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The role of social sociometric measurement and its importance in the classroom

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Abstract:

The current research aims to identify the sociometric measurement in terms of its concept, the date of its appearance and its owner, as well as how it is used, methods of working with it, and the great benefit it provides to us, in addition to the technique and method of preparing it, how to correct it and the uses of its results, and through that we will gather most important information about this simple and very important technique at the same time.

Keywords: *Measurement*; *Sociometric Social*; *Classroom*.

INTRODUCTION

Social interactions in a group can be measured in an objective manner, and the techniques used for these measures. It is the social technique (sociometric) that measures the interactions of individuals belonging to a group, and the second is the analysis of interaction processes used to measure the relationships between the teacher and his students. In this article, we will address the technique of social measurement (sociometric) or the social questionnaire, as its name suggests. Sociological measurement is a measure of social relations. Researchers in the network of social relations are geoscientists of the human field, as they seek to understand and know the map of relationships that bind individuals to each other and use this information in order to accurately determine the location of people in relation to each other in the interpersonal space.

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This trend dates back to some of the early works in sociology and psychology, as the founders of these two fields all sought to make social relationships tangible and these efforts include psychometric studies of attraction in groups. (Al-Zarad - Hawashin 2016)

It can be defined as follows:

The concept of sociometric consists of two parts, one in Latin and the other in Greek: Socius Metrum

It is called a tracking method in measuring social relations within a specific group or groups during a certain period of time. This method reveals what is happening within the group in terms of attraction or repulsion, dissolution or cohesion, as well as the informal organization of the group, as well as the social positions of individuals through their social interactions.

(Sabah Al-Najjar 2013, p. 22).

2.The owner of the sociometric measure:

First Subtitle

This technique was developed by Moreno, and is used to measure the relationships of attraction and rejection between individuals who make up a group, the level of cohesion, and other variables that help to better understand group dynamics, as we will see later.(Jean Marie Diem 1978)

Social testing is one of the most effective ways to determine the underlying condition of a group.(Roger Mucchielli 1973)

Where the idea of "Moreno", who worked in his search for a technique that secures freedom of expression in the group, is due to his influence on the ideas of "Froebel", "Pstalozzi" and "Bergson" calling for the freedom of expression of the deep ego, as he was influenced by the social studies of "Sharif" and "Levin", and "Margaret Mead". All of whom were contemporaries, directed in their studies to highlight the importance of social relations and interaction between group members. (Araby Farahati 2010).

The social questionnaire is based on a very simple principle where the group members are asked to answer a question of this kind:

* With which group members would you prefer to be
* Who would you rather work with or any other matter of choice.

To give the number of votes obtained by each member of the group a measure of his popularity in this group and his metric social status in relation to others. (Dergaoui Lynda 2023)

There is no doubt that the social questionnaire is one of the best tools that social psychology has developed to assist the teacher. It allows the teacher to know the social structure of the class as well as to help children adapt better to the school environment, and perhaps as a result to help them adapt better as adults in the group.

In general, many teachers believe that they are aware of the social relations of their class. However, research has proven the opposite. They are often surprised by the results of social questionnaires. The student who the teacher believes is not chosen by his classmates finds him the most popular among them, and vice versa.

This is certainly due to many variables, but among others we can talk about the selection criteria which at a certain age are linked to the teacher's evaluation of the pupils, and at other ages this evaluation is no longer linked to the group's criteria.

To understand the relationship between age and the choice of children and teachers, we return to the results of one of the studies mentioned in this framework, where teachers were asked to classify students in the scale of popularity and then apply the sociometric technique to these students. The results were as follows, as shown in the table.

Table 1. Relationships between teacher classification and sociometric classification

Age	Number of pupils	Number of teachers	Relationships between teacher classification and sociometric classification
8-9	342	10	0.72
10-11	381	10	0.51
12-13	340	10	0.30
14-15	296	10	0.23
16-17	230	10	0.12

Where the teachers are asked to classify the students in the scale of popularity, and then apply the sociometric scale to these students. As it appears from this table, the younger the age of the pupils, the more the teacher is aware of building social relations in his department, and his classification of the pupils according to popularity is closer to the results of the sociometric technique.

We find in the primary school, especially in the first sections, that the teachers know their students well because they spend most of the time with them, while in the secondary school, the teachers who teach a specific subject only spend some hours with the same section, and they cannot understand and realize the collective relations in the section, moreover in Elementary school A child who is approved by the teacher finds that he is popular in his classes, because the teacher has a very important influence on the attitudes of children at this age. The older the students, the more distant the group of students from the teacher's standards.

Very often the student who is the favorite is rejected by the teacher, while the bad student is admired and therefore enjoys a certain popularity.

3. The benefit of sociometry:

In light of the data, it seems important to us to improve the teacher's capabilities in knowing the social relations in his department better, as the use of sociometric technology seems relatively simple, but it is full of advantages for him.

We will present several points that prove these advantages, namely:

- In his work as a teacher, the teacher is often in a position where he desires to improve the social relations in his class, so he must objectively know the existing relationships, that is, the relationships as the students see them and not as he imagines them himself.

Indeed, Moreno in 1943 noticed the difference between the way the teacher sees the social relations in his class and those social relations as they really exist.

It is recognized that teachers' abilities to assess the social relations in his class are more or less accurate and different, but in general it can be said that they tend to attribute a higher social status to students who perceive themselves as positive. To avoid a false view of the social relations in his class the teacher can use the results of a sociometric questionnaire.

- He can also use the results of this questionnaire to improve the academic results of his class. Research, especially in industry, has shown that in groups where cohesion is high, i.e. where individuals are attracted to others and where there is no tension, he is better than groups in which cohesion is low.

At the same time it is envisaged that schoolwork will be more effective in a class where the level of coherence is higher than in a class where

the level of coherence is low, so it will be important for the teacher to know this level of coherence for his group.

- For some subjects, or sometimes teaching takes place in small groups, the latter affects the effectiveness of learning, as the close group composition gives a better result than the combination in which choices are not taken into account, and the social questionnaire guides the teacher in distributing students.

- Students' behavior and attitudes depend to a large extent on the group or sub-group to which they belong, because the group, as we will see later, sets standards for those who join it to follow, so knowledge of the relationships in the teacher's group can help influence the individuals who are part of it, especially when he cannot do this directly with some people, the social questionnaire will help the teacher understand which subgroup each student in the class belongs to.

- And as many researches in psychology showed that the member in the group more easily accepts the opinions and orientations of the high-ranking person in the group, and therefore in the class students, especially his classmates, will be influenced by the most popular member and those who have leadership positions.

So you will show and give sociometric questionnaires to the teacher exactly this leader and his influence, and from him the teaching authority will be greater if the teacher asks for help from these leaders or these populists, or if he works with them.

- Sometimes the tension in a section is the result of conflicts between sub-groups, where competition between sub-groups and the desire for the failure of the other group can cause a situation in which students' energy is channeled in ways that are completely different from the learning paths, in such sections a lot of time is wasted in dealing with discipline issues, even worse, these problems can remain unresolved if you do not look for the source of the conflict itself.

Rose (1966) showed that in classrooms where many discipline problems arise, teachers are less aware of the social relations in their class, but thanks to the social questionnaire they will have a clear understanding of the sub-groups of their classes and will be able to improve the classroom atmosphere more effectively.

- The teacher can, through the social questionnaire, discover children who find it difficult to adapt with their colleagues, as we have seen previously, the need for belonging is one of the most important, and the isolated student may suffer and the isolation may cause him to lack focus and interest in the learning process, and may even enter into Daydreaming and all these symptoms are related to learning problems and others, so we find it important for teachers to know this group to help them.

- Sometimes we find that there are problems with some pupils adapting from the fear of not being accepted by others, which can be called the fantasy of isolation, as they see themselves rejected by others even when this is not true, and the social questionnaire is what can teach the teacher Self-portrait of students in the social field, which will be a first step towards the help that can be provided.

- The social questionnaire can help the teacher to help the students effectively either as a student or as a member of a sub-group or the group, and after making an attempt to improve the classroom atmosphere either to increase its cohesion or to help the lonely ones, the social test will inform him of its results and whether it is effective or not.

It is clear that these different points are just some of the advantages offered by the social questionnaire, and few teachers use it, they fear that it is too complex and expert tool.

In this regard, a survey was conducted by "John Marie Diem" for 30 primary school teachers, and the results were somewhat negative. 27 of them had heard about sociometry and knew the objectives of the

questionnaire, but they had never used it. The reasons for refraining from doing it were various, including that they they do not see that they can do the daily help with the children and also because they do not feel well enough trained to use it because in their opinion it is too complicated.

This sample is certainly not completely representative but we believe that many teachers would have given the same answers. As we explained above, sociometry is a working tool that can help the teacher in his daily work in the school. As for the second argument put forward by the teachers, we do not believe at all that this questionnaire is intended only for experts and its delivery and analysis does not require very complicated preparation, and every teacher can learn the technical stages. important to become proficient and knowledgeable.

4. The technique of preparing and conducting a social questionnaire:

It is clear that the results of the social test will be indicative of the question asked. If you want to form school work groups, you should ask questions in this sense, such as asking who are the people you want to include in your group and be with you in the new group .

If we want to know the hierarchy in the leadership of a group we can ask, for example, who you would like to represent your class on the school council.

Moreno believes that the results of a social test differ according to whether we use a hot or a cold sociometric. For example, after asking the above question, the hot sociometric will form new groups taking into account as much of the children's wishes as possible. If the social test does not follow any validation, it will be a cold social analogy. While he insists that the participants' spontaneity is greater if they know their choice will be taken into account, Moreno believes that cold sociometry can produce valid results.

The issue of social choice at first depended only on the basic question, but then the researchers realized that it was necessary to study rejection as well. Children express not only choices, but also refusals, and this is in a negative form, for example, with whom they do not want to be on the same team.

Another aspect of choice comes to light (Taqiri 1952), and it revolves around the rational analysis that studies the perception by the individual of his position in the group. Each individual sees in a certain way his acceptance by others. Questions in this aspect can be formulated as follows: Who do you think chose you to go with him to the new team and also negatively in this way who do you think does not want to be with you in the new team.

(Jean Marie Diem 1975)

So, the sociometric test is usually in the form of a direct and clear question or questions designed according to the conditions of the sociometric test, in order to clarify the choices of the questioner, or the relationships of rejection and rejection, or neutrality, so that it is directed to each student separately and asks him to determine his relationship with one of the members of his group to which he belongs or some of them. Or all of them are in the situations that the sociometric test identifies and targets. The test can aim at outweighing the choices by asking the respondent to arrange his negative and positive choices. In simple tests with one criterion, the questions can be formulated as follows:

- Write the names of three of your fellow students whom you would like to sit near
- Write the names of three of your fellow students that you do not like to sit near

Or as if the group of students is placed in a nominal list and each student is asked to indicate his social relationship with each of his classmates in the following formula:

Put a sign (+) in front of every student you like to study with, a sign (-) in front of every student that you don't like to study with, and a sign (0) in front of every student that you don't care about.

Or in the case of weighting and preference in the positive and negative answers, the question is formulated as follows:

Arrange three or four names that you like to play with and three names that you do not like to work with among your colleagues in the classroom, and give this arrangement weights of degrees. If the sociometric test targets multiple levels of analysis, it is based on several criteria and a degree of complexity, such as putting questions in the form of a form and including questions of choice, mutual rejection, expectations, and questions related to more than one standard, such as the lesson and work, sitting...etc. (Farhati 2010)

Social analysis: The children's answer sheets are arranged in alphabetical or numerical order and then the prepared grid sheet is used according to the example below:

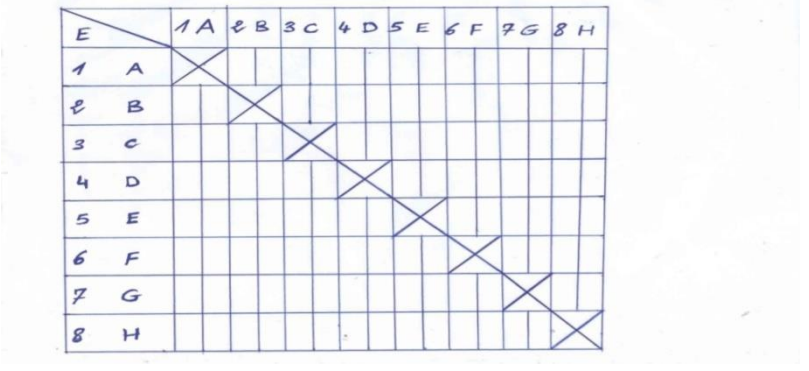


Fig.1. Sociogram: The results of a social test can be graphically represented in different ways, and the one that seems most clear to us is the "Northway" method.

The "North Way" sociogram chart, known as (the sociogram target), is in the form of three or four concentric circles.....etc, depending on the size of the studied group.

In the first circle, i.e. the middle one, we put the individuals who were chosen by the largest number, for example (6), and then we put in the next circle the children who received a slightly smaller number, for example (5), and so on.....etc.

As for those who did not receive any choice, we put them in the outer circle.

A social scheme for rejection can be constructed according to the same method. In the middle, the children who received the most rejections and those who received no rejections would be outside the circles. (Jean Marie Diem 1975)

All of the above is shown in these examples and the following diagram:

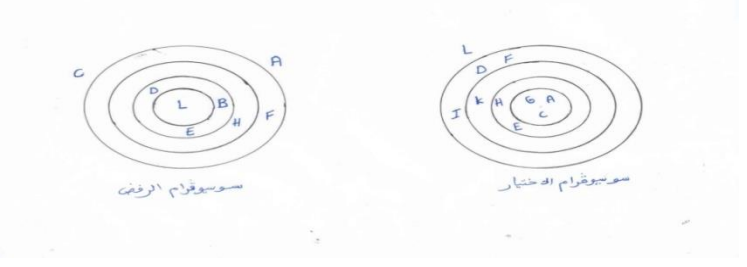


Fig.2. diagram test and rejection

Sometimes we find that males choose only males, and females choose only females, so the sociogram can be represented as follows:

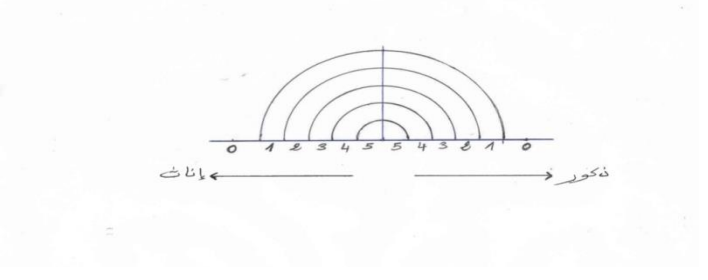


Fig.3. sociogram that males choose only males, and females choose only females.

The same can be done for rejection(Roger Muccilli 1973)
In addition to a group social scheme one can study the social status of each child and this is done graphically by constructing the child's 'social atom' by means of the following relationships

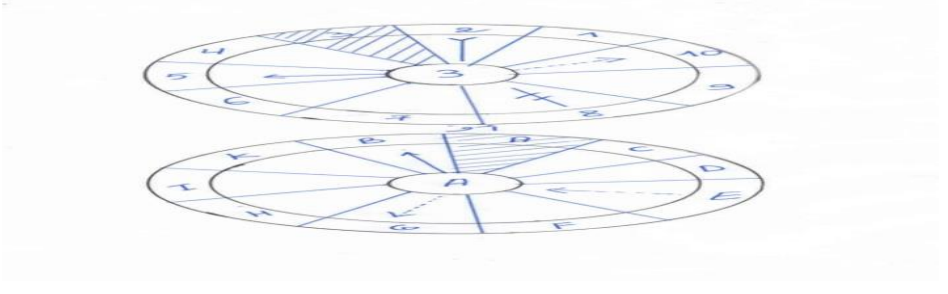
- 1 pick2
- 1 thinks he was chosen by 2
- 1 refuses 3
- 2 and 3 pick each other
- 1 thinks he was rejected by 3

-We can show the individual sociogram as:



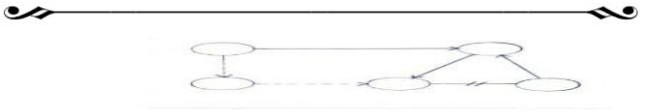
Fig.3. the individual sociogram

follows:



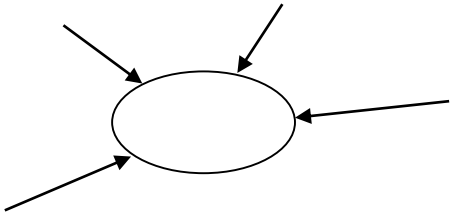
That is, according to the code that we gave to individuals, either numerical codes or numeric codes. (Gilles Amado 'André Gui....2017)

As for the sociometric map, it takes this form, for example, as we extract it from the table in which the students' answers are organized.

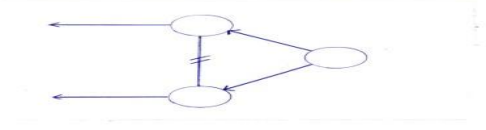


We can mention some cases and types of individuals within the group, according to Stephen Franzo and his colleagues, which are:

Leader**:** he is the one who receives the most choices

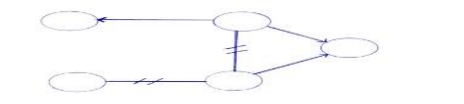


Rejected**:** He is the person who determines his choice and no one chooses him, i.e. he chooses and does not choose



It is an indicator of tension and rifts within the group

Single**:** He is the person who does not choose anyone, but is chosen by the members of the group

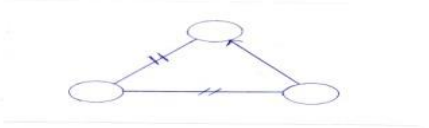


The isolated: He is the person who isolates himself and is isolated by the group. He does not choose anyone and does not choose



The social atom consists of psychological contacts of the individual with others that take many forms

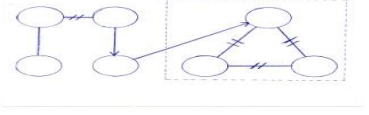
-Triangle, which is the cohesion index



-Chains It is also an indicator of cohesion



- An informal group: an informal group, which is an indicator of internal rift and disintegration



- Popular individuals, are individuals who receive positive support from their colleagues and enjoy more positive social acceptance.

- Untouchable individuals, who are individuals who receive social rejection from their colleagues and have a negative reputation among their colleagues. They generally receive less positive support from their colleagues.

- Arguing individuals, who are between support and rejection, at times they get support and support from their colleagues and at other times they get rejection or lack of support. They receive and are subjected to the two previous types of treatment.

- Neglected individuals, which are individuals who are usually unknown so that they receive little acceptance and rejection due to their negativity and the negativity of their role within the group, so they are

not of interest to their colleagues and are on the marginal lines of the group's social interaction process, and they usually follow the orientations of the majority of the group, as this characteristic it is derived from the nature of their role.

- Moderate individuals, and these individuals are the ones who mediate in the group and tend to reconcile with other groups and take a middle position during the process of social interaction and thus receive moderate acceptance and rejection by their colleagues. (Amer Mosbah 2011)

More than forty studies that used the previous classification of individuals in the group indicated that outcast children are more aggressive, more withdrawn from social situations, less sociable, and less knowledgeable and skilled than moderate children, and unlike neglected individuals who are characterized by extremism and low social vision, popular children They are more sociable, less aggressive, and less withdrawn than normal children.

In general, social acceptance and rejection within the group of comrades is related to the personal characteristics of the member. The physiological attractiveness of the personality is usually linked to the popularity of the individual, while negative traits such as immaturity are associated with social rejection. Helpful and affectionate with others, in contrast to the child who is not popular and socially accepted among his peers, as the socially outcast is not necessarily an antisocial or unfriendly child, but he is more proactive in harassing others and is characterized as a quarrelsome, argumentative and quarrelsome person who behaves in a deviant manner. In contrast, a child who is moderate in presenting himself is accepted by his comrades more easily than a child who is overestimating himself or exaggerating in despising himself. (Amer Mosbah)

5. Uses of the results of the social questionnaire (scale):

First of all, we must highlight the dangers of publishing the results of the social questionnaire, it is bad to use the trust that children show to their teacher, then it can be traumatic for some especially the isolated and rejected ones.

Whereas some educators believe that all isolated or rejected children know their social status in the group, and therefore the results of social choices can be disseminated or communicated to the isolated and rejected.

It is true that a number of children feel rejected by their peers, but this is not the case for all, as the defense mechanism allows and it is a process that makes some blind and not see this fact (the fact of rejection).

So publishing the results of social measures or discussing their situation in the group cannot be harmful to them, and if we want it to be of the following kind generally ((some children are not chosen and others have many options)), and so on until we make the children aware of the situation It is difficult for those who are not chosen, nor should any of them be mentioned as a case of a child in order to avoid the embarrassment that he will feel.

After clarifying this important point, let us address the basic question, (what can the teacher do with the children to achieve strong social integration in the group).(Salti Melhem 2015)

* Individual assistance: It has been noted that the teacher sometimes has some surprises in the results of the questionnaire, he may notice and find options that contradict those he assumed, these surprises disappear if we observe, live and notice the possible behaviors of children in difficult situations. Sometimes, in order to attract the attention of others and please them, they become the clowns of the group, or they are aggressive or impolite (impolite).

In the school field, the feeling of rejection can be translated either by hard work and the desire to be stronger than others in this field, or by a kind of general abandonment expressing the feeling that nothing will work or change anything.

It is very important for the teacher to be sensitive to these phenomena and to understand their causes because it has been observed that teachers are particularly sensitive to noisy forms of behaviour, and they care much less for children who remain quietly in the corner.

The educator should also know that if he does not intervene, the chances of changing the situation in groups of isolated or rejected children decrease. Many studies have shown that the social status of children in the special classroom changes at a very weak rate even when it is followed up for several years, as new classes were created experimentally. In some schools it has been found that after a certain time children who were popular in their old class became popular in their new class and the same was true for the excluded and rejected.

It should not be thought that the social status is unchanged, the tests that culminated in showed that when teachers intervene, the social status of isolated or rejected children can improve greatly.

The method that is used most often to help an isolated child better integrate into his group is to find an area in which he can succeed. Of course, it is not always easy for everyone, but we can generally discover talents for drawing, singing, sports, or any manual work.

Giving an isolated child a task at which he can succeed will be an encouragement for him, and can help him to persevere in this activity, but it is also of great importance if this activity gets approval and approval

It is on the part of the teacher because it will improve his social status in the department more and more.

Flinders and Hvamaki, by conducting social tests in several elementary school classes and practicing systematic observations, found that the children who receive the greatest possible attention and encouragement from the teacher are also those who are selected by their peers in the social questionnaire.

Another way to help the isolated child is to have one or more interviews with him. This privileged connection that is being established can be of help.

A study was carried out that allowed the researcher to know the benefits and advantages of this. Children who benefit from these special connections suddenly form and have a more positive attitude towards their peers. Just as these interviews show the child that he was a target for selection, they also show him the rejection of his colleagues, which prompts him to think about the possible reasons for this rejection.

It shows the areas in which the child feels weak or strong, so the teacher can evaluate the child's abilities in the activities in which he feels more comfortable.

It should be recalled that among the isolated children are children who are indifferent to ties with others, so you find them well balanced and developing a system that suits their personality. Social will be useless.

Rather, all attention is necessary with those who suffer from social loneliness while discovering its causes.

It is also necessary to distinguish true and false (i.e. true and false solitude). False solitude are those who answer in the question (who chose them) that no one chose them when in fact they were chosen by many children. They express for several reasons a lack of Security and a sense of social insecurity.

During an individual interview, the educator will explain to the child that his feeling of isolation is subjective and false, and that the children in his group actually choose him, contrary to what he believes, and such an interview can contribute to a positive change in self-confidence.

The problem of rejected children is much more serious than the problem of isolated children. Isolated children are those who do not receive a choice, while the rejected children are those that we do not want as a teammate.

Some of them require the help of a psychologist and the teacher will try to consult a psychologist in a particular case, but often it is enough to listen with understanding of the reasons for the refusal.

Sometimes these reasons may seem unimportant to adults, but we know that children have different standards than those of adults, whether in their choice or rejection, so what matters to them are these children (his group) and not the teacher, and the child who prefers to follow the adults rather than the young ones can To be a target for his group's rejection of other children, so understanding the reasons for rejection can help the teacher bring about a change in the child's behavior.

Change at the group level Change in the group of isolated children may help while contributing to the improvement of children's problems, and the best known way to improve the social status of isolated children is to engage them in subgroup activities with children who have a good social status.

The principle of forming this subgroup is to place the isolated child with children who have been well adapted and do not reject him. On the other hand, it should be noted that in this subgroup there are children who were chosen by the isolated child.

Goyard and Murphy have proven that the loners who have been joined in those sub-groups accompanied by well-adapted children who also receive some kind of responsibility improve their social status and become non-isolated in the true meaning of socio-social.

The explanation for this phenomenon is found in Newcomb's theory: "In subgroups, even if they were created artificially, the interaction between the members intensifies and the relationships become more positive."

Hence, the teacher forms groups of work, play, or any other group that has a common purpose, and if this group is composed of famous children and there are some children who have an average status and

one or two isolated children, then it creates a situation in which the opportunity for group work is provided, which helps to improve the situation isolated children.

Another way to improve children's social bonds is to prevent the formation of closed groups that are capable of forming certain aggressiveness towards other groups, and to avoid this, the teacher can create sub-groups, for example different study groups according to the subject.

This system allows children to practice in multiple relationships and in different situations and they may be somewhat more successful.

The subgroup can have a beneficial effect, because he is grouped with well-adjusted children who are also his chosen ones, and he wants to be accepted by them and will adjust his behavior in this direction.

The motives or the desire to be good in the eyes of colleagues are stronger than to be good in the eyes of adults, and thus the group can influence the individual because in each group the effects of each of them differ on the other groups.

We have talked about the chief or the leader, so every command that comes from him is better accepted than what comes from the teacher, the latter can help us. It must also work for the influence of the leader to be harmless, and for these leaders and harmful leaders it is important for the teacher to know their connections with other children.

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Discussion with the leader can produce and bring about a change, and it is also possible that this change is difficult for the student because of his companions. Changing the role in the class is not always easy, which makes resorting to changing this student in another class group or another class is the solution and it is a solution. Useful not only for the academic department, but especially for it.

(Jean Marie Diem 1973)

It also helps us to identify the unnoticed networks of social connections, and to understand it more, we include the dangerous puzzle faced by the psychiatrist "Moreno" in 1932, when the faculty of the Hudson School for Girls swept a wave of dropouts that included 14 girls in a period of two weeks, and they summoned "Moreno" for help. Moreno discovered that something was hiding beneath the surface of the groups at Hudson School that the faculty had overlooked, and through the psychometric methods he developed, he discovered that the girls who escaped united together in an unnoticed network of social

connections, and these connections facilitated the transfer of influence and ideas, some of which included on the idea of leaving Hudson School.Inter your text here).This is the text of the article. This is the text of the article. This is the text of the article. This is the text of the article. This is the text of the article. This is the text of the article. This is the text of the article. This is the text of the article. This is the text of the article. Add space before the paragraph (6). Add space before the paragraph (6).

6. Conclusion

The analysis of the network of social relations is useful in making what is invisible and unnoticed visible. Bilateral relations, differences in rank, love and dislike, and communication patterns may not be clearly known to some in the group, but only the analysis of the social network often reveals the actual patterns, and the real processes that strengthen these relationships.

The social changes that we talked about at the group level, the formation of sub-groups and the marginalization of some except for others are just examples that help the teacher to make better use of the dynamics of his group, and this helps to create a more pleasant atmosphere, provide a higher level of cohesion and help some children to integrate better in their social life, like any social science tool, it is very much about user competence.

7. References

1. Al-Arabi, Farahati (2010), Patterns of interaction and communication relations in the academic department group and methods of measuring them (1 edition), Algeria: University Publications Office.
2. Amer, Mosbah (2011). Social Psychology in Politics and Media (1st Edition). Algeria: Dar Al-Kitab Al-Hadith.
3. Aebisher V oberlé D (2016), The group in social psychology, (5ed) France; DUNOD.
4. Dergaoui Lynda (2023), small group activation techniques (1st Edition), Algeria: Kounouz El-Hikma.
5. Faisal, Muhammad Khair Al-Zrad and Mufid, Hawashin. (2016), Group Dynamics (1 edition). Amman: Dar Al-Fikr.

6. Gilles A Guittet A (2017), Dynamics of communications in groups, (7ed) France: ARMAND COLIN.
7. Jean marie .diem (1975), Experimental psychopedagogy, France: pressess.
8. Mucchielli Roger (1973), The dynamics of groups (6ed). France: modern publishing company paris.
9. Salti Muhammad Melhem (2015), Measurement and Evaluation in Education and Psychology, Dar Al Masirah for Publishing and Distribution, Amman, Jordan.