

# TECHNOLOGY USE: ANALYSIS OF LESSON PLANS ON FRACTIONS IN AN ONLINE LABORATORY SCHOOL

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This study aims to investigate how pre-service teachers (PSTs) use of technology when preparing fraction lesson plans in an Online Laboratory School. The school is established during Covid-19 pandemic under the roof of a university. The school served to hundreds of public-school students all around Turkey since Spring 2020. It also aims to provide quality internship experience to mathematics PSTs by planning, teaching, and reflecting on the experience. For this project we focus only the planning experiences of PSTs on the topic of fractions. Fractions are 30 %of middle school curriculum in Turkey which is centralized and students having most difficulty. There were 17 PSTs participated and planned lessons as a group. PSTs prepared 12 written lesson plans on fractions (ranging from 5-13 pages) and taught 4th, 5th, and 6th grade mathematics during 2020-2021 academic year. Content analysis of the written lesson plans were conducted. We first analyzed whether technological tools were used, if yes then which technological tools were used, and for what purposes.

Results show that the web 2.0 applications were present almost in all plans, sometimes more than one applications (Nearpod, Padlet, GeoGebra, etc.) were used in a lesson. More specifically, Math Learning Center was used in 7 out of 12 lesson plans, and Nearpod was used in 6 out of 12, Powtoon and Wordwall was used in 3 out of 12 lesson plans: Animaker, Math Playground and GeoGebra were used twice, Mentimeter Learninggaps, Conceptua Math, Plotagon, Phet Colorado Edu. were used once in 12 plans. One of the most used applications were the Math Learning Center; it was used to model fractions and to provide solutions of fraction problems through the model and this tool was teacher directed. The other highly utilized tool was Nearpod Applications, and they were used to provide students with an individual study environment, and to measure what students learned at the end of the lesson.

We can conclude at least one technological tool was used in all the online lesson plans. Some of the technological tools were used only by the teacher and all students observed. In some cases, students were given the opportunity to study online individually. We are also implementing TPACK framework to the same data to study the details of the PSTs' technological pedagogical knowledge which we might share results in PME also.

## References

Harris, J., Grandgenett, N., & Hofer, M. (2010). *Testing a TPACK-Based Technology Integration Assessment Rubric*. Book Chapters. 6. <http://publish.wm.edu/bookchapters/6>