RESEARCH ROADMAP
UNDERGRADUATE PROGRAMME OF MATHEMATICS EDUCATION
2016 – 2025



UNDERGRADUATE PROGRAMME OF MATHEMATICS EDUCATION
FACULTY OF MATHEMATICS AND NATURAL SCIENCE
UNIVERSITAS NEGERI SURABAYA
2023

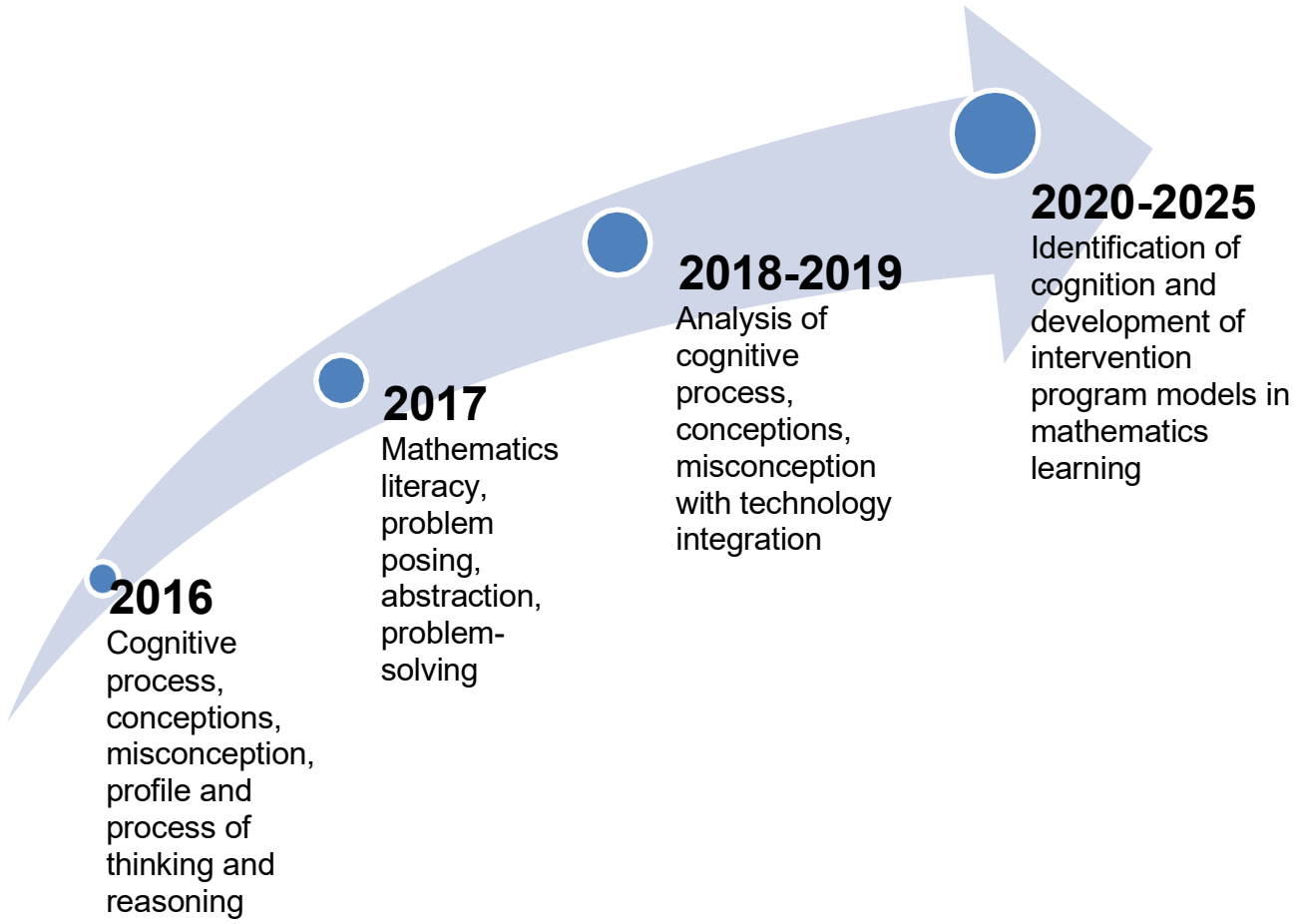

Fig. 1. Research Roadmap for the Bachelor of Mathematics Education program in the field of Mathematics Education Psychology

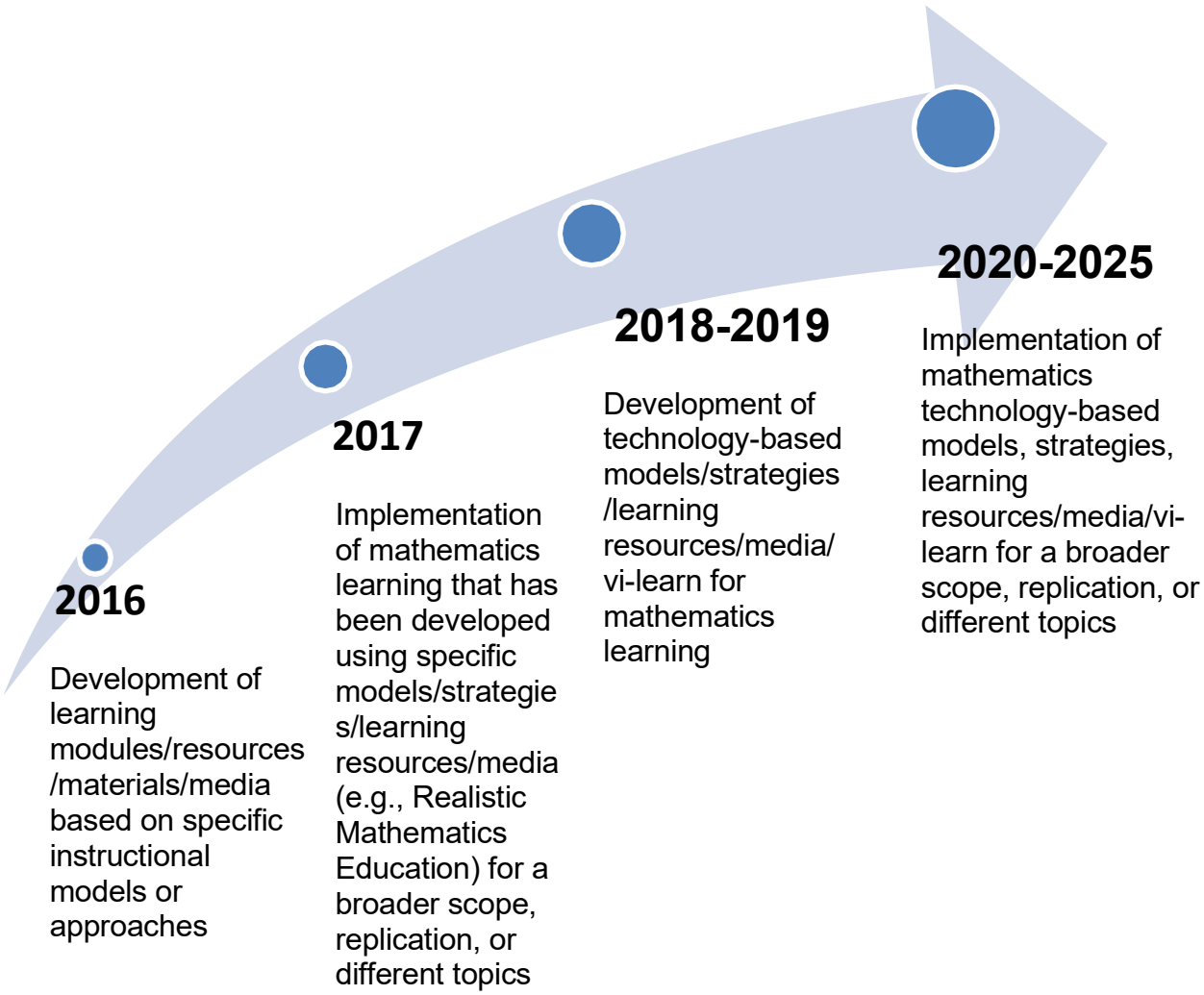

Fig. 2. Research Roadmap of the Undergraduate Programme of Mathematics Education in the Field of Mathematics Learning

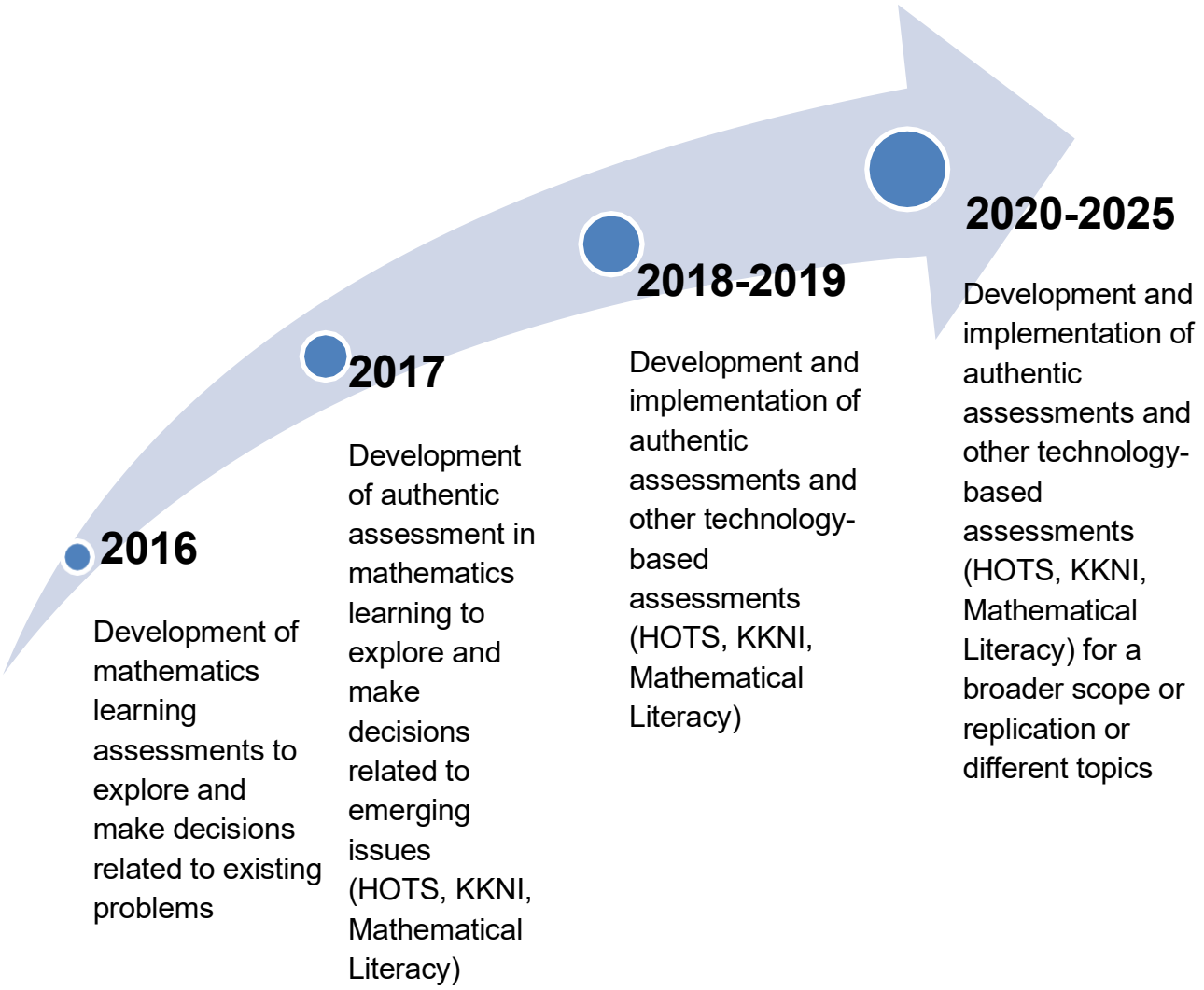

Fig. 3. Research roadmap for the Bachelor of Mathematics Education study program in the field of Mathematics Education Evaluation

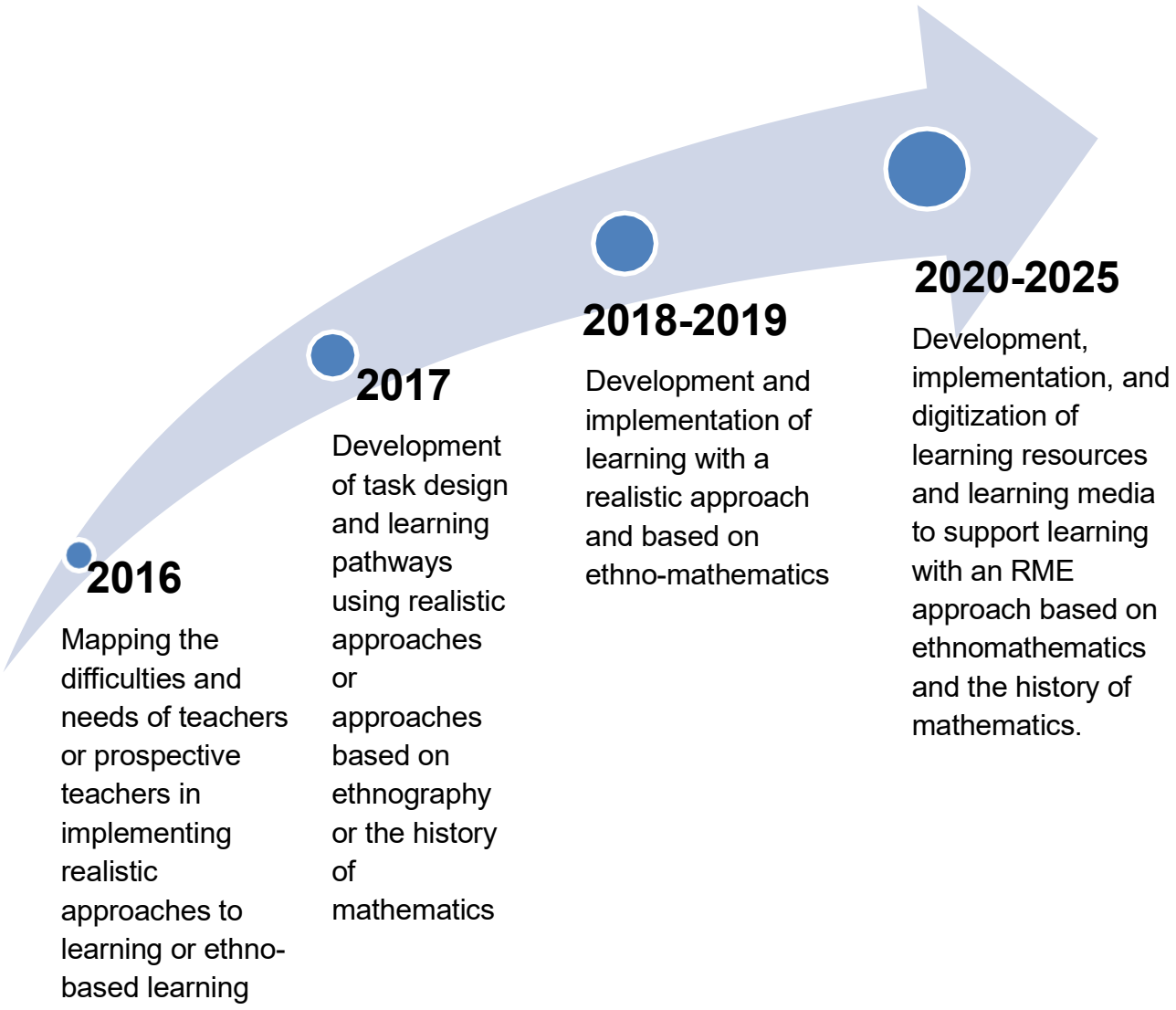

Fig. 4. Research roadmap for the Bachelor of Mathematics Education study program in the field of Realistic Mathematics and Social and Cultural Mathematics Education.

Table Describing the Research Road Map for Lecturers in the Mathematics Education Undergraduate Program Based on Clusters and Examples of Appropriate Research

No.	Rumpun	Deskripsi Road Tahun 2020-2025	Contoh Penelitian
1	Educational Psychology of Mathematics	Identification of cognition and development of a model for developing a mathematics learning intervention program based on the cognitive profile that has been studied	**Lecturer:** Development of Teaching Materials for Mathematics Learning Psychology Using Instructional Videos to Improve the Pedagogical Skills of Mathematics Education Students (Ika Kurniasari et al., 2023)
			Students: Profile of Students' Mathematical Connections in Arithmetic Sequences and Series Material in Terms of Learning Styles (Dyah Ayu Shofa Noer Azizah)
2	Mathematics Learning	Application of technology-based mathematics learning models/strategies/resources/media/vi learn for a broader scope or replication or different topics	**Lecturer** Development of Teaching Materials for the Curriculum Analysis Course on Misconceptions in Mathematics to Strengthen Pedagogical Content Knowledge of Prospective Mathematics Teachers (Siti Khabibah et al., 2023)
			Student Development of ICT-Based Learning Media Using Game-Based Learning Methods for Statistics Material (Muhammad Fahreza)

3	Assessment in Mathematics Education	Development and implementation of authentic assessments and other technology-based assessments (HOTS, KKNI, Mathematical Literacy) for a broader scope or replication or different topics.	**Lecturer** Design of a Prototype for Assessing Junior High School Mathematics Problem-Solving Skills integrated with Geogebra Classroom (Abdul Haris Rosyidi et al., 2023)
			Student Development of AKM Numeracy Questions in the Domain of Geometry and Measurement Content for Eighth Grade Junior High School Students (Audrey Putri Berliana)
4	Realistic Mathematics and Social Culture of Mathematics Education	Development, implementation, and digitization of learning resources and learning media to support learning with an RME approach based on ethnomathematics and the history of mathematics.	**Lecturer** Development of Geometry Teaching Materials Based on Realistic Mathematics-Project Based Learning (RM-PjBL) Assisted by Geogebra: A Case Study of Mathematical Modeling (Dayat Hidayat et al., 2023)
			Students Development of Hypothetical Learning Trajectory for Algebraic Multiplication Material for Grade VII using the Realistic Mathematics Education Approach (Salsa Bela)

Study Program Coordinator of UPME



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