Interpersonal Relations and Achievement among University Upgrading (Grade V) Teacher Students

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ABSTRACT

Interpersonal relations refer to an intelligence and competence that enable the establishment and maintenance of mutually satisfying relationships with a variety of people across diverse situations. Academic achievement refers to satisfactory learner performance as shown by grades attained in course-work, tests, continuous assessment and end-of-semester examinations. The study interrogated the relationship between interpersonal relations (IR) and academic achievement (AA) among university upgrading (Grade V) teacher students in Ugandan universities. Using a quantitative sample of 473 and a qualitative sample of 75 upgrading Grade V teacher-students from Makerere University and Uganda Christian University (UCU), a cross-sectional survey and interview were carried out. The results showed that IR was positively and significantly related to subjective AA ($r = .23$, $p < .001$). However, it was not significantly related to objective AA – CGPA ($r = .04$, $p > .05$) thus, supporting the hypothesis: There is a positive relationship between IR and AA among university upgrading teacher-students. Qualitative findings showed that team spirit, group work and collegial relations were important aspects of IR. In conclusion, the study stressed collaborative approaches to IR as useful in the 21st century. As a contribution to policy and practice, the study recommends that: for better AA, teacher-students need to have a holistic curriculum to train on IR. Knowledge of negative and positive perceptions of IR are critical for the furtherance of both individual and collaborative functions in teaching, learning, training, and research.

Key words: Interpersonal Relations, Academic Achievement, Teacher Training, Teacher Education

INTRODUCTION

Interpersonal Relations (AR) and Academic Achievement (AA)

Academic achievement means satisfactory learner performance as shown by grades attained in course-work, tests and end-of-semester examinations. Several studies on AA such as Fernandez, Salamonson, & Griffiths, (2012) established that AA goals were rooted in personal dispositions and contextual features where individuals adapt to changing environments. According to Richardson, Abraham, and Bond (2012) attributions that enhance relations refer to the way people explain causation and particularly, in this context, students' explanations of past academic failures. Internal and external locus of control were key to performance. These are concepts that characterise the relation between IR and AA. Spitzberg (1989) defined interpersonal competence as "the ability to establish and maintain mutually satisfying relationships with a variety of people across diverse situations" (p. 16). Paying attention, making eye contact and hearing other people made them feel appreciated, and created a positive feeling for them about you. This led to personal and professional benefits, which enhanced IR (Bennett, 2013). Kusmayadi and Husodo (2018) proposed that the development of interpersonal intelligence as early as possible shaped the character of students and instilled positive values in them such as working together, a great sense of empathy and a positive concept of others.

Tol, Tavassoli, Shariferad, and Shojaeezadeh (2013) focused on life promotion through lifestyle which consisted of health responsibility, spiritual growth, IR and stress management. High academic achievers had better socio-emotional development and were more likely to get promoted at work. Chauhan and Chauhan (2007) argued that in an increasingly competitive world, qualities like cooperation, resilience, interpersonal skills, team leadership and optimism – which

were beyond the realm of mental intelligence quotient – set the star performers apart from the average performers.

Objectives, Research questions and Hypotheses

The study had the following objectives:
1. This study sought to establish the relationship between IR, OAA and SAA of university upgrading teacher-students.
2. To determine the predictive power of IR on OAA and SAA of university upgrading teacher-students.

To achieve these objectives, the study addressed the following research questions:
1. What are the university upgrading teacher- students' perceptions of IR?
2. How does IR contribute to AA (objective and subjective)?

Accordingly, the following research hypotheses were tested:

H01: There is no relationship between OIR and SAA among university upgrading teacher-students,

H02: IR will not predict positively on AA (objective and subjective) among university upgrading teacher-students.

LITERATURE REVIEW

Theoretical Framework

Stewart and Klein (2016) showed that it was increasingly becoming important to consider the application of theory at the outset of research and to avoid the situation of finding a theory to fit at the point of data analysis. Martin, Bostwick, Collie, and Tarbetsky (2017) indicated that AA involved adaptability, task engagement and task enjoyment, persistence and resilience. Incremental beliefs tended to have a positive effect on AA (Dinger, Dickhäuser, Spinath, & Steinmayr, 2013). The Attribution Theory by B. Weiner (2013) was used to bring out key aspects of the OAA and SAA. This was preferred to other theories like the Expectancy Value Theory (Eccles, 2005). Attribution Theory was the most influential contemporary theory with implications for academic motivation (B. Weiner, 2013). It holds that people attribute their successes or failures to factors that will enable them to feel as good as possible about themselves. Nevertheless, Attribution Theory has been criticized, in that it was mechanistic and reductionist for assuming that people are rational, logical and systematic thinkers. It turns out that they are cognitive misers and motivated tacticians as demonstrated by the fundamental attribution error (Heider, 1958). The process of attribution, according to Cook and Artino Jr (2016) begins with an event; if the outcome was expected or positive, it would often directly elicit emotions (happiness or frustration) without any further action.

Peplau's Theory of IR published in1952 (Senn, 2013) was used because of the closeness of nursing to teaching in terms of its dealings with human beings and the nature of interaction with people. Like nursing, teaching is an interpersonal process that involves interaction between two or more individuals with a common goal. The nurse and patient, just like the teacher and student or colleague, work together to enable the attainment of maturity and knowledgeability in the process. This theory was found to be relevant to the present study, despite its limitations.

Interpersonal Relations and Objective Academic Achievement

Kusmayadi and Husodo (2018) found that learning achievement of students who had a high level of interpersonal intelligence was better than that of students with interpersonal intelligence in medium and low levels. However, only mathematics students were used in the study. Emmanuel-Frenel (2017) too found that administrators needed to have good relations with distance education students to guide them on how to use the available support services given to them. However, there was no emphasis on the importance of lecturers in cultivation of positive IR with students. Carver and Rapp (2018) reported that the three most important characteristics for effective online instructors were, "respectful, knowledgeable, and approachable" (p. 509). Using the in-depth interviews fulfilled the seventh recommendation made by Royal (2018) to add a qualitative aspect to the study.

In addition, Fernández-Berrocal and Ruiz (2008) studied the crucial components of emotional adjustment and interpersonal relationships, among others, in adolescent contexts of everyday life. Quoting Alfred Binnet (1909) [sic] they castigated people who threw derogatory remarks at students, most of whom believed in these remarks and never got the opportunity to rise above these remarks, thus destroying their personalities and future AA. Mekonnen (2014) laid emphasis on performance in an examination as being dependent on a student's cumulative grade point average; and students' success being judged by examination performance while the best criterion of performance is the sum of the student's academic performance in all the subjects taken. This would involve IR, which was not interrogated. Using multiple regression analysis, the study by de Koning, Loyens, Rikers, Smeets, and van der Molen (2012) showed that observed learning activities, first- and second-year performance, conscientiousness and verbal ability were most strongly and consistently related to AA at the bachelor degree level. Prior educational achievements and observable learning activities were most important for academic success in a problem-based learning psychology bachelor programme. Their sample was rather different form the present study, and IR was not treated.

Interpersonal Relations and Subjective Academic Achievement

Khmil, Kyselova, and Morkvian (2019) discovered that the use of collective work, that is, the whole group works on the majority or all tasks or projects; work in subgroups; the individual work of each member of the team, and then a group comparison and discussion of the results, led to greater results than picking one method alone. Hanaba (2019) brought in the perspective of the individual who needs to develop himself educationally but finally will also need community to achieve this.

On the other hand, Leng (2019) pointed to the effective work of university libraries that could participate in the reform of colleges and universities personnel training model to promote the overall development of students. But they did not underscore the need for IR and SAA! As part of what could improve on the IR and AA of university students, Khamis, Ahmad, and Muraina (2018) proposed a prescriptive visualization model by focusing on AA, that would assist institutions of higher learning while deciding on what services to provide to their students. This process would involve consultations and cooperation that IR brings on board.

IR and AA Studies in Uganda

In Uganda, studies that come close to IR and AA include research by Ngoma, Ntale, and Abaho (2017) who did not find a significant relationship between socioeconomic factors and AA at higher institutions of learning. The regression model they used was significant though, and explained 47 percent of the variation in AA. Ludigo, Mugimu, and Mugagga (2019) revealed that the student-centred strategy had a positive and significant influence on AA of students but teacher-student interaction strategies did not. In addition, Haolader, Hakim, Kassim, and Mubarak (2017) found that there was a significant difference in the AA of the two groups of Science and Arts students. The Science group outperformed the Arts students who left room for improvement in their performance.

Subsequently, no known study has been done in relation to IR and AA among university upgrading (Grade V) teacher students in Uganda. Teacher students are professional teachers who have a Diploma in Education. They are already professional teachers but come to the university to upgrade in order to obtain a Bachelor's Degree. These students usually have 3 to 4 weeks interaction with each other and their lecturers in a space of 3 months per session. Although The National Council for Higher Education (Education., 2013) report suggested that teacher-students were generally performing reasonably well academically, it was silent on issues of IR in relation to AA. This AA assumed a good literacy background. Teacher education programmes in Uganda did not clearly stipulate IR as a vital and critical issue, despite the fact that Psychology and Professional Ethics were included in the teacher education curriculum. Consequently, it was necessary to investigate IR and AA as IR is lived out daily yet taken for granted.

Conceptual Framework of Interpersonal Relations and Academic Achievement

Figure 1 illustrates the relationship between variables. Interpersonal relations is manifested in positive and negative types of relationships. Achievement is divided into objective and subjective achievement. Objective achievement factors in coursework and end of semester results using quantitative data. Subjective achievement uses course work, end of semester results and group work, majorly using qualitative data.

Figure 1 shows the relationship between IR and objective academic achievement (OAA) and subjective academic achievement (SAA).

METHODOLOGY

Paradigms, Epistemology and Research Approaches

The study used mixed methodology combining both quantitative and qualitative approaches. The quantitative positivist approach sought cross-sectional data which was gathered from Grade V teacher students in a face to face interaction together with 3 research Assistants. Qualitative data sought descriptive phenomenological data through group and in-depth interviews. Epistemologically, this obtained information about AA in relation to IR. Kivunja and Kuyini (2017) postulated that a paradigm comprises four elements, namely: epistemology, ontology, methodology and axiology. The knowledge of IR and AA constituted epistemology and ontology. The methodology constituted mixing the approaches of quantitative and qualitative methods with a higher leaning on the former. The values and ethical standards were followed by obtaining permissions from the College of Humanities and Social Sciences, Makerere University, and Uganda National Council of Science and Technology, that grants permission for researchers to conduct research on behalf of the President of Uganda.

van Manen (2019) contended that the rewards phenomenology offers to professional practice and the practice of everyday life were the promise of meaningful insights contributing to our thoughtfulness and tact. This was manifested through group (Grade V teacher students) and in-depth (Lecturers) interviews.
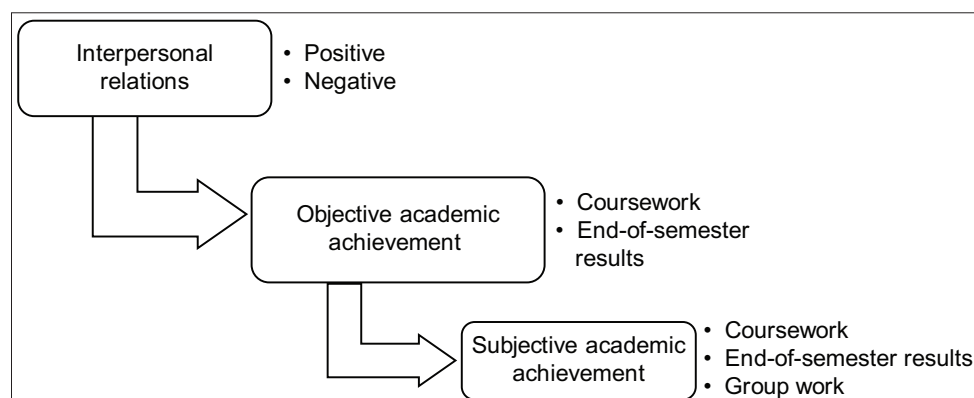

Figure 1. Conceptual framework of the relationship between IR and AA, objective and subjective

Explication of the Data

The heading "data analysis" was deliberately avoided here because Hycner (1999) cautioned that the word "analysis" had dangerous connotations for phenomenology as the process was continuous. "Explication" implied an "investigation of the constituents of a phenomenon while keeping the context of the whole" (p. 161). Validation and truth-making were ensured through the credibility, transferability, dependability and confirmability of the data collection process through data analysis to interpretation of data, as researchers monitored each phase of data collection and processing. Reliability and validity are conceptualized as trustworthiness, rigor and quality in qualitative paradigm. This was done by training the research assistants, obtaining consent from the participants and respondents, data cleaning and processing and debriefing in the case of qualitative data. This use of triangulation through using mixed methodology eliminates bias and increases the researcher's truthfulness of a proposition about some social phenomenon (Denzin, 2017).

Research Design

Owing to the nature of the research problem, mixed methodologies (concurrent, QUAN + qual) were used (Creswell & Creswell, 2017). It was concurrent, not sequenced, not equally weighted, but integrated and explicit. A survey was conducted to gather quantitative data and an interview guide and in-depth interview schedule were used to obtain qualitative data. Survey research design using a majorly Likert Scale design was used because it is flexible and versatile, being able to measure things from simple to complex. In this case, because the original sample obtained using the Krejcie and Morgan (1970) Table was used to obtain a simple randomised sample of 473 teacher-students. Triangulation of data was done using a 'QUAN + qual' simultaneous design (Morse, 1991, p. 121).

The data also had a transformative aspect because the study sought to transform the manner in which daily business was conducted in the educational and teacher training system in relation to the objective of showing the relationship between IR and AA (objective and subjective). Trilar et al. (2019) postulated that the use of triangulation in research contributes to a deeper understanding of the study phenomenon. It is one of the ways to increase the accuracy of the study (Denzin & Lincoln, 2017). Qualitative data is rich and holistic with strong potential for revealing complexity such as thick descriptions (Miles & Huberman, 1994) (Silverman, 2013) that are evidenced under qualitative data findings. Memos too were used to bring out the non-verbal manifestations of the participants and the mood of the interview sessions.

Quantitative Sample

A sample of 473 teacher-students: 449 from Makerere University (261 male, and 161 female [36 missing data]); 24 from UCU (6 male and 6 female [3 missing cases]) was obtained using simple random sampling technique.

Qualitative Sample

The sampled respondents were stratified according to years and subject specialty and sampled purposively for group interviews due to the skewed nature of the enrolment where the males were more than the females. Fifty teacher-students of Year 1 and 2 from Makerere University and 25 of similar years from UCU were interviewed meeting Flynn and Korcuska (2017) suggestion of no fewer than 60 and no more than 150 subjects. The study also had 10 lecturers (7 from Makerere University and 3 from UCU). Saturation point was reached at both universities. The sampling methods domain items included snowball and purposeful sampling methods.

Research Instruments

Several standardised tools were combined to obtain the IR instrument used in this study. These included: Interpersonal Solidarity Scale Location: Wheeless (1978) Interpersonal Relationships; Confirmatory Factor Analysis of the Youth Experiences Survey for Sport (YES-S) (Sullivan, LaForge-MacKenzie, & Marini, 2015); and Several Dimensions of Brand Personality Measurement Models (Aaker, 1997; Bosnjak, Bochmann, & Hufschmidt, 2007; Geuens, Weijters, & De Wulf, 2009; and Caprara, Barbaranelli, & Guido, 2001). Seven professors and senior lecturers at Makerere University vetted the instrument. The majority of the items were found to be appropriate for the study. The tool had a reliability coefficient of 0.730. Self-reported end-of-semester I and II results for both years were averaged and analysed for OAA. The Content Validity of the tool was 0.863, calculated using the CVI formula (Polit & Beck, 2006) through SPSS. The group interview schedule for Grade V teacher students and in-depth interview guide for their lecturers were researcher formulated and vetted by experts in psychology in addition to pilot testing among the population.

Procedure

SPSS was used to calculate the validity of the final survey instrument. The group interviews and in-depth interview schedule were tested and modified using NVivo 12. Four Educational Psychology lecturers helped to administer the survey tool. Prior permission and approval were obtained from The College of Humanities and Social Sciences and National Council for Science and Technology before releasing, publishing and using survey data thus, meeting ethical standards. The four research assistants were trained to handle the exercise. Two interviewers were trained in locating, identifying, contacting, greeting, qualifying, interrogating, recording and terminating the interviews. Ethical considerations were taken into account.

Ethical Considerations

Axiologically, permission and approval were obtained from School of Psychology Ethics Committee; the Research and Ethics Committee, College of Humanities and Social Sciences, Makerere University; and the National Council for

Science and Technology (Alreck & Settle, 1995). Permission was sought from the two selected universities to carry out the research. Consent was obtained from the sampled teacher-students and lecturers. Participants were debriefed before leaving the premises.

Data Processing and Analysis

Quantitative data analysis was carried out using SPSS/STATA software applications.

Qualitative data were described, interpreted and explained. The data were subjected to a process of data reduction, data display, and data conclusion drawing and verification using Nvivo 12 Trial software. The trustworthiness procedures domain items included data saturation, triangulation, thick and rich descriptions, prolonged engagement with data, and reflexivity.

PRESENTATION OF FINDINGS

The findings are presented using research questions and hypotheses.

Qualitative Demographic Information of University Upgrading Grade V Teacher Students from the Group Interviews

Table 1 shows biodata for the qualitative sample.

The secondary school Grade V teacher students had more representation among the respondents than primary school ones. Year one teacher students had 03 references (0.18% coverage) and Year 2 had 04 references (0.23% coverage).

University Lecturers (not tabulated since they were only 11 in number) constituted of 5 females and 6 males in total; 3 females from Makerere and 2 from UCU. Of these there were 02 female key informants from Makerere and 01 female key informant from UCU. There were also 5 males from Makerere and 01 from UCU among whom 02 males from Makerere were key informants. General age was from 28 to over 60 years of age. Majority were 35 years and above (08) and 03 were below 35 years of age. All the females were

35 years old and above. There was a high level of physical and chronological maturity among the Participants. All the 03 males below 35 years old were from Makerere. Ten Participants were married. Only 01 male from Makerere was not married. Marriage (in Uganda) is usually associated with physical maturity and responsibility (showing positive IR). Majority of the Participants had served at the university level for 09 years or more. Key informants from Makerere University had served the university for over 20 years.

Grade V Teacher Students' Perceptions of IR

The first research question addressed the university upgrading (Grade V) teacher students' perceptions of IR. Table 2 presents the various participants' perceptions on IR.

The responses on Table 2 are reported according what participants said. When one member mentioned something, others would either agree or say they had nothing to add. As evident from Table 2, participants specifically said that IR helped them live in harmony with others and made them appear as 'diehards' to observers. This helped them tame their tempers and maintain their jobs because, for example, when the boss comes and criticizes one publicly then one is able to control their temper. Participants from the other groups tended to share similar views.

For the Year One UCU teacher-students, managing emotions had improved on their IR using the quality of tolerance. On the other hand, the Year Two UCU teacher-students were able to cope and work with others. They became people of all seasons, and could fit anywhere. They also learnt to love others, understood and helped them, all because of positive IR.

Quantitative Sociodemographic Variables of the Sample

Table 3 shows the survey biodata of the 449 respondents from Makerere University and the 24 Respondents from UCU. Through the process of data cleaning the number reduced to 339 in total (267 males and 167 females with 39 missing respondents). Of these, 1,328 respondents were married (although the study did not investigate the types of

Table 1. Demographic information for the qualitative sample

Group	Age	Training Level	Year of Study	Marital Status	Gender
Agriculture	25-40	Secondary school teacher	Year 2	Married = 9 Single = 8	Male = 13 Female = 4
IPSS	29-43	Primary school teacher	Year 1	Married = 6 Single = 0	Male = 3 Female = 3
Arts	26-43	Secondary school teacher	Year 2	Married = 5 Single = 3	Male = 6 Female = 2
UCU Year 2	29-48	Primary school teacher	Year 2	Married = 13 Single = 1	Male = 8 Female = 6
Business education	25-40	Secondary school teacher	Year 1	Married = 8 Single = 3	Male = 9 Female = 2
Science	25-40	Secondary school teacher	Year 2	Married = 4 Single = 5	Male = 8 Female = 1
UCU Year 1	26-43	Primary school teacher	Year 1	Married = 10 Single = 0	Male = 3 Female = 7

Table 2. Grade V university upgrading teacher students' perceptions of interpersonal relations

Male	Female
Giving positive advise	Living and working together with others, peacefully
Helping others with their challenges e.g. materially, financially	Not hurting others
Empathy	Responding to whoever we come across
Accepting others as they are	Responses towards one's reactions or responses in given circumstances
Management of feelings	Reasoning
Awareness of others' emotions	Reacting to situations positively or negatively
Managing one's weaknesses	Appropriate behavior to others in different circumstances
Appropriate response to situations	Cooperation
Ability to interact with others	Sharing
Adjustability to new people and situations	Sharing
Friendliness	Sharing
Sharing	Friendly formations
Living together in harmony	Realizing that relations matter
Mutually benefiting interaction	Working together
Living amicably	Team work
Cooperation	Communication
Positive reactions towards colleagues	Open and free communication
Performing tasks together for a common goal	
Doing to others as you would want them to do to you	

Table 3. Demographic information for the survey sample

	Categories	Frequency	Percentage
Age	20-24	07	1.68
	25-29	98	23.50
	30-34	110	26.38
	35-39	102	24.46
	40-44	67	16.07
	45-49	15	3.60
	50-54	06	1.44
	55-59	02	0.48
Sex	Male	267	56.4
	Female	167	35.3
Marital status	Married	328	69.3
	Single	113	23.9
Year of study	1	153	32.3
	2	320	67.7
Training background	Primary	192	40.6
	Secondary	260	55.5
Subject taught 1	Arts	107	24.21
	Languages	159	36.00
	BTVET	20	4.52
	Sciences	156	35.29
Subject taught 2	Arts	195	43.33
	Languages	95	21.11
	BTVET	15	3.33
	Sciences	145	32.22
Makerere University	Sample	449	94.9
UCU, Mukono	Sample	24	5.1

marriages and did not apply all that is reflected on the Table for this article) and 113 were single. (From the qualitative data, the married teacher-students showed more maturity and were more realistic and practical when it came to aspects of IR.) The respondents ranged from 23 to 59 years-of-age. The majority of the respondents were between 25 and 42 years of age. The older the respondents, the more realistic they were about their IR. They tended to commit more to their SAA and were more willing to disclose their OAA.

Table 3 presents quantitative biodata from Respondents.

Table 3 also shows two major categories of training backgrounds. While some of the respondents had a Primary Teacher Education training background, others had a Secondary Teacher Education backgrounds. There was one outlier; a tutor that was added to the Primary Teacher Education background, making the number 192. Table 3

indicates that Year One respondents were 153 in total; whereas Year Two respondents were 320. The first and second teaching subjects are shown. Most respondents taught English Language, with a frequency of 154. Some subjects had only one respondent; for example, Luganda and Computer Science. Some respondents had double-main subjects like Agriculture, Music (done as both 1st and 2nd major), and English (that combines English Language and Literature in English). IR contributes to all these subjects.

Among the second teaching subjects, Social Studies had a frequency of 96. The least represented subjects included Literacy 1 and Chemistry, with only one respondent in each. This can help teacher training institutions and the Ministry of Education and Sports to plan.

Research Findings

Table 4 shows the descriptive statistics of the study.

Table 4 indicates that there were 405 respondents that indicated their age and 473 who indicated their year of study. Possibly some of those who did not disclose their age were female respondents who do not usually want to disclose their age owing to gender cultural issues.

Table 5 shows the correlation of the variables.

Null hypothesis 1: There is no relationship between Interpersonal Relations and Academic Achievement among university upgrading teacher-students.

Table 5 shows that IR were positively and significantly related to SAA ($r = .23$, $p < .001$). However, it was not

Table 4. Descriptive statistics

Descriptive statistics					
	N	Minimum	Maximum	Mean	Std. deviation
Age	405	23.00	59.00	34.3111	6.30865
Year of study	473	1.00	2.00	1.6765	.46829
Valid N (listwise)	405				

Table 5. Correlation analysis of study variables

		1	2	3
1	IR	1		
2	AA Subjective	0.23*	1	
3	AA Objective (CGPA)	0.04	0.08	1

*p<0.001

significantly related to OAA – CGPA (r = .04, p > .05). Since, the teaching profession is more humanly interactive, the respondents were more responsive to IR in relation to SAA both for the quantitative and qualitative aspects than to OAA. This was demonstrated in the way all seven groups of the teacher-students interviewed agreed that positive IR were very critical not only for healthy living but for positive AA too. The alternative hypothesis was thus accepted and confirmed that there is a positive relationship between IR and AA in as far as SAA is concerned, showing that how the participants view themselves is different from how they eventually perform.

IR had a positive relationship to AA (quantitative results, hypothesis 2). It was also found that IR actually directly influences AA. Qualitative data from the Integrated Primary School Science (IPSS) participants revealed that through IR, a student got a lot of advice directly that helped him/her to pursue education. Negative IR affected performance when young girls had sexual relations with teachers (Participant). Positive interpersonal relationships through cooperation enabled group discussions to proceed profitably.

The data from the in-depth interviews with lecturers strongly corroborated what the teacher-students submitted. They all agreed that good IR made a positive contribution to the AA of their students. Positive contributions to AA enabled free interaction with lecturers. For example, a first-class student can help others learn better. IR is both in-born and environmental. Family background is important too. Colleagues too help and facilitate AA. A key Male Participant submitted that, at the university level, discipline was important in IR. IR enabled productive group work assignments, as members depended on each other, thus, creating harmonious relationships, team work, and free communication with others.

A Female Participant observed that the African community is basically an oral and informal community. A lot is done when working informally. A colleague can help with work that could take one person a long time. IR helped students collaborate with each other and their lecturers without fear. A hostile environment leads to loneliness and aloneness. "In our language we say, '*nasiba mu kange asiba mukako*', meaning if you want to wrap in your own cloth, you'll end up wrapping in the worst wrapping you have ever thought of." (Female Key Participant, Makerere University)

Thus, collaboration and collegiality were emphasised. IR positively contributed to AA. High intelligence quotient, being a professor, holding a doctorate alone without good and positive IR were not enough. Organisational and institutional developments depend on IR. It is IR that upholds values, etiquette and good manners in public and private activities.

If group work was to yield positive results and achievement, there had to be good and positive IR. IR enhances SAA through self-motivation when faced with challenges, that is, internal locus of control; paying attention to tasks; hard work; meeting deadlines on tasks; following instructions; doing research and reading in the library; working in and with groups; and enhancing leadership skills in groups when one is always picked upon to lead. Negative indicators of IR included: loving to read alone; not contributing when forced to join a group; not being interested in the study programme; and lack of resilience when faced with challenges.

Lecturers (Participants) thought IR facilitated a conducive teaching-learning environment; simplified learning; promoted understanding; and made learning enjoyable. Good and positive IR brought about friendship and free interaction with the students. What's up groups can be used to facilitate IR (although it would have to be done with caution to avoid social problems). IR fostered stability, continuity, unity and teamwork, thus, facilitating better understanding of issues. IR was thought to avoid a flipped classroom (teacher/lecturer-centred) atmosphere. When a lecturer is liked, most likely the subject would also be liked and learning made better, because the students would easily open up, develop good relations amongst themselves in addition to developing confidence in the lecturer. As one participant said:

> For me, I have been practicing that (IR) because that inter-personal relationship continues after school. You meet them (students taught) in the field, they recognise you, talk very nicely with you and they never forget. And when they like you, they like the subject…. personal relations are very important; for example, one time I went to Revenue (Authority offices). I found a person I taught. So I did not even go through the line. She recognised me and said, 'Madam, come'. So, I was stopped by a policeman, but the other one said, 'That is my teacher'. So, the policeman was kinder to me than he would have been. So, they actually become your friends. (Female Lecturer Participant).

Friendship building and warmth as ingredients for positive IR were thus stressed. Teaching and learning can then take place where there is good and positive IR. The students would begin to develop confidence, open up, and willingly share their ideas and challenges with the lecturer because the environment is conducive.

Research question 2: How does IR contribute to AA (objective and subjective)?

From the qualitative data IR was very important for group work for coursework and assignments. It promoted team spirit and work. Positive IR promoted good working relations, consultations, collaboration and academic performance would more easily be achieved. This ties up with hypothesis 2.

Null hypothesis 2: Interpersonal Relations will not predict positively on Academic Achievement among university upgrading teacher-students.

Table 6 shows results from a linear regression equation that was built where IR and socio-demographic data were matched against the DV (SAA).

This confirms that IR ($\beta = .13$, $t = 3.93$, $p < .001$) have significant effects on SAA. This is so even when controlling for the effects of gender, age and marital status. Overall, the whole model indicated significant effects on SAA ($F = 8.3$, $p < .001$, $R^2 = .16$). The adjusted R^2 indicates that the variables in the model accounted for 14% of SAA among the participants, meaning that other factors contributed for 86%.

Table 6. Regression results for the effect of socio-demographic IR on SAA

Variables	Coefficients	Std. Error	t-value	Sig.
(Constant)	2.59	0.39	6.67	0.000
Gender of the respondent	0.04	0.06	0.71	0.476
Age	-0.02	0.01	-0.44	0.661
Marital status	-0.11	0.07	-1.50	0.134
Training background	-0.05	0.06	-0.87	0.387
Year of study	-0.04	0.07	-0.60	0.548
IR	0.13	0.03	3.93	0.000
F- value	8.3			
p	0.000			
R^2	0.160			
Adjusted R^2	0.140			

[a]Dependent Variable: SAA, [b]Predictors: (Constant), year of study, training background, interpersonal relations, gender of the respondent, marital status, age

Table 7 shows the coefficients of the variables in relation to subjective academic achievement.

Table 8 shows the coefficients of the variables together with biodata to be significant at $p < 0.000$ significance, with SAA. Data from the group interviews indicated that the practice of using group work and methods of study supported SAA. Qualitative data showed that the majority of participants preferred group discussions to individual reading and study. Most of the time individual study was done either early in the morning or late in the evening, these being teachers who needed to first teach and make an input in their various schools.

Table 8 shows coefficients of variables in relation to OAA.

Table 8 shows that overall, OAA is not significantly related to IR. All the coefficients have $p > .05$ significance. Thus, there was a disparity between SAA and OAA (self-reported potential and actual performance), in relation to IR.

DISCUSSION

Objective 1: To Establish the Relationship between IR and AA (Objective and Subjective) among Upgrading Teacher-Students

The study found that IR was positively and significantly related to SAA ($r = .23$, $p < .001$), although the figure is low, in as far as SAA is concerned, showing that how the participants view themselves is different from how they eventually performed. This also meant that there were other factors other than IR that related to AA. This finding agreed with Khmil et al. (2019) who discovered that the use of collective work led to greater results than picking one method alone. Student participants had the opportunity to execute collaborative projects, discuss them and publish results on the Internet. Education practitioners at Makerere and UCU could use such knowledge. Results showed that collegial relations with superiors improved with positive IR. This was supported by Özbek and Taneri (2019) who found that majority of the participants did not feel discomfort from the involvement with school administrators, parents and students. This was very evident from the memos and general observed behaviour among Grade V teacher students as well as with their lecturers.

Table 7. Coefficients of variables in relation to SAA

	Coefficients[a]						
	Unstandardized coefficients		Standardized coefficients	t	*p*	Collinearity statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	2.131	.372		5.722	.000		
Gender of the respondent	.040	.056	.037	.715	.475	.922	1.084
Age	-.005	.005	-.061	-.998	.319	.650	1.538
Marital Status	-.116	.069	-.095	-1.672	.095	.752	1.330
Training background	-.065	.060	-.061	-1.087	.278	.765	1.307
Year of study	.067	.061	.056	1.092	.276	.916	1.092
IR	.086	.039	.111	2.219	.027	.974	1.026

[a]Dependent variable: AA (subjective)

Table 8. Coefficients of variables and OAA

	Unstandardized coefficients		Standardized coefficients	t	p	Collinearity statistics	
Coefficients[a]	B	Std. Error	Beta			Tolerance	VIF
(Constant)	74.685	64.222		1.163	.247		
Gender of the respondent	-1.798	6.952	-.022	-.259	.796	.919	1.088
Age	-.582	.677	-.102	-.860	.391	.489	2.044
Marital status	-9.203	8.337	-.115	-1.104	.272	.629	1.589
Training level	3.440	7.752	.047	.444	.658	.617	1.620
Year of study	.606	21.521	.002	.028	.978	.959	1.042
IR	-2.089	4.952	-.037	-.422	.674	.893	1.120

[a]Dependent variable: AA (objective - CGPA)

Findings emphasised the significance of SAA especially in group and collaborative work. This supports Hanaba's (2019) perspective that the individual who needs to develop himself educationally would also need community support to achieve this. The study too found the plight of most students who could not access library services, thus, supporting Leng (2019) who pointed to the critical role of libraries in the early stage of college students' innovation and entrepreneurship. Group work has been used in the educational system for many years with great results when properly conducted. Thus, findings clearly brought out issues of collective learning and performance reflected in group work, with a good background of literacy. This supports Khmil et al.'s (2019) finding on the use of group work and projects. The use of a physical library and information technology through mobile devices was emphasized, although some participants lacked personal smart phones.

Qualitative findings revealed the importance of sharing and fair-play as contributors to AA. These also support Khamis et al.'s (2018) proposed prescriptive visualization model focusing on students' academic performance. It would assist institutions of higher learning while deciding on what services to provide their students, especially during examination seasons. The whole process of decision-making and implementation is interactive as it involves consultations and cooperation aspects of IR. Findings further showed that IR, was not significantly related to OAA – CGPA (r = 04, p > .05), contrary to several previous studies. For example, Kusmayadi and Husodo (2018) found that AA of Mathematics students who had a high level of interpersonal intelligence was better than that of students with interpersonal intelligence in medium and low level, pointing to the need of literacy at these stages. Additionally, Emmanuel-Frenel (2017) found that administrators needed to have good relations with distance education students to guide them on how to use the available support services given to them if they are to maximise the AA. Findings showed that all lecturer Participants at both universities underscored the need for positive relations with their students and colleagues that also directly and indirectly had a positive relationship with AA. This supports Carver and Rapp's (2018) findings that the three most important characteristics for effective online instructors were respectfulness, knowledgeability, and approachability. The current findings suggest that for educators to be perceived as effective, they should use similar characteristics and behaviours to exhibit the same qualities for all students no matter their age, gender, or programme of study. Use of humour, however, was recommended when teaching younger, undergraduate students, thus, supporting Hauge's (2018) finding that mental health professionals could benefit from a mindfulness training programme. Royal (2018) too argued that the parent must assume the role of being the first individual to help motivate the child to become academically challenged; if not, teachers should take up this role.

Qualitative phenomenological findings manifested teacher-students' insight that IQ alone without IR did not help them perform well academically. Similarly, Fernández-Berrocal and Aranda (2017) found that social skills are relegated to the private sphere where each person is responsible for their own personal development yet they fit in the public domain too. For this reason, the majority of the participants in this study proposed that IR effectively and deliberately be included in the Ugandan curriculum and be taught starting as early as kindergarten through to university. The study findings also support Mekonnen (2014) findings that academic performance was the measure of output mainly expressed in terms of learning, changes in knowledge, skills and attitudes of individuals as a result of their experiences within the school system that involved IR. Students' success was judged by examination performance while the best criterion of performance was the sum of the student's academic performance in all the subjects taken. Poor academic performance was adjudged by the examinee and as set by the evaluator, which could be affected by the relationship between the examinee and the evaluator. The upgrading teacher-students also experienced this as the education system in Uganda relies heavily on examinations!

Objective 2: To determine the Predictive Power of IR on OAA and SAA of University Upgrading Teacher-Students

A linear regression equation was built where IR and socio-demographic data were matched against the DV (OAA and SAA) and it confirmed that IR have significant effects on SAA, partly supporting de Koning et al.'s (2012) findings that learner performance, conscientiousness and verbal ability most strongly and consistently related to AA.

The Participants were more responsive to IR in relation to SAA both for the quantitative and qualitative aspects than to OAA. This was demonstrated in the way all seven groups of the teacher-students and the lecturers agreed that positive IR were very critical not only for healthy living but for high and positive AA too. The alternative hypothesis was thus accepted, and confirmed that there was a positive relationship between IR and AA. IR are very useful in any interaction especially student-student and student lecturer interactions. In addition, findings showed that IR actually directly predicted SAA as revealed by qualitative data from the IPSS participants. IR directly impacted female and girls' performance. Positive interpersonal relationships enabled group discussions to proceed profitably. The lecturers strongly corroborated what the teacher-students said. Lecturers learn from the students as students learn from the lecturers. Colleagues helped and facilitated good performance. As one key male participant submitted:

> This is all discipline... No one can be master. So, there is need to have that IR so that we are all able to do our assignments properly. As we realise we are not islands– we depend on one another. And the depending on one another is only possible when we have IR so that we see our friends as friends and as colleagues who need the support of each other in all these things, which creates harmonious relationships; reduces misunderstandings and work goes on well. (Grade V Teacher Student Male Participant)

Female lecturers agreed that IR contributed positively to general AA, illustrating that the African community is basically an oral informal community. A lot is achieved when working informally with colleagues and students alike. Positive IR removes fear. This followed the social constructionist approach that promotes learning from each other. Using e-mails, phone calls and short messages gave freedom of communication amongst participants, thus leading to achievement and research collaboration. Phenomenologically, collaboration led to better AA.

Open communication both on physical and personal level, is enabled by positive IR. The findings support Weiner's (2013) belief in the attribution theory as the most important theory that helped explain AA. It brought out issues of learning goals, performance goals, learned helplessness, self-handicapping, expectancy, and self-worth, which are critical in the study of IR and AA. The findings also support Peplau's Theory of IR (Senn, 2013). Teaching is an interpersonal process that involves interaction between two or more individuals with a common goal. Both positive and negative views of IR impact AA. Teachers and students who started as strangers the first time, get closer to each other over time. They also played the role of counsellors by facilitating understanding and integration of meaningfulness to life circumstances, provided guidance and encouragement to their students for positive change. The importance of IR with peers and colleagues for personal, family, educational and institutional development were underscored. From the memos, IR was particularly useful in collaborative work as colleagues participated in data collection. The body language of both teacher-students and their lecturers was phenomenal.

Because of the limited time and academic deadlines, some participants were fidgety and distracted, especially the Year Twos at UCU.

CONCLUSIONS

From objective 1: 'To establish the relationship between IR and AA of upgrading Grade V teacher-students and Hypothesis 1: There is a positive relationship between IR and AA among upgrading teacher-students, the hypothesis was accepted for SAA but not for OAA, concluding that perceptions and self-reports may differ from actual performance evidence by end of semester results. IR contributes to and enhances cognitive abilities among Grade V teacher students. Non-intellective factors such as personality traits, motivational factors, self-regulatory learning strategies, students' approaches to learning, and psychosocial contextual influences, were most useful in understanding academic performance. That could have been the reason for low score for IR. IR was part of that list as per the findings. The improvement in the students' academic performance were influenced by the extent to which they are validated through a caring learning environment. Qualitative findings tallied with quantitative results in that Participants recommended that IR should be included in the Teacher Training institutions, and be taught right from Kindergarten through to University level. The study found the Attribution and Peplau's Interpersonal Relations theories very appropriate for daily interactions. IR was correlated to teacher effectiveness. The Teacher Students were able to identify types of interactions, positive and negative interactions and their consequences. The idea that friendship formation and sustenance should be built early in life and that the skills learnt will automatically continue throughout life is a very false assumption. Interpersonal relations that facilitate individual interactions in and outside lecture rooms, are very critical to academic performance, educational growth and development. Good and quality interpersonal relations promote collaborations amongst students, and students and lecturers, thus improving academic performance of all at educational institutions.

From objective 2: To determine the predictive power of IR on OAA and SAA of university upgrading teacher-students and Hypothesis 2: IR will predict positively on AA (objective and subjective) among university upgrading teacher-students: IR positively predicted SAA. All of life, especially in the African context, rotates around relationships. To excel in any aspect of life, means one has good and quality relations at whatever level including university level.

Mixed methodology was well suited for the study. Quantitative data supplied neutral and objective data, while qualitative data brought in types of personalities, positive and negative aspects of interpersonal relations and live examples of quality relations including spousal relations that enabled some participants to cope and excel in their academic performance. The phenomenon of IR was more related with SAA than OAA.

Weiner's attribution and Peplau's theories of IR were relevant to the study. Different attributes played out

differently depending on participants' personalities and nature of relations. As human beings living with other human beings, there would be no way of becoming isolated islands. Interactions are inevitable. SAA and qualitative results showed higher relationship between IR and AA. Literacy, though not a major factor of the study, supported IR and AA. Education systems involve reading, writing and arithmetic even at university level.

Teaching IR after primary schooling was new. IR needs to be taught at higher levels of education and should deliberately be included on the curriculum. SAA emerged in the process of the research. No other researcher had differentiated between SAA and OAA or performance. Most previous research on IR had not employed mixed methodology approach in their studies. Most used quantitative approaches only. The quality of IR is brought out in this study. The study was limited by the availability of teacher students of given subjects because of the packed programme (lectures, course-works, tests and examinations). A sustainable Nvivo data analysis software was very expensive because of limited funding. Phenomenological studies in education are few. Another research tool may be could have yielded other and better results.

Ministry of Education and Sports, National Curriculum Development Centre, teacher training institutions and other education stakeholders should adopt the teaching of IR to further enhance AA. Educational institutions especially universities should continue teaching and upholding interpersonal relational skills and techniques. Avenues like Parents Teachers Association meetings could be used to promote IR; and concerts and homes should be used to teach and promote IR. More phenomenological studies should be done in the educational field. Literacy at all levels should be considered as a factor that relates to AA. It would be good to have follow up studies in IR and AA at other higher educational levels like National Teachers' Colleges, other government and private universities and educationalists holding leadership posts. More phenomenological studies in the educational areas need to be carried out. The literacy levels of upgrading teacher-students should be researched into as well.

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