschacht and Goeman (2015) experimental study at KU Leuven in Belgium found significant differences in the treatment effects of the BL courses across course types. Vo, Zhu, and Diep (2017) did a meta-analysis to find if BL approach influences student performance at course level. The results of their analysis found higher significant effect in STEM (hard sciences) compared to non-STEM (soft) disciplines. Nevertheless, their study was focused mainly comparing BL and face to face traditional courses. A study by Thomas (2018) among undergraduate students taking BL courses in Thailand found no relationship between eLearning activity and student academic performance. Interestingly, a study by Kwak, Menezes, and Sherwood (2014) found that BL has no impact on student performance if learning is non-cumulative and only affects the performance of the quizzes associated with materials covered by BL.

### **Teaching presence and students' performance**

The third objective of the study was to examine whether teaching presence predicts students' performance. The results of regression analysis show that teaching presence scores significantly predicted student performance scores,  $\beta = 21.083$ ,  $t(10.165) = 3.556$ ,  $p < .001$ . Teaching presence also explained a significant proportion of variance in student performance scores,  $R^2 = .020$ ,  $F(1, 625) = 12.644$ ,  $p < .001$ . The current results therefore suggest that higher levels of perceived teaching presence in these blended learning courses significantly, positively predict student performance scores. This indicates that teaching presence has an influence on students' outcomes. This may be due to fact that there was a link between student learning activities and the actual and perceived teaching. In another study by Akyol and Garrison (2008), teaching presence also related to perceived learning. However, in a quantitative the study by Almasi, Zhu and Machumu (2018b) teaching, social and cognitive presences did not predict students' performance.

### **Conclusion, Implication and Limitation of the Study**

Based on the findings, the following conclusions can be made, there is a high teaching presence in the BL courses studied. Our study found no significant gender differences in students' performance in the BL courses indicating that gender is not an important variable in the learning of such courses.



Students and instructors seem to agree that the use of blended learning is the best mode of learning, though *direct instruction* is still viewed as most important and elearning system saves as a platform for sharing learning notes, assignments, links, books, videos and in some cases online discussion forums.

Majority of students emphasise on *attending classes and listening to the instructors* (aspects of direct instruction) as the main ways in which they learn best on top of group discussion. Students maintain that group discussion is their main way teaching presence manifest. Interestingly, group discussion is known to have social presence effect. This suggests the interaction that exists between the teaching presence and social presence indicating that student learning is interestingly social. Instructors continue to view content delivery as their main *teaching* role and the main element of their presence in the teaching. They also replicate traditional teaching approaches in the online by continuing to post course outline, and student notes.

This study is limited first in the number of instructors involved in the sample. The fact that only 6 instructors were involved makes the study. Furthermore, only three campuses of one University among more than 40 higher learning institutions in Tanzania were used in the study. All these limit the generalisation of the findings. Furthermore, the use of cross-sectional data limit the study to weakness of this design hindering an in-depth follow up of the studied variables over time.

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