

## ABSTRACT

**Hardi, 2021 Students' Mathematical Connection Ability Based on Online Distance Learning in terms of Learning Style and Gender.** Promotor Prof. Dr. Hardi Suyitno, M.Pd., Ko. Promotor Prof. Dr. Kartono, M.Sc., Member of the Promotor Prof. Dr. rer.nat. Yl Sukestiyarno, M.S., Ph.D

**Keywords: Mathematical Connection Ability, Online learning, Learning Style, Gender**

Mathematical connection is the ability to associate mathematical knowledge with mathematical skills in real life. The problem that exists today is that mathematics is considered difficult, the ability to connect mathematics is still low. This study aims to: 1). Measuring the effectiveness of online learning on students' mathematical connection skills 2). Identify whether there are other aspects of learning styles, 3). Identifying the mathematical connection abilities of students who receive online and offline learning in terms of learning styles and 4). Identify differences in students' mathematical connection abilities in online learning in terms of learning styles and gender.

The method used in this study is a mixed method, with a concurrent triangulation design. This research method combines qualitative and quantitative methods by mixing the two methods in a balanced way. The method is used together, at the same time, but independently to answer similar problem formulations. Mathematical connection ability is measured by tests and learning styles with a questionnaire and then triangulated by interviews.

The results of this study indicate that: 1). Online distance learning is more effective in improving students' mathematical connection skills. Said to be effective because of the increase from before to after. The average value of the online method is higher than the offline method. The value of students' mathematical connection abilities online has reached a predetermined limit, which is high. 2). There are 69.56% of female students tend to use the learning style aspect from the heart while 65.21% of male students. So male students tend to be lower than female students in using the learning style from the heart aspect, 3). The ability of mathematical connection in female students who use online learning is best in the audio learning style while those who use offline learning are also audio. The ability of mathematical connection in male students who use online learning the best is kinesthetic for offline learning as well as kinesthetic, 4). The mathematical connection ability of female students is seen from the best learning style is audio, while the best is kinesthetic for male students. There is a difference in the ability of mathematical connections between the online distance learning method and the offline method, when viewed from a learning style, while in terms of gender there is no difference.