Curriculum Vitae

1. Personal Data

Name in Hebrew:	ד"ר קלמר ענת
Name in English:	Klemer Anat, Ph.D.
E-Mail:	AnatKl@wgalil.ac.il

2. Education Certificates and Degrees

Education	Institute	Department	From - To
First Degree	Bar Ilan University	Psychology and criminology	1985-1988
Second Degree	Haifa University	Mathematics Education	1989-1992
Third Degree	Haifa University	Mathematics Education	1995-2000

3. Title of Master's Thesis:

The perception of the concept of area and the area's measurement by 9-10 years old students, while using computerized microworld.

Supervisor: Prof. Michal Yerushalmy.

Title of Doctoral Thesis:

Models to improve the understanding of the concepts of ratio and proportion-colors, chips and correspondence tables.

Supervisor: Prof. Perla Nesher and Dr. Irit Peled.

4. Academic Ranks

Rank	% Position	From - To	Institute
Lecturer	100%	2012 -Present	Western Galilee College

5. Supervising Graduate and Post-Graduate Students

In the past five years, from 2014 to present, I supervised graduate students at Oranim Academic College of Education, in their Seminar's project. So far, I supervised 89 graduate students.

6. Grants and Awards

Year	Name of Grant/Award
1991	A scholarship from the Dean of Students, in the framework of the M.A.
1992	A scholarship from the Dean of Students, in the framework of the M.A.
1997	Scholarship for Excellence from the Dean of Graduate Studies in the framework of Ph.D.
1998	Grant of participation in a scientific conference in South Africa, University of Haifa
2018	Teaching Excellence Award, Western Galilee Academic College

7. Research Grants

From-To	Funding Agency	Title of Research	Amount	Names of Research Partners
1991	Dean of Graduate Studies	The perception of the concept of area and the area's measurement by 9-10 years old students, while using computerized microworld.	750 NIS	Michal Yerushalmy
1998	Grant of participation in the scientific conference PME * 22 in South Africa	Models to improve the understanding of the concepts of ratio and proportion-colors, chips and correspondence tables.		Irit Peled

(*International Conference for the **P**sychology of Mathematics **E**ducation)

8. Organization of Scientific Conferences

1. Math as a creation, March 24th, 2020, Western Galilee Academic College (Prepared and not held due to the corona)
2. Math as a creation, May16th, 2017, Western Galilee Academic College
3. Math as a creation, January 12th, 2016, Western Galilee Academic College
4. Math as a creation, December 24th, 2014, Western Galilee Academic College
5. The annual conference of mathematics education in elementary school, in 2013, the convention center, Shefayim.
6. The annual conference of mathematics education in elementary school, in 2012, the convention center, Shefayim.

9. Positions Held

From-To	Institute	Position	% Position
2012 -Present	Western Galilee Academic College	Lecturer, head of the field of gamification and innovation in education	100%
2014 -Present	Oranim Academic College of Education	Lecturer	6 Hours

10. Additional Professional Experience (Public Positions)

2012 - curent — Member of the journal system "Mispar Hazak 2000".

The journal is dedicated to mathematics teachers and professional mathematics educators.

The purpose of the journal is to nurture and develop the community of teachers, to expose teachers to both practical and theoretical materials, to enrich their knowledge and contribute to their professional development.

Members of the journal are involved in teacher training and research in this field. The journal is considered a journal of referees and is sponsored by the National Teachers' Center for Mathematics in Elementary Education, the Faculty of Education - Haifa University, the Ministry of Education - the Pedagogical Secretariat - the Science Department and the Israel Center for Science and Technology Education.

2012 – 2014 — Management of the National Center of Teachers of Mathematics

in the Primary Education, Haifa University

http://ymath.haifa.ac.il

The Teachers Center serves all mathematics teachers in primary schools in the country and belongs to the University of Haifa. In administering the Teachers' Centre I was responsible for the following:

Offering and leading national projects in the field of mathematics for elementary school teachers.

Budget management of the National Teachers Center.

Leading the staff of the national teachers' center.

Holding seminars for teachers.

2008 – 2011 Content Development Team Leader, Time To Know (T2K)
http://www.timetoknow.co.il

The company develops online learning environment for learning, teaching and assessment for schools in the country and abroad.

As part of my job, I led the field of evaluation and learning environment which prepares assessment. This position included managing a team developing educational programs in mathematics for Israel and for the United States. Characterization of interactive tools designed to serve the online learning environment. Planning teaching units and evaluation units in accordance with the curriculum and the requirements of education systems in different countries in accordance with the standards of each country. In addition, integrated work between teams from Israel and the United States.

2005 – 2006 Management of the National Teachers Center of Mathematics

see 2012-2014

2002 – 2008 Managing the field of Mathematics at "Snunit" Association of ICT educational advancement.

http://www.galim.org.il

Developing ideas for integrating ICT in learning.

My responsibilities included: designing a mathematics e-learning environment for elementary schools, planning a project for intelligent economics in elementary school, Planning a mathematical course for parents and children.

1993 – 2001 Conducting teacher training courses at the Tel Hai College Regional Teachers' Center.

1999 – 2001 Development a booklet for mathematics teaching in methods of research, for Bar-Ilan University.

Development of teaching materials for the Center for Educational Technology (CET): Mathematical problems in the integration of a spreadsheet.

1990 – 1991	Teaching assistant of Dr. Michal Yerushalmi, School of Education, University of Haifa. Experience in computerized teaching, especially in math education.
	Teaching assistant of Dr. Irit Peled, School of Education, University of Haifa. Experience in mathematics learning difficulties.
1989	Instructing in "Nitzan" – working with children who were diagnosed as having difficulties with Math.
	Conducting observations in kindergartens as part of the psychological service in Nahariya, identify children who need treatment, and assessing the progress of children who were treated in the child development center.
1987	Daily accompaniment in a surveillance center which treats post psychotic patients –in Jaffa, the Ministry of Health.

11. Scientific Areas of Specialization

Development of mathematical thinking in elementary and pre-elementary school.

Integration of manipulatives: concrete and digital, for illustrate the development of mathematical thinking.

12. Miscellaneous

Active participation in Scientific Conferences

Date	Conference	Place	Subject
2018	The Annual International Conference on Creativity in Teaching	Oranim Academic College	Student and teacher as a team builds insight
2018	The Sixth Jerusalem Conference on Research in Math Education	Jerusalem, Lev Academic	Mooc Environment course to advance the knowledge of mathematics teachers
2017	The Annual Conference on Creativity in Teaching	Oranim Academic College	A learning environment for the professional development of students by designing Mooc course
2017	The Fifteenth Annual National Conference of Meital	Haifa University	A learning environment for the professional development of students by designing Mooc course
2017	Learning disabilities	Western Galilee Academic College	Understanding the concepts of ratio and proportion by mixing colors
2016	Learning disabilities	Western Galilee Academic College	Understand mathematics using concrete models

Date	Conference	Place	Subject
2014	Learning disabilities	Western Galilee Academic College	Open windows on the integration of dynamic applets, in learning elementary school mathematics
2013	Learning disabilities	Western Galilee Academic College	Constructing meaning for concepts and actions in mathematics
2007	The Annual Conference for the Advancement of Mathematics Education in Israel	Tel-Aviv	A dynamic curriculum linked to learning and teaching materials
2007	The 21st Annual "Moach" Conference - Israeli Association for Information Technology in Education	Tel-Aviv	Link between learning environments - an online learning environment that adds a dynamic dimension to textbooks
2005	The 12th Annual Conference for the Advancement of Mathematics Education in Israel	Tel-Aviv	"Shared Math" Parents and children improve math achievements
2004	The 11th Annual Conference for the Advancement of Mathematics Education in Israel	Tel-Aviv	"Intel takes into Math" an online mathematics program for elementary school students in Israel
2003	The 10th Annual Conference for the Advancement of Mathematics Education in Israel	Tel-Aviv	E-learning environment in mathematics - Building meaning for simple fraction
2003	Teacher training for elementary school mathematics	Oranim Academic College	Instructing students in an online environment: Teaching students simple fracture
2002	The 9th Annual Conference for the Advancement of Mathematics Education in Israel	Tel-Aviv	From Amazing to discover, from discovery to knowledge
2001	The 8th Annual Conference for the Advancement of	Tel-Aviv	Analysis the use of spreadsheet in solving problems

Date	Conference	Place	Subject
	Mathematics Education in Israel		
2001	The Annual Conference of regional teacher centers	Beit Berl College	Promotion of mathematics education in elementary school
2000	The 7th Annual Conference for the Advancement of Mathematics Education in Israel	Tel-Aviv	Evaluation of solving math problems in the spreadsheet environment
1999	The 5th Annual Conference for the Advancement of Mathematics Education in Israel	Achva College	Building knowledge according to children's perceptions: the concept of attitude
1998	Leadership in teaching mathematics to coordinators and teacher educators	Jerusalem	Windows for creativity (inside, on the side and beyond the world of mathematics) on the website
1998	PME 22 - International Conference for the Psychology of Mathematics Education	Stellenbosch, South Africa	Inflexibility in teachers' ratio conceptions
1998	The Mathematical Society	Beer Sheva	Building knowledge about children's perceptions: the concept of ratio
1998	"Tomorrow 98" The main conference in summary 5 years of activity	Shefayim	Lack of flexibility in perception of the concept of Ratio
1997	The Mathematical Society	Haifa University	Solving problems with spreadsheet integration: Editing of research in the mathematics class
1996	Summer Seminar for Research Students in Mathematics and Science Teaching	Hagoshrim	The relationship between the level of cognitive development of immigrant children from Ethiopia and the years of their studies in Israel

13. <u>Academic Profile</u> (the candidate must present his/her research papers and evaluate the papers which are important in his/her view and their contribution to research. Future plans must be presented seperately).

During my work at Snunit Association, 2002-2008, I lead and designed an e-learning project of mathematics as part of Snunit's "Galim" digital learning environment. The project was implemented in schools throughout Israel in cooperation with the Ministry of Education.

During the period of my work at "Time to Know", 2008-2011, I managed an ICT curriculum development team for the USA. The program was implemented in USA schools.

As director of the National Teachers' Center of Mathematics for Elementary School, 2012-2014, I developed and implemented a training program for mathematics teachers in Israel.

Starting in 2014 I focused on academic work. I have studied the impact of teaching and learning mathematics using physical as well as digital means of manipulatives. I published my research in the International Journal of mathematical education in science and technology.

These days, I continue my research work through several projects I lead on behalf of the Western Galilee Academy which are implemented in several schools in it's vicinity. This year, we are researching the impact of integrated learning environments of Origametria and the Geogebra computer software on perceiving geometry concepts in second grade in Acre.

My main objective concerning my academic work throughout the years is aiding students to develop their mathematical insights, using modified learning environments. To realize this goal, I intend to keep searching for means of adjusting and optimizing the learning environments of students to best suit their needs and improve their understanding as well as problem-solving skills.

Publications

Klemer Anat, Ph.D.

A. Articles and Chapters in Books

1. Peled, I. & **Klemer, A**. (2018). Teachers' Knowledge and Flexibility: Understanding the Roles of Didactical Models and Word Problems in Teaching Integer Operations. In: L. Bofferding, & N. M. Wessman-Enzinger (Eds). Exploring the integer Addition and Subtraction Landscape – Perspectives on Integer Thinking. Springer. Pages 277-288. (12 pages). https://link.springer.com/book/10.1007/978-3-319-90692-8

B. Articles in periodicals

2. Alin, R., & **Klemer, A**. (2002). Integrating the use of spreadsheet with mathematical problem solving. *Strong Number 2000 (Mispar Hazak 2000) 3*, 30-35. (6 pages). (Hebrew).
3. Oberman, J., **Klemer, A**., & Krol, S. (2003). The study of fraction in an online environment. *Strong Number 2000 (Mispar Hazak 2000), 6*, 30-34. (5 pages). (Hebrew).
4. **Klemer, A**., Oberman, J., & Golan, M. (2015). Development of spatial insight - Learning and teaching of geometry through paper folding (origami). *Strong Number 2000 (Mispar Hazak 2000), 26*, 23-30. (8 pages). (Hebrew).
5. **Klemer, A**., Tal. I. (2017). Understanding the calculation of a triangular area: Three types of activities learning in combination with physical and computerized objects to construct geometrical insight, 54-59. (6 pages). (Hebrew).
6. **Klemer, A.** & Lev, Z, H. (2018). Teacher knowledge and expression in teaching fractions. *Strong Number 2000 (Mispar Hazak 2000)*, 29, 8-27. (20 pages). (Hebrew).
7. Klemer, A. Rapoport, S., & Lev, Z, H. (2018). The missing link in teachers' knowledge about common fractions division. International Journal of mathematical education in science and technology. Taylor & Francis. (18 pages).
8. Klemer, A. & Tal, I. (2019). The accessibility of a research problem using geogra. Strong number 2000 (Mispar Hazak 2000), 28, 54-61. (7 pages). (Hebrew).
9. Klemer, A. & Lev, Z, H. (2019). Children explain the distribution of fractions using representations in Excel. Research and Study in Mathematics Education, No. 7. (16 pages). (Hebrew).
10. **Klemer, A.** Rapoport, S., & Lev, Z, H. (2019). Building a Computerised Dynamic Representation as an Instrument for Mathematical Explanation of Division of Fractions. International Journal of mathematical education in science and technology. Taylor & Francis. (18 pages).
11. Klemer, A. Rapoport, S., & Keisar, E. (2019). Development of Math Trainee Teachers' Knowledge while Creating a MOOC. International Journal of mathematical education in science and technology. Volume 51 Issue 6, Pages: 939-953. Taylor & Francis. (14 pages).
12. Klemer, A. Rapoport, S. (2020). Origami and GeoGebra activities contribute to geometric thinking in second graders. Eurasia Journal of Mathematics, Science and Technology Education. Volume 16 Issue 11. (27 pages).
13. **Klemer, A.** Keisar, E. (2021). Changes in Math students' knowledge while creating a MOOC course on ratio and proportion. *Research and Study in Mathematics Education*, No. 8. (11 pages). (Hebrew).

C. Non-Refereed Publications

14. **Klemer, A.** (2001). Writing mathematical activities in conjunction with the Excel - booklet (mathematical issues), Center for Educational Technology.
15. Oberman, J. **Klemer, A.** Kroll, S. Marom, A. (2003). Mathematical sequence - exploration activities for the sixth grade. Booklet for Teacher. Was published with the funding of the Department for Planning and Development of Curricula in the Ministry of Education and the Amos de Shalit Center for Science Education.
16. **Klemer, A.** (2013). Booklet of difficulties in multiplying natural numbers - understanding the concept of multiplication. Publication in the National Teachers' Center for Mathematics in Elementary Education, University of Haifa.

D. Papers Presented At Scientific Conferences

17. **Klemer, A.,** & Peled, I. (1998). "Inflexibility in teacher's ratio conceptions", Proceedings of the 22nd Conference of the International Group for the Psychology of Mathematics Education. V 3, pp. 128-134.
18. **Klemer, A.,** Oberman, J., and Golan, M. (2014). An Assessment of Learning Geometry through Folding Paper by the Origametria Method, on the Visual Thinking of Grade Four Students. Origami6: 6th International Meeting on Origami in Science, Mathematics and Education. Tokyo, Japan. http://origami.gr.jp/6osme/program/6OSME-Program-0806.pdf