Lisa 1. Valimi ülevaade

Lisa 1.1 Analüüsitud artiklite teoreetiline raamistik ning kasutatud hindamisvahendid

Allikas	Teoreetiline raamistik							Valimi andmed			Hindamisvahendi andmed	
Viide allikale[1]	OVT	IMT	SET	AT	HT	SKT	Muu	Riik	Klass	Vanus	Mot. faktoreid	Kasutatud hindamisvahendid
Akin jt (2016)	x							Türgi	6-8	11-16	5	**MSRI** (Mathematics self-report inventory)
Baten jt (2020)		x						Belgia	4	9,41	3	Self-Regulation Questionnaire for Reading Motivation (adapteeritud matemaatikasse)
Cai jt (2017)		x	x					Singapur	4-6	M=11	11	**SRQ-A** (Academic Self-Regulation Questionnaire), 3x2 Achievement Goal Questionnaire
Chatzistamatiou jt (2015)	x		x					Kreeka	5-6	11-12	5	ise loodud
Desoete jt (2022)		x						Belgia	4-5	9-12	2	Academic Self-Regulation Scale Dutch version
Finch jt (2022)		x					x	Elevandi-luurannik	2,4	-	2	**ESMS** (Elementary School Motivation Scale)
Forsblom jt (2022)							x	Portugal	5,7	10-15 (M=11,57)	4	**IMI** (Intrinsic Motivation Inventory Portuguese version), The Competence in Mathematics subscale of the Self-concept and Self-esteem Scale for Pre-Adolescents, **AEQ-PA** (the Achievement Emotions Questionnaire for Preadolescent Students)
Freiberger jt (2012)	x							Saksamaa	2	M=7,95	2	ise loodud hindamivahend tuginedes Expectancy-Value Theory mudelil
Friedel jt (2010)			x					USA	6-7	-	3	**PALS** (Patterns of Adaptive Learning Survey)
García jt (2016)	x							Hispaania	5-6	10-13 (M=10,99)	5	**IAM** (Inventory of Attitudes Towards Mathematics)
Garon jt (2016)		x						Kanada	1,2,4	1. kl 7,15 2. kl 8,10 4. kl 10,14	1	**ESMS** (Elementary School Motivation Scale) (baseerub AMS-il (Academic Motivation Scale))

Gidalevich jt (2019)			x				Israel	4	9-10	3	**PALS** (Patterns of Adaptive Learning Scales)
Gomes jt (2019)		x					Portugal		8-11 (M=8,80)	4	**SRQ-A** (The Academic Self-Regulation Questionnaire)
Guay jt (2010)		x					Kanada	1-3	6-9 (M=7)	3	**ESMS** (Elementary School Motivation Scale) (baseerub AMS-il (Academic Motivation Scale))
Hermann jt (2022)		x					Saksamaa	4	M=9,81	3	**KIM** (Intrinsic Motivation Inventory)
Hornstra jt (2016)			x				Holland	5	11	3	**PALS** (Patterns of Adaptive Learning Scales), Goal Orientation Questionnaire
Jansen in de Wal jt (2016)			x				Holland	5-6	8-12 (M=10,64)	3	Goal Orientation Questionnaire (Seegers *et al.*, 2002)
Jiang jt (2014)			x			x	Korea	4-6, 7-9	4.-6. kl 9,2-12,2 7.-9. kl 12,2-15,2	4	**PALS** (Patterns of Adaptive Learning Scales), MSLQ (Motivated Strategies for Learning Questionnaire)
Kriegbaum jt (2019)	x						Saksamaa	3-4	3. kl M=8,28 4. kl M=9,93	2	ise loodud hindamivahend tuginedes Expectancy-Value Theory mudelil
Lazarides jt (2018)	x						Soome	1-2	M=7,25	2	**TVS-C** (Task-Value Scale for Children)
Leonid jt (2022)		x					Venemaa	2-4	8-10 (M=8,67)	3	**SSEM-M** (Scenario Scale of Extrinsic Motivation toward Math), TSEM-M (Traditional Scale of Extrinsic Motivation toward Math), ESMS-R (Elementary School Motivation Scale Russian version)
Linder jt (2015)	x		x		x	x	USA	2-5	-	5	**EMMI** (The Elementary Mathematics Motivation Inventory)
Lohbeck (2018)		x					Saksamaa	4	9-13 (M=9,55)	7	**AMS** (Academic Motivation Scale), SDQ I-GS (short German version of the Self-Description Questionnaire I-GS)
Martin jt (2018)	x		x	x			Austraalia	3,5,7,9	3.kl 7-8 5. kl 9-10 7. kl 11-12	1	Short **MES** (Short Motivation and Engagement Scale)
Maruno jt (2010)			x			x	Hiina	5-6	-	6	Motivated Strategies for Learning Questionnaire for Children (baseerub MSLQ-il)

McGeown jt (2020)	x					Inglismaa	5-6	9-11 (M=9,91)	2	Expectancy-Value Theory mudel
Metallidou jt (2010)	x				x	Kreeka	5-6	5.kl 10,25-11,25 (M=10,58) 6. kl 11,50-12,33 (M=11,75)	5	**MSLQ** (Motivated Strategies for Learning Questionnaire)
Ning (2018)			x		x	Singapur	5	M=11,39	4	**AGQ-R** (Achievement Goal Questionnaire-Reversed)
Oppermann jt (2021)	x					Soome	2-3	M=8,17	2	ise loodud hindamivahend tuginedes Expectancy-Value Theory mudelil
Orosco (2016)					x	USA	2-3	M=8,75	3	**BEAMMS** (Beliefs, Engagement, and Attitude Math Motivation Scale)
Østbø jt (2022)	x	x				Norra	4,8	10,17-12,08	2	Mathematics motivation TIMSS2015
Peixoto jt (2022)	x					Eesti Soome Rootsi Norra Portugal Serbia	3-5	-	5	**EVS** (The Expectancy-Value Scale)
Prast jt (2018)	x					Holland	2-6	M=9,45	4	**MMQC** (Mathematics Motivation Questionnaire for Children)
Rajotte jt (2016)		x				Kanada	3	-	2	**AMS** (Academic Motivation Scale)
Ramos jt (2021)			x			Belgia	5,6,7	-	1	**PALS** (Patterns of Adaptive Learning Survey)
Ramos jt (2022)		x				Hispaania	1-3	6-10 (M=7,41)	3	**ESMS-E** (The Elementary School Motivation Scale Spanish version)
Rodríguez jt (2021)	x					Hispaania	5-6	9-13 (M=10,77)	4	**IAM** (Inventory of Attitudes Towards Mathematics)
Rodríguez jt (2017)	x		x			Hispaania	5-6	9-13 (M=10,77)	4	**IAM** (Inventory of Attitudes Towards Mathematics)
Rodríguez jt (2020)	x					Hispaania	5-6	9-13 (M=10,77)	4	**IAM** (Inventory of Attitudes Towards Mathematics)
Rutherford jt (2022)	x					USA	3-4	-	5	ST Math
Schweinle jt (2013)	x		x			USA	5	10-11	7	**PALS** (Patterns of Adaptive Learning Scales), STP (Self and Task Perceptions), MCA (My Class Activities Survey)

Smyrnis jt (2022)				x	Austraalia	2	6-9 (M=7,44)	1	**IMI** (Intrinsic Motivation Inventory)
Suzuki jt (2022)				x	Jaapan	4-6	-	7	**AEQ-ES** (Achievement Emotions Questionnaire - Elementary School)
Tang jt (2022)	x				Soome Saksamaa	6-9	6.kl 12-13	5	Expectancies and Subjective Task Value Measures
Throndsen (2011)			x	x	Norra	2	6,75-7,66 (M=7,17)	2	ise loodud
Tossavainen jt (2019)	x				Rootsi	5-6	-	4	ise loodud
Ukdem jt (2022)				x	Türgi	3	-	3	**MLMS** (Mathematics Lesson Motivation Scale)
Weber jt (2013)	x				Saksamaa	4	M=9,7	3	ise loodud hindamivahend tuginedes Expectancy-Value Theory mudelil
Wei jt (2014)				x	USA	4-12	8-18 (M=13,31)	3	MII (Mathematics Interest Inventory)
Weidinger jt (2017)	x				Saksamaa	2-4	2. kl M=7,95 4. kl M=9,93	1	ise loodud hindamivahend tuginedes Expectancy-Value Theory mudelil
Whitney jt (2020)				x	USA	1,3,5,8	-	2	**SDQ** (Self Description Questionnaire)
Wu jt (2022)	x				USA	1-2	M=7,47	1	ise loodud hindamivahend tuginedes Expectancy-Value Theory mudelil
Xia jt (2022)		x			Hiina	4-6	9-12	4	**MES** (Motivation and Engagement Scale Chinese version)
Zee jt (2021)		x		x	Holland	3,6	1. laine 5,9 2. laine 9,6 3. laine 11,6	2	**PALS** (Patterns of Adaptive Learning Scales), Task Motivation Scale (Seegers *et al.*, 2002)
Zhou jt (2013)			x		Saksamaa Hiina	4	M=9,93	2	Ulm Motivational Test Battery
Zhu jt (2018)				x	Hiina	3-4, 4-5	3. kl M=8 4. kl M=9 (esimeses laines)	1	ise loodud - Scale of Interest in Mathematics

Märkused. [1]Lisas 1.2 on toodud analüüsitud artiklite põhjalikumad andmed. OVT – ootuste-väärtuste teooria, IMT – isemääramisteooria, SET - saavutuseesmärkide teooria, AT – atributsiooniteooria, HT – huviteooria, SKT – sotsiaal-kognitiivne teooria, Muu – kõik teised teoreetilised raamistikud, mis ei ole üks kuuest põhilisest akadeemilise motivatsiooni teooriast.

Lisa 1.2 Analüüsitud artiklite andmed

Autorid	Pealkiri	Ajakiri	Aasta
Akin, A., Güzeller, C. O., & Evcan, S. S.	The Development of a Mathematics Self-Report Inventory for Turkish Elementary Students	EURASIA Journal of Mathematics, Science & Technology Education	2016
Baten, E., Vansteenkiste, M., De Muynck, G.-J., De Poortere, E., & Desoete, A.	How Can the Blow of Math Difficulty on Elementary School Children's Motivational, Cognitive, and Affective Experiences Be Dampened? The Critical Role of Autonomy-Supportive Instructions	Journal of Educational Psychology	2020
Cai, E. Y. L., & Liem, G. A. D.	"Why Do I Study and What Do I Want to Achieve by Studying?" Understanding the Reasons and the Aims of Student Engagement	School Psychology International	2017
Chatzistamatiou, M., Dermitzaki, I., Efklides, A., & Leondari, A.	Motivational and Affective Determinants of Self-Regulatory Strategy Use in Elementary School Mathematics	Educational Psychology	2015
Desoete, A., & Baten, E.	Math Learning in Grade-4 and 5: What Can We Learn Form the Opportunity-Propensity Model?	International Electronic Journal of Elementary Education	2022
Finch, J. E., Wolf, S., & Lichand, G.	Executive Functions, Motivation, and Children's Academic Development in Côte d'Ivoire	Developmental Psychology	2022
Forsblom, L., Pekrun, R., Loderer, K., & Peixoto, F.	Cognitive Appraisals, Achievement Emotions, and Students' Math Achievement: A Longitudinal Analysis	Journal of Educational Psychology	2022
Freiberger, V., Steinmayr, R., & Spinath, B.	Competence Beliefs and Perceived Ability Evaluations: How Do They Contribute to Intrinsic Motivation and Achievement?	Learning and Individual Differences	2012
Friedel, J. M., Cortina, K. S., Turner, J. C., & Midgley, C.	Changes in Efficacy Beliefs in Mathematics Across the Transition to Middle School: Examining the Effects of Perceived Teacher and Parent Goal Emphases	Journal of Educational Psychology	2010
García, T., Rodríguez, C., Betts, L., Areces, D., & González-Castro, P.	How affective-motivational variables and approaches to learning predict mathematics achievement in upper elementary levels	Learning and Individual Differences	2016
Garon, C. G., Boivin, M., Guay, F., Kovas, Y., Dionne, G., Lemelin, J., Séguin, J. R., Vitaro, F., & Tremblay, R. E.	Intrinsic Motivation and Achievement in Mathematics in Elementary School: A Longitudinal Investigation of Their Association	Child Development	2016
Gidalevich, S., & Kramarski, B.	The Value of Fixed versus Faded Self-Regulatory Scaffolds on Fourth Graders' Mathematical Problem Solving	Instructional Science: An International Journal of the Learning Sciences	2019
Gomes, M., Monteiro, V., Mata, L., Peixoto, F., Santos, N., & Sanches, C.	The Academic Self-Regulation Questionnaire: a study with Portuguese elementary school children	Psicologia: Reflexão e Critica	2019

Guay, F., Chanal, J., Ratelle, C. F., Marsh, H. W., Larose, S., & Boivin, M.	Intrinsic, Identified, and Controlled Types of Motivation for School Subjects in Young Elementary School Children	British Journal of Educational Psychology	2010
Hermann, J. M., & Vollmeyer, R.	Gender stereotypes: implicit threat to performance or boost for motivational aspects in primary school?	Social Psychology of Education	2022
Hornstra, L., van der Veen, I., & Peetsma, T.	Domain-specificity of motivation: A longitudinal study in upper primary school	Learning and Individual Differences	2016
Jansen in de Wal, J., Hornstra, L., Prins, F. J., Peetsma, T., & van der Veen, I.	The Prevalence, Development and Domain Specificity of Elementary School Students' Achievement Goal Profiles	Educational Psychology	2016
Jiang, Y., Song, J., Lee, M., & Bong, M.	Self-Efficacy and Achievement Goals as Motivational Links between Perceived Contexts and Achievement	Educational Psychology	2014
Kriegbaum, K., Steinmayr, R., & Spinath, B.	Longitudinal reciprocal effects between teachers' judgments of students' aptitude, students' motivation, and grades in math	Contemporary Educational Psychology	2019
Lazarides, R., Viljaranta, J., Aunola, K., & Nurmi, J.-E.	Teacher ability evaluation and changes in elementary student profiles of motivation and performance in mathematics	Learning and Individual Differences	2018
Leonid, P., & Kanonire, T.	A Comparative Investigation of the Rasch/Guttman Scenario Approach: Measuring Learning Motivation Toward Mathematics in Elementary School	Assessment for Effective Intervention	2022
Linder, S. M., Smart, J. B., & Cribbs, J.	A Multi-Method Investigation of Mathematics Motivation for Elementary Age Students	School Science and Mathematics	2015
Lohbeck, A.	Self-Concept and Self-Determination Theory: Math Self-Concept, Motivation, and Grades in Elementary School Children	Early Child Development and Care	2018
Martin, A. J., & Lazendic, G.	Achievement in Large-Scale National Numeracy Assessment: An Ecological Study of Motivation and Student, Home, and School Predictors	Journal of Educational Psychology	2018
Maruno, S. I., & Zhang, L.	Causal Relationships among Academic Delay of Gratification, Motivation, and Self-Regulated Learning in Elementary School Children	Perceptual & Motor Skills	2010
McGeown, S. P., & Warhurst, A.	Sex differences in education: exploring children's gender identity	Educational Psychology	2020
Metallidou, P., & Vlachou, A.	Children's Self-Regulated Learning Profile in Language and Mathematics: The Role of Task Value Beliefs	Psychology in the Schools	2010
Ning, H. K.	Singapore Primary Students' Pursuit of Multiple Achievement Goals: A Latent Profile Analysis	Journal of Early Adolescence	2018
Oppermann, E., Vinni-Laakso, J., Juuti, K., Loukomies, A., & Salmela-Aro, K.	Elementary school students' motivational profiles across Finnish language, mathematics and science: Longitudinal trajectories, gender differences and STEM aspirations	Contemporary Educational Psychology	2021
Orosco, M.	Measuring Elementary Student's Mathematics Motivation: A Validity Study	International Journal of Science & Mathematics Education	2016
Østbø, I. U., & Zachrisson, H. D.	Student Motivation and Parental Attitude as Mediators for SES Effects on Mathematics Achievement: Evidence from Norway in TIMSS 2015	Scandinavian Journal of Educational Research	2022

Peixoto, F., Radišić, J., Krstić, K., Hansen, K. Y., Laine, A., Baucal, A., Sõrmus, M., & Mata, L.	Contribution to the Validation of the Expectancy-Value Scale for Primary School Students.	Journal of Psychoeducational Assessment	2022
Prast, E. J., Van de Weijer-Bergsma, E., Miočević, M., Kroesbergen, E. H., & Van Luit, J. E. H.	Relations between mathematics achievement and motivation in students of diverse achievement levels	Contemporary Educational Psychology	2018
Rajotte, T., Marcotte, C., & Bureau-Levasseur, L.	Evaluation of the Effect of Mathematical Routines on the Development of Skills in Mathematical Problem Solving and School Motivation of Primary School Students in Abitibi-Témiscamingue	Universal Journal of Educational Research	2016
Ramos, A., De Fraine, B., & Verschueren, K.	Learning Goal Orientation in High-Ability and Average-Ability Students: Developmental Trajectories, Contextual Predictors, and Long-Term Educational Outcomes	Journal of Educational Psychology	2021
Ramos, M., De Sixte, R., Jáñez, Á., & Rosales, J.	Academic motivation at early ages: Spanish validation of the Elementary School Motivation Scale (ESMS-E)	Frontiers in Psychology	2022
Rodríguez, S., Estévez, I., Piñeiro, I., Valle, A., Vieites, T., Regueiro, B.	Perceived Competence and Intrinsic Motivation in Mathematics: Exploring Latent Profiles	Sustainability	2021
Rodríguez, S., Piñeiro, I., Gómez-Taibo, M. L., Regueiro, B., Estévez, I., & Valle, A.	An explanatory model of maths achievement: Perceived parental involvement and academic motivation	Psicothema	2017
Rodríguez, S., Regueiro, B., Piñeiro, I., Estévez, I., & Valle, A.	Gender Differences in Mathematics Motivation: Differential Effects on Performance in Primary Education	Frontiers in Psychology	2020
Rutherford, T., Duck, K., Rosenberg, J. M., & Patt, R.	Leveraging Mathematics Software Data to Understand Student Learning and Motivation during the COVID-19 Pandemic	Journal of Research on Technology in Education	2022
Schweinle, A., Berg, P. J., & Sorenson, A. R.	Preadolescent Perceptions of Challenging and Difficult Course Activities and Their Motivational Distinctions	Educational Psychology	2013
Smyrnis, E., Ginns, P., & Bobis, J.	Mimicking Tracing Actions Enhances Young Children's Mathematical Learning	Applied Cognitive Psychology	2022
Suzuki, M., & Tonegawa, A.	Development of the Japanese Version of the Achievement Emotions Questionnaire – Elementary School (AEQ-ES-J)1,2	Japanese Psychological Research	2022
Tang, X., Lee, H. R., Wan, S., Gaspard, H., & Salmela-Aro, K.	Situating Expectancies and Subjective Task Values across Grade Levels, Domains, and Countries: A Network Approach	AERA Open	2022
Throndsen, I.	Self-regulated learning of basic arithmetic skills: a longitudinal study	British Journal of Educational Psychology	2011

Tossavainen, T., & Faarinen, E.-C.	Swedish Fifth and Sixth Graders' Motivational Values and the Use of ICT in Mathematics Education	EURASIA Journal of Mathematics, Science & Technology Education	2019
Ukdem, Ş., & Çetin, H	Investigating the Impact of Interventions Using Concrete and Virtual Manipulatives on 3th Grade Students' Fraction Concept and Motivation	International Online Journal of Education & Teaching	2022
Weber, H. S., Lu, L., Shi, J., & Spinath, F. M.	The Roles of Cognitive and Motivational Predictors in Explaining School Achievement in Elementary School	Learning and Individual Differences	2013
Wei, T., Chesnut, S. R., Barnard-Brak, L., Stevens, T., & Olivárez, A., Jr.	Evaluating the Mathematics Interest Inventory Using Item Response Theory: Differential Item Functioning across Gender and Ethnicities	Journal of Psychoeducational Assessment	2014
Weidinger, A. F., Steinmayr, R., & Spinath, B.	Math grades and intrinsic motivation in elementary school: A longitudinal investigation of their association	British Journal of Educational Psychology	2017
Whitney, S. D., Asigbee, F. M., Jones, S., & Schulte, K.	Student Self-Reported Motivation and Teacher-Rated Engagement as Predictors of Mathematics Achievement by Sex and SES in a U	Australian Educational Researcher	2020
Wu, J., Barger, M. M., Oh, D., & Pomerantz, E. M.	Parents' Daily Involvement in Children's Math Homework and Activities during Early Elementary School	Child Development	2022
Xia, Q., Yin, H., Hu, R., Li, X., & Shang, J.	Motivation, Engagement, and Mathematics Achievement: An Exploratory Study Among Chinese Primary Students	SAGE Open	2022
Zee, M., Rudasill, K. M., & Bosman, R. J.	A Cross-Lagged Study of Students' Motivation, Academic Achievement, and Relationships with Teachers from Kindergarten to 6th Grade	Journal of Educational Psychology	2021
Zhou, J., & Urhahne, D.	Teacher Judgment, Student Motivation, and the Mediating Effect of Attributions	European Journal of Psychology of Education	2013
Zhu, J., & Mok, M. M. C.	Predicting Primary Students' Self-Regulated Learning by Their Prior Achievement, Interest, Personal Best Goal Orientation and Teacher Feedback	Educational Psychology	2018