

Social Relations of Mathematics Education Students North Sumatra State Islamic University Medan with Sociometry Assisted

Abdurrahman¹, Indra Jaya², Muhammad Taufiq Azhari³

^{1,2}Faculty of Tarbiyah and Teacher Training, Universitas Islam Negeri Sumatera Utara, Indonesia

³Postgraduate Student in Educational Management, Faculty of Tarbiyah and Teacher Training,
Universitas Islam Negeri Sumatera Utara, Indonesia

Email: taufiqazhari28@gmail.com

Abstract: *Font paragraph this study aims to determine the level of social relations of mathematics education students with the help of sociometry. This research was revealed using sociometry tools. The population is staple 2018 second semester mathematics education students, totaling five classes. The sample used by mathematics class 2 researchers was 40 students. In this study produced several student positions at the level of social relations. In determining the level of one's social relations measured by assisted sociometry determined by a range of values from 0 to 1. So that the results of the level of social relations are obtained as follows: 1) 0.384 totaling 1 person, 2). 0.282 totaling 2 people, 3). 0.153 innumber, 4). 0.128 is 1 person, 5). 0.076 totaling 7 people, 6) 0.051 totaling 3 people, 7). 0.025 totaling 8 people, 8). 0 numbered 17 people. The conclusions of this study explain that there are still many social partners that must be improved, especially among individuals because student answers are quite varied.*

Keywords: *social relations; sociometry; communication; assessment; counseling; interaction; sociogram*

I. Introduction

Social relationships are reciprocal relationships between individuals with each other, influence each other and are based on awareness to help each other. Each individual must engage social because essentially invented human beings social that will be separated from the interaction social or contact social with individu or other group.

Social relations are interactions between people. According to Gillin and Gillin, social relations are dynamic relationships involving relationships between individuals, between groups, between people and groups. In general, social relations are reciprocal relationships between individuals with each other, influence each other and are based on awareness to help each other. The process of social relations can occur directly with face to face or indirectly or using the media, such as telephone, television, radio, correspondence, and others. The process of social relations will occur when there are two or more individuals who hold social contact and communication with each other. (Soerjono Soerkano, 2012)

According to Hardjana, as quoted by Edd Lestari G (2003) etymologically communication comes from Latin namely cum, a preposition meaning with, or together with, and the word unus, a number word meaning one. Two words to form nouns communion, which in English is called communion, which has the meaning of togetherness, unity, fellowship, combined, relationships, or relationships.

Due to Communion needed existence of business and work, then word communion made word Go communicate which means sharing something with someone, exchange, discuss something with someone, tell something to someone, conversing, exchanging ideas, related, or friends. By communication has meaning notifications, conversation, conversation, exchange, thoughts or relationships. (Agus M. Hardjana, 2003).

Therefore social relations need to be maintained so as not to damage the meaning of the purpose of social relations itself. On this occasion where researchers wanted to see how much the level of social relations of mathematics education students with the assistance of non-test tools in counseling guidance, namely sociometry. The term sociometry comes from the Latin socius which means social, and "meter" which is interpreted as a measurement. Based on these basic words, sociometry used as a way to measure the level of inter- hu of flower individual in the group. Exchange not only in conducting assessment of the behavior of individuals in the group, but also to intervene to make positive changes and determine how extensive the changes.

Assessment is an activity that cannot be separated from general learning activities. All learning activities carried out must always be followed or accompanied by assessment activities. (Nurgiantoro, 2013: 3). Educational assessment is the process of gathering and managing information to measure the achievement of student learning outcomes. (Permendikbud No.23, 2016). Klizik (2009: 19) says, "Assessment is a process by which information is obtained relative to some known objective or goal. Assessment is a broad term that includes testing. A test is a special form of assessment".

Assessment is a series of activities to obtain, analyze, interpret data about the learning process and learning outcomes of students which are carried out systematically, accurately and continuously by using certain measurement tools, such as questions and observation sheets, so that it becomes meaningful information in decision making related to the achievement of participant competencies students (Mindayani et al, 2019).

Based on the experts' ideas above regarding the meaning of assessment, it can be concluded that assessment is one of the tools used by teachers to determine the value of an object, and a series of activities to obtain, analyze, interpret data about the learning process and learning outcomes of students carried out systematically, accurate and continuous. That is, to say that students get good grades, moderate, and less attention to clear size criteria.

Teacher's expertise in carrying out educational tasks is obtained after taking certain teacher education that is not possessed by other professions. There are several roles teachers can play as educators, including: (a) As a professional worker with the function of teaching, guiding and training. (b) Humanitarian workers with the function can realize all their human capabilities. (c) As a benefit officer with the function of teaching and educating the public to be good citizens (Saragih and Mardianto, 2019).

In group work, sociometry is a tool to measure the strength of conflict reduction and improve communication, because group sociometry allows the group to see itself objectively and to analyze the dynamics of the group. Sociometry is also a good tool for assessing dynamics and development in outpouring groups for therapy and training. Thus, sociometry can be interpreted as a method or technique for understanding individuals, especially to obtain data about the network of social relations between individuals (between individuals) within a group, based on personal preferences among group members. Personal preferences are

expressed in the joy of being together in certain activities or expressed in expressions of feelings towards group members to carry out certain activities. In this case it often happens that in different activities, individuals choose different friends. (Gudanto, 2013)

Then the purpose of using sociometry is as follows:

1. Find out which students have problems adjusting themselves in their groups.
2. Helps increase social participation among students with social acceptance.
3. Helps improve students' understanding and understanding of the social problems being experienced by certain individuals. Plan constructive programs to create a better social climate and at the same time help overcome the problem of adjustments in certain classes. (Pangaribuan, 2013)

Besides the benefits of sociometry for counselors are as follows:

1. To improve the structure of social relations of students in their classrooms.
2. To fix adjustment of the relationship so social students individually.
3. Study the effects of school practices on social relations among students.
4. Study the quality of leadership in various situations.
5. Find the norms of association between students desired in the group / class concerned (Mulfayetti, 2011).

II. Research Methods

In the assessment of guidance and counseling there are two types of categories, namely technical tests and techniques nontes. Besides the counselor also needs to have competence in clicking assessment, among others, can use a variety of assessment instrument itself. In order to know students optimally one of them is collecting data about patterns and structures of relationships between individuals to individuals, or in a group.

Sociometry is based on the premise that, the group has a structure comprised of relationship-circuited and interpersonal complex. The position of each individual and the relationships that occur within his group structure can be measured quantitatively and qualitatively. The results of sociometry are a description of the number of scores obtained by each person, such as the pattern of relationships, intensity of relationships, discussion of learning and the position of students in the group. Sociometry as a non-test assessment tool is very useful for teachers in several ways, including: to determine the formation of work groups (division of tasks), to direct group dynamics, to improve individual relationships within groups and provide guidance to each child.

In this study, researchers used one of the nontest techniques namely nominative type sociometry. In this type each individual in the group is asked, who friends are liked / disliked to be invited to do a certain activity or who is his friend in a certain relationship pattern. The choice must be written in sequence from the first choice (most preferred), the second choice and so on. Therefore, this study was conducted in the Mathematics Education Study Program, North Sumatra State University Mathematics Education class 2 semester II with a sample of 40 people. Then collected to be tabulated in the sociometric matrix and described in a sociogram and analysis of the sociometric index.

Nature sociogram usually toward rejection is not depicted, described is the direction of the election by giving a different line shapes color or shape. For example, black color for the first choice and green for the second choice, or solid lines for the first choice, and dotted lines for the second choice. In a variety of literature, the analysis of sociometric indices is usually in

terms of selection status (cs = choice status), rejection status (rs = rejection status), and rejection selection index (crs = choice and rejection status).

The formula used to search for each status is as follows:

Selection Status (Choice Status = Cs)

$$cs A = \frac{\text{jumlah orang yang memilih } A}{N - 1}$$

atau:

$$cs A = \frac{\text{jumlah pemilih}}{N - 1}$$

Description:

A = code of people investigated in the group

N = number of people in the group

This selection index moves from 0 to 1. If someone gets an index close to 1, it means that the level of popularity is high, while getting an index of 0 means that no one chooses (popular, remote).

III. Discussion

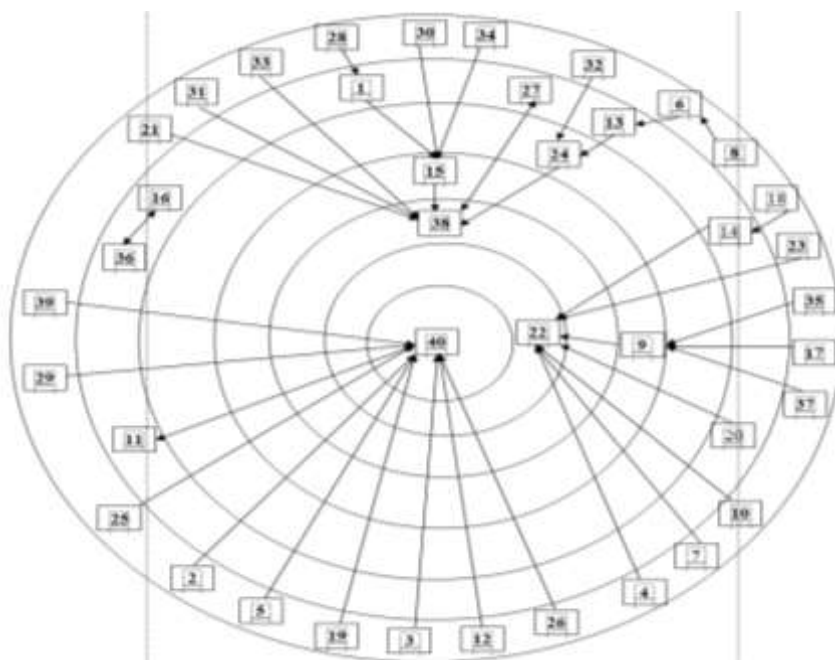
Based on the results of the data obtained to see the level of interaction students in choosing friends who preferably in discussion groups to learn to do the grouping in i Index This election (cs) version of the theory in a way as follows:

Table 1. Election Index (Cs) Theory Version

Subject	Score	N-1	Index Cs
1	1	3 9	0.025
2	0	3 9	0
3	0	3 9	0
4	0	3 9	0
5	0	3 9	0
6	1	3 9	0.025
7	0	3 9	0
8	0	3 9	0
9	3	3 9	0.076
10	0	3 9	0
11	1	3 9	0.025
12	0	3 9	0
13	1	3 9	0.025
14	1	3 9	0.025

15	3	3 9	0.076
16	1	3 9	0.025
17	0	3 9	0
18	0	3 9	0
19	0	3 9	0
20	1	3 9	0.025
21	0	3 9	0
22	7	3 9	0, 179
23	0	3 9	0
24	2	3 9	0.051
25	0	3 9	0
26	0	3 9	0
27	1	3 9	0.025
28	0	3 9	0
29	0	3 9	0
30	0	3 9	0
31	0	3 9	0
32	0	3 9	0
33	0	3 9	0
34	0	3 9	0
35	0	3 9	0
36	1	3 9	0.025
37	0	3 9	0
38	6	3 9	0, 153
39	0	3 9	0
40	10	3 9	0.2 56

Furthermore, the results of this study can be drawn into the form of a sociogram as follows:



So from the selection index data (CS), the theory and sociogram versions can be interpreted as follows:

a. Circle 1

In this circle describe as the focal point of social interaction between individuals is very good. Where students named M. Siddik Sinaga get the highest value of 0.384 even though this value is insufficient from the range of values 0-1.

b. This can be seen from the answers of his friends who are very confident and trust in him as stated in the reasons put forward in the sociometry card. Like, like to share, patient, sincere, active, smart and can finish and explain to his friends what was asked and also not understood.

c. Circle 2

In this circle there are two students who have the same value, 0.282. That means the level of their social relations is well established. h al is ter view of the answer to the friends that are very varied .

d. Circle 3

In this circle there is a student who has the same value of 0.153. That means the level of their social relations is quite good. This can be seen from the answers of his friends who are very varied.

e. Circle 4

In this circle there is a student who has the same value of 0.128. That means the level of their social relations is quite good. This can be seen from the answers of his friends who are very varied.

f. Circle 5

In this circle there are seven students who have the same value of 0.076. That means the level of social relations they build often happens. This can be seen from the answers of his friends who are very varied.

g. Circle 6

In this circle there are three students who have the same value of 0.051. That means the level of social relations they build sometimes happens. This can be seen from the answers of his friends who are very varied.

h. Circle 7

In this circle there are eight students who have the same value of 0.025. That means the level of social relations they build is only once they occur. This can be seen from the answers of his friends who are very varied.

i. Circle 8

In this circle there are seventeen students who have the same value of 0, which means the level of social relations they have built is not good. Along with this circumference is the position of people who are isolated or people who cannot produce the results of social relations that are built. This is often the case when forming group discussions or also discussions with students. So often there are disturbances in learning communication where the impact will return to themselves such as feeling lack of confidence, not brave and others.

After seeing the results of existing research, prove how the level of social relations that exist between individuals with each other varies greatly. With this, the teacher or lecturer can place from one student to another and can help students in forming learning discussions from the suitability of social relationships that occur.

Social relations affect the social level from individual to other individuals. Of them communicate, greet each other, and help each other and others. If this continues, the interaction in the learning process will improve. Not only interaction between lecturers and students, but also students and other students. Therefore, the process of social relations that occurs in accordance with the objectives of social relations itself such as, strengthen friendship, mutual cooperation, encourage students to think forward and certainly strengthen the friendship.

IV. Discussion

Based on the results of this study, several conclusions were obtained as follows: First, the results of social relations that occur in Mathematics Education are quite varied because the network of social relations formed is flexible enough not to overlap one individual but rather quite a lot. Second, the results of social relations occur can map students such as the formation of discussion groups, study groups and social interaction groups in the learning difficulties encountered. Thus, social relations have important links in the learning process.

Based on the conclusions above, the researcher delivered a number of suggestions as follows: First, for students, in order to improve social relations between one friend and another. Blending is one key to success in social relations and also maintaining communication interactions that are built. Second, for lecturers or teachers, so that they can pay attention to each individual student, especially social relations. This is useful for teachers in the placement of positions such as study discussion groups so that communication exists between individuals who can understand each other. Third, the researchers themselves are interested in doing the same research, in order to further develop this research by preparing other material presentations that are more appropriate. And also intend to see social relations in different locations or subjects.

References

- Agus M. Hardjana. (2003). *Intrapersonal and Interpersonal Communication*, Yogyakarta : Kansius.
- Husin, Amir Pangaribuan. (2013) *Instrumentation in guidance and counseling* . M screwy: Faculty of Teacher Training and Science Education University Muhammadiyah Sumatera Utara.
- Klizik, B. (2009). *Measurement, Assessment, and Evaluation in Education*. Shah Alam: UITM.
- Kunandar. (2014). *Penilaian Autentik (Penilaian Hasil Belajar Peserta Didik Berdasarkan Kurikulum 2013)*. Jakarta: Rajawali Pers.
- Mulfayetti, Sri. (2011) *Psychological Assessment Non Test Techniques*. Medan: Postgraduate of Medan State University.
- Mindayani, N., et al. (2019). The Development of SOLO Taxonomy Based Assessment Tool on Text of Observation Reports of X Grade Students of Senior High School 1 NA. IX-X. *Budapest International Research and Critics in Linguistics and Education (BirLE) Journal*; 2(4): 371-381
- Nurgiyantoro. (2001). *Penilaian dalam Pengajaran Bahasa dan Sastra*. Yogyakarta: BPFE.
- Permendikbud Nomor 23 Tahun 2016 Tentang Standar Penilaian Pendidikan.
- Rahardjo Susilo and Gudnanto. (2013) *Individual Understanding of Nontes Technique* . A akarta : Kencana.
- Saragih, K., and Mardianto. (2019). Relationship between Teacher Professional Performance and Discipline of Workers with Teacher Professionalism in Madrasah Tsanawiyah in Pematangsiantar City. *Britain International of Linguistics, Arts and Education (BioLAE) Journal*; 1(2): 77-84.
- Soekanto Soerjono. (2012). *Sociology An Introduction* , Jakarta