Linguistic Portfolios

Volume 8 Article 8

2019

A Social Network Analysis of Nepali Students at a US University

Ettien Koffi
St. Cloud State University, enkoffi@stcloudstate.edu

Linguistic Portfolios–ISSN 2472-5102 –Volume 8, 2019| 83

A SOCIAL NETWORK ANALYSIS OF NEPALI STUDENTS AT A US UNIVERSITY

ETTIEN KOFFI[1]

ABSTRACT

Individuals in a community interact with others in small and large social groupings. Such interactions provide a wealth of information that can be exploited in multiple ways. In this paper, we investigate the social networks of Nepali students at St. Cloud State University, a comprehensive university in central Minnesota, USA. The participants are 10 males and 9 females. Their responses to survey/interview questions serve as the basis for this research. The aggregated data show that Nepali students have 76 "best friends" in their social networks, and that 45 of those are Nepali, 31 are international students from 12 different countries, and 11 are domestic (American) students. The data also show that Nepali students spent 611 hours a week with the people in their social networks, including 411 hours with other Nepalis, 139 hours with international students, and 61 hours with domestic students. These social networks and the interactional patterns discussed in this paper (and in a companion paper in this volume) contain important insights for both university staff and Nepali students.

1.0 Introduction

The number one reason why international students come to St. Cloud State University (SCSU) is to get a good education. In light of this lofty goal, it may seem trivial to investigate their social networks and interactional patterns. However, since international students are social beings, it is my contention that the social networks that they form while at the university can have a profound impact on their overall success, even if academic success remains their top priority. With this in mind, I have set out to investigate how 19 prototypical Nepali students out of the 387 enrolled at SCSU in fall of 2017 interacted with fellow students.[2] The choice of Nepali students is not random.[3] According to official SCSU data, the Nepalis are the largest international student population on campus. This makes their social networks and interactional patterns worth investigating. The paper is subdivided into six installments. The first provides a succinct overview of the literature about social network analysis, the second gives background information about the participants, the third explains basic terminology used in social network analyses, the fourth quantifies interactional time and patterns, the fifth examines gender roles, and the last section lumps together some miscellaneous observations.

1.1 Succinct Literature Review

Long before virtual communities such as Facebook, Instagram, Tweeter, etc. existed, sociolinguists and social anthropologists deployed considerable resources studying social interactions between individuals in small and large groups (see Wardhaugh and Fuller 2015 for a short review). With the advent and success of online communities, experts in other disciplines

[1] I wish to acknowledge the help of the students who took my sociolinguistics course in fall of 2017. They collected the data which have served as the basis for the analyses in this paper.

[2] Source: https://www.stcloudstate.edu/internationalstudies/_files/documents/fall2018_intlstudentnumbers.pdf

[3]Julie J. Condon is the English for Academic Purposes (EAP) Coordinator at SCSU. She offered insights and editorial assistance on this paper. She also helped with various aspects of this project, including serving as a liaison between me and the Center for International Student and Scholar Services. Her assistance is gratefully valued and graciously acknowledged.

are joining in the investigation of social networks. I was surprised to read Schweitzer's (2018) article in *Physics Today* with the following caption, "To the extent that individuals interact with each other in prescribed ways, their collective social behavior can be modeled and analyzed." This is precisely the kind of modeling I am proposing in this paper. Past publications on this topic include Abat and Koffi's (2016) examination of the social network of a 22-year old student from China and Koffi et al.'s (2017) analysis of the social network of five international students. The main findings of the latter study showed that the five international students spent 224 hours in weekly interactions with the 25 people in their networks. Furthermore, they spent 153 hours interacting with students from their home countries (68.30%), 45 hours interacting with domestic (American) students (20.08%), and 26 hours with international students from other countries (11.60% of the time). These findings serve as baseline measurements against which we will compare and contrast Nepali students' interactional data. This research, like the two previous cited above, were approved by the Institutional Review Board (IRB). Participants signed an informed consent form. In return, they received Academic & Cultural Sharing Scholarship credits administered by the Center for International Student and Scholar Services at SCSU in fall of 2018. The interview/survey questions are in the appendix. A companion paper examining the intelligibility of their pronunciation can also be found in this volume. Though the two papers are part of the same research, their findings are published separately because their subject matters are different.

1.2 Participants and Settings

Nineteen out of 387 Nepali students (roughly 5%) participated in our survey/interview. As alluded to previously, the Nepalis are the largest body of international students at SCSU. As of fall 2018, SCSU had15,253 students (13,467 undergraduates and 1,786 graduates). SCSU is a comprehensive university that offers BA and MA degrees, and one doctoral degree in education. In fall 2017 when this study was conducted, there were 1,512 international students on campus.[4] The Nepali students represented 25.59% of the entire international student population.[5] The Nepali students in our survey were a representative slice of the entire Nepali student population in that most of them were pursuing degrees in Computer Science or Information Systems (Business Computer Information Systems, Business Intelligence, Information Insurance) in the Herberger School of Business. None of the 19 respondents were degree-seeking students in the humanities or in social sciences. Their length of residency (LOR) ranged from 3 months to 3 years, with an average LOR of 2.4 years. Tables 1A and 1B display various types of information about the participants, including gender, quantity of interactional times, and the nationalities of the students with whom they interacted. The participants responded to the interview questions in Appendix 1. The suffixes "M" and "F" stand for respectively "male" and "female."

[4] Source: https://www.stcloudstate.edu/internationalstudies/_files/documents/enrollment/enorllment_fall_2017.pdf

[5] There are discrepancies between student enrollment numbers found in different sources. The overall enrollment numbers cited in this paper are based on those released by SCSU. However, the number of international students remains identical across sources. According to the 2018 figures, the number of international students has dipped from 1,512 students in 2017 to 1,411 in 2018. A decrease is also seen in the number of Nepali students which stands at 346 in fall of 2018 versus 387 in fall of 2017.

Participants	Nepal	Nepal	Nepal	Nepal	USA	USA[6]	Japan	Japan	S. Arabia
Nepali 1M	10	12	12	10					
Nepali 2F	8	4	4	3	4	4			
Nepali 3M	7				4	4			
Nepali 4M	40				6		16	8	
Nepali 5M					7				3
Nepali 6F	8						10		7
Nepali 7M	10	10			8				
Nepali 8F	7	10					5	7	
Nepali 9M	30								
Nepali 10F	10	10			10	10			
Nepali 11F	20								
Nepali 12M	20	10	10	14					
Nepali 13F	6	4	6	6					
Nepali 14M	10	10	4	2					
Nepali 15M	4	8				2			
Nepali 16F	2	1	4	4					
Nepali 17M	2	5	10	10					
Nepali 18F	6	3			2				
Nepali 19F	10	7	8						
Total	**210**	**94**	**58**	**49**	**41**	**20**	**31**	**15**	**10**

Table 1A: List of "Best Friends"

Participants	S. Korea	Pakistan	China	Philippine	Slovakia	Ivory Coast	Albania	Mexico	Mongolia
Nepali 1M									
Nepali 2F									
Nepali 3M		5							
Nepali 4M									
Nepali 5M						8			
Nepali 6F						5			
Nepali 7M									
Nepali 8F	3								
Nepali 9M			7		7		9		
Nepali 10F									
Nepali 11F			5	8				10	
Nepali 12M									
Nepali 13F									
Nepali 14M									

[6] Countries are repeated to the extent that students interacted with more than one person from the same country.

Nepali 15M									2
Nepali 16F									
Nepali 17M									
Nepali 18F		4							
Nepali 19F			2						
Total	**3**	**9**	**14**	**8**	**7**	**13**	**9**	**10**	**2**

Table 1B: List of "Best Friends"

A cursory look at the data reveals the following: the 19 participants had 76 friends in their social networks. Excluding Nepal, the participants had friends from 12 different countries/nationalities. Eleven domestic (American) students were listed as "best friends." This represents 14.47% of the total number of actors in the various social networks. The participants also listed 45 Nepalis as being their "best friends." In other words, 59.21% of the respondents interacted mostly with other Nepalis. Nineteen Nepalis (25%) listed international students from other countries as "best friends." Additional insights will be gained as we scrutinize the data further.

1.3Social Network Terminology and Interactional Patterns

Three concepts lie at the core of social network analyses. The first, **social network density**, has to do with the number of linkages among the participants in the same social network. A related term to density is network **strength**, which is described as **strong**, **weak**, and **moderate**. A strong network is one in which all the participants know and interact with each other. In a simple five-person network such as the one used in this paper, a network is strong if there are 8 to10 links between participants. A **moderate** network has between 5 and 7 links, and a **weak** network has less than five links. Network density is illustrated by Figure 1, which depicts the social network of Nepali 4M. His network strength is 60% (6 out of 10 possible links). Overall, it is a moderate network.

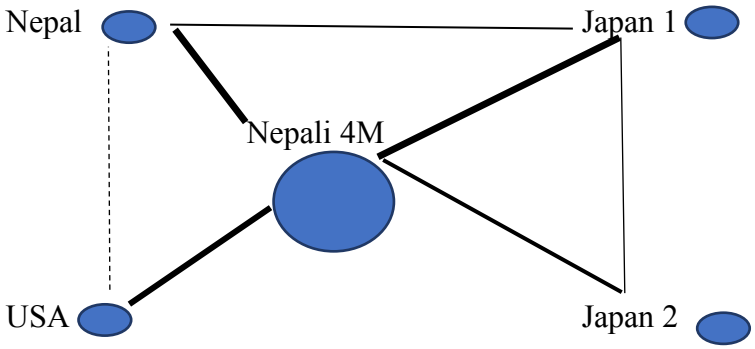

Figure 1: Interactional Patterns

The second key concept is network **intensity** or **quantity**. Both terms are used interchangeably. It has to do with number of hours per time installments during which individuals in a social network interact with each other. For the purposes of our analyses, the time installment is calculated in **hours per week**. Looking at Table 1A, we see that Nepali 4M spends on average 40 hours per week with the other Nepali student in his network, 16 hours with Japanese 1, 8 hours with Japanese 2, and 6 hours with a domestic student. Line thickness is manipulated to depict pictorially the quantity of interactional time. The linkage between Nepali

4M and the other Nepali student is the thickest because they spend more interactional hours together. The next thickest line is the one between Nepali 4M and Japanese 1. The line connecting him to Japanese 2 is the third thickest, while the line between him and the domestic student is the fourth thickest. The lines connecting the other participants have the same thickness because, though they are connected, we have no information on the amount of time they spend with one another. The absence of a connecting line indicates that the people in question do not interact. Broken lines mean that the participants have heard of each other without ever interacting with each other in person.[7]

The third key concept is **network complexity**. This one is hard to represent pictorially. It has to do with the number of "social events" during which the participants in a social network interact. If students are in the same university course, this counts as one "event". If they study together, it counts as two "events". If they go to the gym together, it counts as three "events." If they participate in religious ceremonies, it counts as four "events". and so on and so forth. The more events in which the participants in a social network interact, the more **complex** their interactional patterns. The fewer the number of events, the more **simplex** it is. Nepali 4M is involved in a complex interaction with the other Nepali student because they are roommates. They eat their meals together and engage in a wide variety of social activities together. His social network with the two Japanese students is simplex. They meet together in only one social event, i.e., for Nepali 4M to practice his Japanese. His network with the American student is also simplex because they interact only in two social events: they are in class together and they prepare for exams together.

Participant Info	**Nepali**	**Japanese 1**	**Japanese 2**	**Domestic**
Countries	Nepal	Japan	Japan	United States
Native language	Nepali	Japanese	Japanese	English
Languagesused	Nepali	Japanese/English	Japanese/English	English
Number of events	Multiples	1 event	1 event	2 events

Table 2: Network Complexity

1.4Quantification of Interactional Times and Patterns

Now that the relevant terms have been defined and illustrated, let's turn our attention to the entire set of Nepali participants. Collectively, the 19 participants spent 611 hours with the participants in their social networks. Furthermore, the Nepali students spent 411 hours with the other 45 Nepali students in their networks. In other words, they spent 67.26% of the available interactional hours with each other. Additionally, they spent 139 hours (27.77%) with the 20 international students in their networks, and 61 hours (9.98%) with the 11 domestic students in their social networks. In social network terminology, the Nepali students' social network qualifies as cliquish because they spend a significant portion of their interactional times with other Nepali students.

How do the Nepali students compare with other international students at SCSU? Koffi et al.'s (2017) study indicates the Nepali students are more cliquish than other international students at SCSU. The Nepali students spent only 10.11% of their interactional time with the

[7] Broken lines are not taken into account in calculating network density.

American students in their network, whereas the other international students surveyed spent 20.08% of their time with Americans. Even for Nepali 2F, 3M, 5M, 7M, 10M, and 15M, who interacted with American students, these domestic students are on the periphery of their social networks, just as is the case of Nepali 4 in Figure 1. This means that American students in the networks of Nepali students do not know or interact with other Nepalis. In fact, one interviewee complained that an American student became his "friend" only when he needed help for a class that they were taking together.

1.5Typicality of Nepali Students' Social Networks

The Nepali students' social network is rather typical of the network of other international students at SCSU. Koffi et al. (2017:65) report that 68.15% of interactional time is spent with students from their home country. This is similar to the 67.26% of the time that Nepali students spend with other Nepali students on campus. Why are international students at SCSU so "cliquish"? The answer is rather obvious and can be summarized by these two adages: "There is strength in numbers" and "Birds of a feather flock together." In the case of Nepali students, they select each other as roommates. Moreover, for the most part, they tend to pursue the same academic degrees. They are overwhelmingly represented in the Computer Science department or in the Herberger School of Business, where they are pursuing degrees in Information Systems. As a result, they find themselves working in similar jobs on campus. At the time of this study, many worked at the Computer Store and the Husky Helpline. Many also worked at the various food establishments on campus.

The "cliquish" mentality may be inadvertently fostered by the Academic and Cultural Sharing Scholarship that SCSU offers to international students. Students who actively participate in Cultural Nights receive this scholarship, which helps reduce their overall tuition bill. Over the years, the university has fostered a vibrant celebration of "Cultural Nights" during which students from the same country come together and put on a show that highlights their home cultures. These Cultural Nights attract a lot of people from the St. Cloud community, from Minneapolis-St. Paul, and even beyond. The Nepali Cultural Night of 2017 attracted a very large crowd. Even Nepali students from a nearby university (Minnesota State University at Mankato, roughly 3 hours from St. Cloud) came to participate or lend support to their fellow Nepalis. The whole period leading to the cultural night festivities is intense, as students are busy rehearsing. This dramatically increases the number of interactional hours.

1.6Gender Roles in Social Interactional Patterns

We scrutinized the data further to try to uncover whether or not differences existed between male and female Nepali students in how they constructed and maintained their social networks. Tables 3A/3B give some clues about male students' interactional patterns, while Tables 4A/4B highlight female students' interactional patterns. Male students spent 364 hours per week with the people in their social network (59.57%).

Participants	Nepal	Nepal	Nepal	Nepal	USA	USA	Japan	Japan	S. Arabia
Nepali 1M	10	12	12	10					
Nepali 3M	7				4	4			
Nepali 4M	40				6		16	16	
Nepali 5M					7				3
Nepali 7M	10	10			8				
Nepali 9M	30								
Nepali 12M	20	10	10	14					
Nepali 14M	10	10	4	2					
Nepali 15M	4	8				2			
Nepali 17M	2	5	10	10					
Total	133	55	36	36	25	6	16	16	3

Table 3A: Male Social Network

Participants	S. Korea	Pakistan	China	Philippine	Slovakia	Ivory Coast	Albania	Mexico	Mongolia
Nepali 1M									
Nepali 3M		5							
Nepali 4M									
Nepali 5M						8			
Nepali 7M									
Nepali 9M			7		7		9		
Nepali 12M									
Nepali 14M									
Nepali 15M									2
Nepali 17M									
Total	5	7			7	8	9		2

Table 3B: Male Social Network

Nepali female students, on the other hand, spent and a total of 247 hours with people in their social network (40.42%), as shown in Tables 4A and 4B:

Participants	Nepal	Nepal	Nepal	Nepal	USA	USA	Japan	Japan	S. Arabia
Nepali 2F	8	4	4	3	4	4			
Nepali 6F	8						10		7
Nepali 8F	7	10					5	7	
Nepali 10F	10	10			10	10			
Nepali 11F	20								
Nepali 13F	6	4	6	6					
Nepali 16F	2	1	4	4					
Nepali 18F	6	3			2				
Nepali 19F	10	7	8						
Total	77	39	22	13	16	14	15	7	7

Table 4A: Female Social Network

Participants	S. Korea	Pakistan	China	Philippine	Slovakia	Ivory Coast	Albania	Mexico	Mongolia
Nepali 2F									
Nepali 6F						5			
Nepali 8F	3								
Nepali 10F									
Nepali 11F			5	8				10	
Nepali 13F									
Nepali 16F									
Nepali 18F		4							
Nepali 19F			2						
Total	3	4	7	8		5		10	

Table 4B: Female Social Network

The data seem to suggest that male students are more social than their female counterparts. This may well be the case. However, it must be remembered that the participant pool had 10 male students versus 9 female students.

1.7 Interactional Patterns with Domestic Students

Eight Nepali students out of the 19 interacted with American students. They spent a total of 61 out of 611 interactional hours with them. Male students Nepali 3M, 4M, 5M, 7M, and 15M spent 31 hours with the American students in their networks. Female students Nepali 2F, 10F, and 18 F spent 30 hours. Nepali 10F had two domestic students in her network with whom she spent 20 hours a week. Nepali 3M also had two American students in his network and spent 8 hours a week with them. As noted earlier, the total amount of interactional time that Nepali students spend with American students is 9.98%. This is well below the SCSU average of 20.08% that students in Koffi et al. (2017).

1.8 Interactional Patterns with International Students

Nepali students spent 139 hours a week with other international students (22.74%). Percentage wise, this is higher than the 11.60% interactional time that the international students

in Koffi et al. (2017) spent with other international students. Particularly noteworthy is the 54 hours a week spent with Japanese students. This is at first glance surprising, but Nepali 4M's explanation for why he has two Japanese speakers in his social network helps us understand. He sought these Japanese speakers out because he wanted to keep practicing his Japanese. According to Ghimire (2013:58), Japanese is offered as a second language in Nepali universities and colleges. Serge (2013:219) notes that there already exists a Nepali-Japanese bilingual dictionary. The New Education System Plan of 1971 (NESP) lists 15 international languages that Nepali students are encouraged to learn for business and diplomatic reasons. This may be the reason why Nepali 6F and 8F have Japanese speakers in their social networks. This may also explain why Nepali 11F and 19F have Chinese speakers in their social networks. Given this background information, it is not surprising that Nepali students interact with more international students than the average international student at SCSU.

1.9Miscellaneous Observations

Nepali 6F has the most cosmopolitan social network of all the participants. Her friends include one Nepali student with whom she spends 8 hours a week, one Japanese student (10 hours a week), one Saudi (7 hours a week), and one Ivorian (5 hours a week). She spends 30 hours a week with the people in her network. At the opposite end of the spectrum are Nepalis 1M, 12M, 14M, 17M, 2F, 13F, 16F, and 16F who list only Nepalis as their "best friends."

1.10 Summary

This line of research seeks to achieve two goals. One is to provide information to university-wide decision makers about how international students relate to the broader community. The other is to draw international students' attention to the diversification or lack thereof of their own social networks. That Nepali students spend only 9.98% of their interactional time with American students is clearly below the 20.08% threshold for other international students on the same campus. Clearly, Nepali students need to reach out more to domestic students. Their outreach to other international students (22.74% of interactional time) is commendable. It is unclear what the university can do to encourage more interactions between international and domestic students. Friendships cannot be mandated from on high. Yet, incentives can be set in place to foster such interactions. For example, domestic students can volunteer as conversation partners for Nepali students who need to improve the intelligibility of their speech, as discussed in a companion paper in this volume.

ABOUT THE AUTHOR

Ettien Koffi, Ph.D. in linguistics from Indiana University, teaches linguistics at Saint Cloud State University, MN. Author of many peer-reviewed articles on various topics in linguistics and of four books: *Language and Society in Biblical Times* (1996), *Paradigm Shift in Language Planning and Policy: Game Theoretic Solutions* (2012), *Applied English Syntax* (2010, 2015), and the *New Testament in Anyi Morofu* (2017), a task which took over 25 years. Specializing in acoustic phonetics, dialect variation, and emergent orthographies, his current research centers on speech acoustics of L2 English (within the Speech Intelligibility Framework), Central Minnesota English, and Anyi. He can be reached at enkoffi@stcloudstate.edu.

References

Abat, Martina and EttienKoffi. 2016. Social Network Analysis and L2 English Acoustic Vowel Space: A Case Study. *Linguistic Portfolios* 5: 34-47.

Ghimire, Laxman. 2013. Mother Tongue-Based Education and the Heritage Languages of Nepal. *Nepali Linguistics* 28:189-198.

Koffi, Ettien, Patrick Ridpath, Thana Al Jumaah, Aizhan Arapova, Karla Huezo, and Joel Coreas. 2017. L2 English Pronunciation Asssessment Based on Social Network Analysis and the *i*+1 Input Hypothesis. *Linguistic Portfolios* 6: 50-71.

Schweitzer, Frank. 2018. Sociophysics. *Physics Today* 71 (2): 40-46.

Serge, Potemkin. 2013. Interactive Evaluation of Quasi-Synonyms Extracted from Bilingual Dictionaries. *Nepali Linguistics* 28:218-224.

Wardhaugh, Roland and Janet M. Fuller. 2015. *An Introduction to Sociolinguistics*. 7th edition. Malden, MA: Wiley-Blackwell.

Appendix 1: Social Network Analysis

Research Methodology

1. Select 1 international student/person, preferably somebody who has been in the USA less than 3 years.
2. Indicate the level of your informant: What grade is he/she in at IEC? Or, what is his/her level of proficiency: beginner, intermediate, advanced?
3. Ask your informant to name **4** persons that he/she knows best at SCSU, in Saint Cloud, or in the community where you live. Your presentation need not contain the last names of the persons. Made-up names will suffice. However, their native tongue and nationality are relevant for this analysis. Your participants MUST NOT include family members in their social network.

Have your informant answer the following questions:

1. How old are you? Check One

17	18	19	20	21	22	23	24	25	26	27	28+

2. What is your home language (mother tongue)?

3. What other languages do you speak?

4. Where did you live when you were a child?

5. How long you have been in the USA?

6. Name 4 people you consider to be your best friends:

	Friend 1	Friend 2	Friend 3	Friend 3
Country of origin				
Native language				

7. How many hours per week do you spend with friend 1?

<30mn	1h	2h	3h	4h	5h	6h	7h	8h	9h	10h

8. How many hours per week do you spend with friend 2?

<30mn	1h	2h	3h	4h	5h	6h	7h	8h	9h	10h

9. How many hours per week do you spend with friend 3?

<30mn	1h	2h	3h	4h	5h	6h	7h	8h	9h	10h

10. How many hours per week do you spend with friend 4?

<30mn	1h	2h	3h	4h	5h	6h	7h	8h	9h	10h

11. Here (on campus), which language do you usually use when you
a. are eating your meals? _____
b. are (doing exercises)? _____
c. are in the classroom? _____
d. speak to a (professor)? _____
e. talk to your friends? _____

12. How do you rate your proficiency in English? Check one
- Very high _____
- High _____
- Intermediate _____
- Low _____

13. Which area of your English proficiency would you like to improve on the most?
_____
14. Why?