

SOME CONSTRAINTS IN IMPLEMENTING *NUMBERED HEADS TOGETHER* COOPERATIVE MODEL IN ONLINE LEARNING IN THE COVID-19 PANDEMIC

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Abstract

This study aimed to reveal some constraints faced by the teacher and students in implementing Numbered Heads Together (NHT) cooperative model in online learning. This study used a case study approach with the research subject is one science teacher who used the Numbered Heads Together (NHT) model in online learning on three learning topics and five students of VIII-A class of Muhammadiyah 2 Taman Junior High School who attended the learning. The instrument consisted of learning plan observation sheets and interviews with the data collection techniques used were observations, document analysis, and interviews. The results of the study show that there are some constraints that come from the teacher and students in implementing Numbered Heads Together (NHT) cooperative model in online learning. Suggestions that can be given include: 1) the teacher must be more creative and innovative so that the online learning atmosphere is fun, not boring, and motivates all students to be actively involved, 2) the teacher must have a good understanding of the steps by the cooperative model Numbered Heads Together (NHT), 3) the teacher must be able to create a condition where students can conduct discussions seriously, and 4) the teacher can start to give rewards to students in the form of verbal praise.

Keywords: *Numbered heads together (NHT) cooperative model, constraints learning, online learning*

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INTRODUCTION

Since March 12, 2020, the emergence of the corona virus or Covid-19 has been declared as a new world pandemic by the World Health Organization (WHO) (Zahrotunnimah, 2020). The birth of the Covid-19 pandemic has had an impact on various lines of life, including education. One of the various steps taken by the Indonesian government to prevent the transmission of the corona virus in education is to start closing schools and implementing online learning. This is in accordance with Circular Letter Number 4 of 2020 issued by the Minister of Education and Culture of the Republic of Indonesia regarding the Implementation of Educational Policies in the Emergency Period for the Spread of Covid-19. Based on this Circular Letter, it is stated that the entire teaching and learning process is carried out through online learning during the Covid-19 pandemic.

The current of Covid-19 pandemic situation requires teachers to rack their brains, as an effort to take the right steps to carry out the online learning during this pandemic. Therefore, teachers must be more creative and innovative in planning and implementing online learning. According

to Afghani (2021), the purpose of teachers is required to remain creative in implementing online learning so that students feel happy and do not feel bored during the learning process. So that teachers can use various learning models that can create a fun online learning atmosphere but still in accordance with the learning objectives and materials and encourage all students to be actively involved (Anugrahana, 2020). Based on the results of interviews with the science teacher at Junior High School of Muhammadiyah 2 Taman, it is known that the teacher used *Numbered Heads Together* (NHT) cooperative model in online learning. The teacher used *Numbered Heads Together* (NHT) cooperative model during the pandemic, namely on three learning materials. The teacher claims to use this model not only to create a fun online learning atmosphere, but also so that students can understand the learning materials that were delivered by the teacher.

The implementation of *Numbered Heads Together* (NHT) cooperative model also inseparable from several related things, namely lesson plans and learning implementations by the teacher. This is in accordance with the opinion of Handayani (2020) which states that the

implementation of cooperative learning by teachers must be adapted to class conditions, student conditions, learning materials, learning plans, and learning implementations.

However, the implementation of cooperative models in online learning is still considered ineffective. Marfuatun, E. Widjajanti (2013) in their research results show that students feel confused in conducting online-based group discussions so that they do not work and carry out group discussions seriously. This is because students cannot meet in person to work, conduct group discussions, and students' interactions have not been formed (Gillies, 2016). Therefore, *Numbered Heads Together* (NHT) cooperative model implemented by the teacher in online learning faced some constraints in its implementation so that further research was needed on the analysis of some constraints in implementation of *Numbered Heads Together* (NHT) cooperative model in online learning in Junior High Schools of Muhammadiyah 2 Taman considering that there is still no related research found.

Based on the background that has been described, the researcher took the title "Some Constraints in Implementing *Numbered Heads Together* (NHT) Cooperative Model in Online Learning in the Covid-19 Pandemic" to reveal some teacher's and students' constraints in implementing *Numbered Heads Together* (NHT) cooperative model during the Covid-19 pandemic.

METHOD

Research Design

This study used a case study approach. This study was conducted to reveal some constraints were experienced by the teacher and students in implementing *Numbered Heads Together* (NHT) cooperative model in online learning at Junior High School of Muhammadiyah 2 Taman. According to Prihatsanti et al. (2018), case study research is used to understand certain cases in depth.

Research Subject

The subject of this study is one science teacher who used *Numbered Heads Together* (NHT) cooperative model in online learning and five grade VIII-A students of Muhammadiyah 2 Taman Junior High School who attended the learning. The selection of this teacher was based on the results of interviews with three science teachers at Junior High School of Muhammadiyah 2 Taman that two out of three teachers found it difficult to use various learning models in online learning so that teachers tended to only provide materials and assignments. In this study, the researcher used three learning topics taught by the teacher, namely the human digestive system, additives and addictive substances, and the human circulatory system. The demographic data of five students of class VIII-A Muhammadiyah 2 Taman Junior High School as research subjects shown on Table 1.

Table 1 Students' Demographic Data

Variable	Category	Frequency	Percentage
Gender	Male	1	20%
	Female	4	80%

Based on students' demographic data on Table 1, it can be seen that students who are male by 20% and who are female by 80%.

Research Instrument

Two kinds of instruments are needed in this study, namely the learning plans observation instrument in the form of checklist data for learning plans document analysis made by the teacher using *Numbered Heads Together* (NHT) cooperative model and the learning implementation observation instrument in the form of interview of the teacher and students to see the suitability of the teacher teaching with lesson plans, as well as constraints in *Numbered Heads Together* (NHT) cooperative model learning. The indicators or aspects observed from the two instruments are:

1. Form several small groups consisting of 4 to 5 students which are used as a forum for student's discussions.
2. Students gathered by each group members.
3. Giving questions that students will discuss.
4. Questions that are given encourage students to carry out discussions in groups.
5. Thinking together activity in their respective groups to formulate answers to the problem given by the teacher.
6. Facilitate students who have difficulty in thinking together to formulate answers.
7. Appoint one student by calling a random number who has the opportunity to answer questions given by the teacher.
8. The student who has been appointed, answers the question based on the result of his group discussion.
9. Provide opportunities for other groups to provide their opinions or just ask questions.

Data Collection Technique

The data collection technique used in this study was observations, document analysis, and interviews. In this study, the researcher used indirect observations. Observation techniques through document analysis and interviews of the teacher and students was carried out to see the learning plans made by the teacher, learning implementations carried out by the teacher using *Numbered Heads Together* (NHT) cooperative model in online learning as well as various constraints in its implementations. The type of interview used in this study is a semi-structured interview. According to Rachmawati (2007), although researchers has prepared several questions to be submitted, researchers can develop their own questions according to the topic of conversation.

Data Analysis Technique

The data analysis technique used in this study is descriptive analysis method. Data from the analysis of observations and interviews were analyzed and described to reveal some constraints in implementing *Numbered Heads Together* (NHT) cooperative model in online learning.

RESULT AND DISCUSSION

Based on the data analysis, it was found that there are various constraints between the teacher and students in implementing *Numbered Heads Together* (NHT) cooperative learning model. These constraints can be divided into two categories, namely teacher’s constraints and students’ constraints. The teacher’s constraints include: 1) the teacher's constraints in implementing *Numbered Heads Together* (NHT) learning model. The *Numbered Heads Together* (NHT) cooperative model steps are numbering, asking questions, thinking together, and giving answers (Mustami & Safitri, 2018). The numbering step is a step where students will have their own numbers and this numbering step plays an important role in distinguishing the *Numbered Heads Together* (NHT) form from other forms of cooperative models (Widyaningtyas et al., 2018).

In this aspect, the teacher is required to be able to apply all the learning steps of *Numbered Heads Together* (NHT) cooperative model well in online learning. Based on the observations, it is known that the teacher has not implemented the numbering step so that the teacher only applies the three steps of *Numbered Heads Together* (NHT) cooperative model, namely asking questions, thinking together, and giving answers. Whereas previously it has been explained that the numbering step is the main step in the *Numbered Heads Together* (NHT) form. In other words, if the teacher does not apply numbering step in learning implementations, then the learning cannot be said to be a cooperative learning model of the *Numbered Heads Together* (NHT) type. Based on the results of the interviews, the teacher does not seem to be able to distinguish the steps of the *Numbered Heads Together* (NHT) type from other types of cooperative models, so it can be concluded that the teacher has not fully understood the steps of *Numbered Heads Together* (NHT) cooperative learning model well. According to Friani et al. (2017), not a few teachers experience the same constraint, namely the lack of teacher understanding of the appropriate learning steps of a learning model. Therefore, the learning carried out by most teachers is not entirely in accordance with the steps of the learning model. This was then confirmed by Azmia & Supriyono (2014) that the teacher's understanding of learning model steps has an important role in developing learning models and achieving learning objectives. In other words, a good teacher's understanding of learning model steps can develop the learning models, facilitate the learning implementations, and achieve the learning objectives.

In addition, the teacher has not been able to develop a cooperative model of the *Numbered Heads Together* (NHT) type in online learning. This is because this is the first experience for the teacher to implement online-based learning so that the adaptation is still needed to be able to develop *Numbered Heads Together* (NHT) cooperative model in online learning. According to Asyafah (2019), in addition to facilitate them achievement of learning objectives, there are several reasons teachers must be able to develop learning models, namely a) learning models can provide various useful informations for students, b) various learning models that vary can provide enthusiasm

and a learning atmosphere something new for students so that it can increase students’ motivations and learning outcomes, c) can improve the teacher ability to use various learning models and not be fixated on only one learning model, and d) teachers can have motivation and enthusiasm for renewal in carrying out the teaching and learning process; 2) teacher constraints in managing online class. The implementation of online learning makes most students less enthusiastic and have low motivations in learning science in online learning. This of course demands the teacher ability to be able to liven up the online learning atmosphere so as to keep the impression of boring online learning and make learning more fun.

Therefore, the teacher tried to apply *Numbered Heads Together* (NHT) cooperative model to invite all students to actively participate and liven up learning. Based on the results of interviews, the implementation of the *Numbered Heads Together* (NHT) cooperative model in online learning environment makes it difficult for the teacher to understand and know all her students well. There are times when many students choose to turn off their microphones and videos during the lesson until the lesson takes place. There are times when many students just turn on their microphones when the teacher directs them to answer questions. And there are times when many students only activate the microphone when the study group is presenting the results of their discussions. This then also complicates and confuses the teacher how to give good rewards in online learning. Meanwhile, according to Marta (2016), a teacher can only give awards to students if the teacher knows well the students are being taught and how to appreciate them. If one of the two or even both of these things is not owned by the teacher, then the teacher cannot give appreciation to his students. The solutions that can be given are based on these constraints, namely the teacher must have a good understanding of the steps possessed by *Numbered Heads Together* (NHT) cooperative model, the teacher must be able to create a condition where students can have discussions seriously and the teacher can start to reward students in the form of verbal praise.

In addition to teacher’s constraints, students’ constraints also affect the implementation of *Numbered Heads Together* (NHT) cooperative model in online learning based on Figure 1.

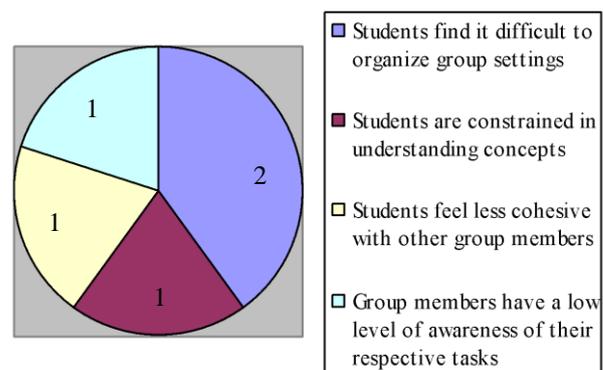


Figure 1 Students’ constraints

Based on Figure 1, the results show that there are four students' constraints that affect the implementation of *Numbered Heads Together* (NHT) cooperative model. Two students said students find it difficult to organize group settings in online learning, one student said students had problems understanding concepts, one student said students feel less cohesive with their other group members, and also one student stated that there were several group members who had low levels of awareness of their respective tasks. Based on study results, the researcher can categorize the constraints faced by students into two categories, namely: 1) students' constraints in conducting group discussions. In this aspect, students face many constraints in conducting their group discussions. The teacher has given the students the freedom to organize group discussion arrangements that they will do. However, students still find it difficult to manage their groups in online learning even though they have been given the freedom to organize them. This is because students conduct online-based group discussions and cannot meet with other group members to exchange opinions. Marfuatun, E. Widjajanti (2013) stated that group discussions can only be carried out by students seriously in offline learning because all students can meet and exchange their opinions.

Students who have not been able to meet and exchange ideas then cause students to feel less cohesive with other group members. Whereas social interactions between students is important to be trained. According to Mangunreja (2014), students' social interactions have a positive impact on students' learning activities. The more often students' social interactions are trained, the students' learning activities will increase. In addition, social interactions play a key role in the entire order of social life (Xiao, 2018). This is because the main condition for the formation of social life is social interactions. So it is important for the teacher to practice these social interaction skills in online learning so that students' social interactions develop and students are ready for everyday life.

The third constraint, some group members have a low level of awareness of their respective tasks. One of the characteristics as well as steps of the cooperative learning model is thinking together. As the name implies, thinking together means being done by all group members without exception. The division of tasks is intended to facilitate the thinking together process. In addition, the process of collecting data or concepts will be easier to collect. However, some students choose to wait for answers from other group members rather than doing their own work so this of course hindered the group discussion. The thinking together step that should be done easily and summarizes time turns out to take longer because they have to find answers to the student's assignments; 2) students' constraints in understanding the concept. Students are only able to collect various data and concepts from all sources but find it difficult in understanding and explaining concepts to other students well and students tend to only understand or even memorize the concepts of the material obtained by their study groups. This is in accordance with Sholikhah (2016) opinion which states that if each group

gets different material, it is likely that other groups do not know the material presented by other groups. In addition, it takes more time to complete the presentation of the results of the discussion from all groups. Which then this can affect students' learning outcomes. In fact, one of the objectives of holding group discussions is to improve students' learning outcomes. However, if students do not know the material presented by other groups, how can students' learning outcomes improve. Based on these students' constraints, the teacher must be more creative and innovative in implementing *Numbered Heads Together* (NHT) cooperative model so that the online learning atmosphere becomes fun, not boring, and motivates all students to be actively involved and also the teacher must be able to create a condition where students can have discussions seriously.

CONCLUSION

Based on study results, it can be concluded that there are some constraints in implementing *Numbered Heads Together* (NHT) cooperative model in online learning in the Covid-19 pandemic. These constraints come from the teacher and students. The teacher's constraints include, 1) the teacher does not understand well the steps of *Numbered Heads Together* (NHT) cooperative model, 2) the teacher cannot develop the cooperative learning model *Numbered Heads Together* (NHT) in online learning, 3) the teacher find it difficult to understand and get knowing her students well, and 4) the teacher also feels confused about how to give good rewards to students in online learning. Students' constraints include, 1) most students have difficulty managing group settings in online learning, 2) students are constrained in understanding concepts, namely students are only able to collect various data and concepts from all sources but have difficulty understanding and describing concepts to other students well and students tend to only understand or even memorize the material concepts obtained by their study groups, 3) not a few students feel less cohesive with other group members, and 4) some group members have a low level of awareness of their respective tasks.

Suggestions that can be given include: 1) the teacher must be more creative and innovative in implementing *Numbered Heads Together* (NHT) cooperative model so that the online learning atmosphere is fun, not boring, and motivates all students to be actively involved in learning, 2) the teacher must has a good understanding of the learning steps possessed by *Numbered Heads Together* (NHT) cooperative model, 3) the teacher must be able to create a condition where students can carry out their discussions seriously, 4) the teacher can use various supportive learning medias that are in accordance with learning materials, and 5) the teacher can start giving rewards to her students in the form of verbal praise.

REFERENCES

- Afghani, D. R. (2021). Kreativitas Pembelajaran Daring Untuk Pelajar Sekolah Menengah Dalam Pandemi Covid-19. *Journal of Informatics and Vocational Education*, 3(3), 70–75. <https://doi.org/10.20961/joive.v3i3.43057>

- Anugrahana, A. (2020). Hambatan, Solusi dan Harapan: Pembelajaran Daring Selama Masa Pandemi Covid-19 Oleh Guru Sekolah Dasar. *Jurnal Scholaria*, 10(3), 282–289.
- Asyafah, A. (2019). MENIMBANG MODEL PEMBELAJARAN (Kajian Teoretis-Kritis atas Model Pembelajaran dalam Pendidikan Islam). *TARBAWY: Indonesian Journal of Islamic Education*, 6(1), 19–32. <https://doi.org/10.17509/t.v6i1.20569>
- Friani, I. F., Sulaiman, & Mislinawati. (2017). Kendala Guru dalam Menerapkan Model Pembelajaran pada Pembelajaran Tematik berdasarkan Kurikulum 2013 di SD Negeri 2 Kota Banda Aceh. *Jurnal Ilmiah Pendidikan Guru Sekolah Dasar FKIP Unsyiah*, 2, 88–97.
- Gillies, R. M. (2016). Cooperative learning: Review of research and practice. *Australian Journal of Teacher Education*, 41(3), 39–54. <https://doi.org/10.14221/ajte.2016v41n3.3>
- Handayani, U. F. (2020). ANALISIS HAMBATAN PENERAPAN MODEL PEMBELAJARAN. 9(2), 22–36.
- Mangunreja, K. (2014). Pengaruh Interaksi Sosial Terhadap Aktivitas Belajar Siswa Kelas Vi Sd Negeri Salebu Kecamatan Mangunreja. *PEDADIDAKTIKA: Jurnal Ilmiah Pendidikan Guru Sekolah Dasar*, 1(1).
- Marfuatun, E. Widjajanti, S. (2013). Pengembangan Metode Pembelajaran Kooperatif Secara the Development of Cooperative Learning Via Online on Lecture of. *Pengembangan Metode Pembelajaran*, 125–133.
- Marta, E. D. (2016). Implementasi Pemberian Reward Kepada Siswa Sd Muhammadiyah Bantul Kota. *Jurnal Pendidikan*, X, 1–21.
- Mustami, M. K., & Safitri, D. (2018). The effects of numbered heads together-Assurance Relevance Interest Assessment Satisfaction on students' motivation. *International Journal of Instruction*, 11(3), 123–134. <https://doi.org/10.12973/iji.2018.1139a>
- Prihatsanti, U., Suryanto, S., & Hendriani, W. (2018). Menggunakan Studi Kasus sebagai Metode Ilmiah dalam Psikologi. *Buletin Psikologi*, 26(2), 126. <https://doi.org/10.22146/buletinpsikologi.38895>
- Rachmawati, I. N. (2007). Pengumpulan Data Dalam Penelitian Kualitatif: Wawancara. *Jurnal Keperawatan Indonesia*, 11(1), 35–40. <https://doi.org/10.7454/jki.v11i1.184>
- Sholikhah, O. H. (2016). Problematika Penerapan Model Pembelajaran Kooperatif Tipe Group Investigation (Gi) Dan Alternatif Pemecahannya. *Premiere Educandum: Jurnal Pendidikan Dasar Dan Pembelajaran*, 5(02). <https://doi.org/10.25273/pe.v5i02.285>
- Widyaningtyas, H., Winarni, R., & Murwaningsih, T. (2018). Teachers' Obstacles in Implementing Numbered Head Together in Social Science Learning. *International Journal of Evaluation and Research in Education (IJERE)*, 7(1), 25. <https://doi.org/10.11591/ijere.v7i1.11625>
- Xiao, A. (2018). Konsep Interaksi Sosial Dalam Komunikasi, Teknologi, Masyarakat. *Jurnal Komunika: Jurnal Komunikasi, Media Dan Informatika*, 7(2). <https://doi.org/10.31504/komunika.v7i2.1486>
- Zahrotunnimah, Z. (2020). Langkah Taktis Pemerintah Daerah Dalam Pencegahan Penyebaran Virus Corona Covid-19 di Indonesia. *SALAM: Jurnal Sosial Dan Budaya Syar-I*, 7(3). <https://doi.org/10.15408/sjsbs.v7i3.15103>