

What the Research on Computer Enhanced Learning was, is, and will be in Taiwan

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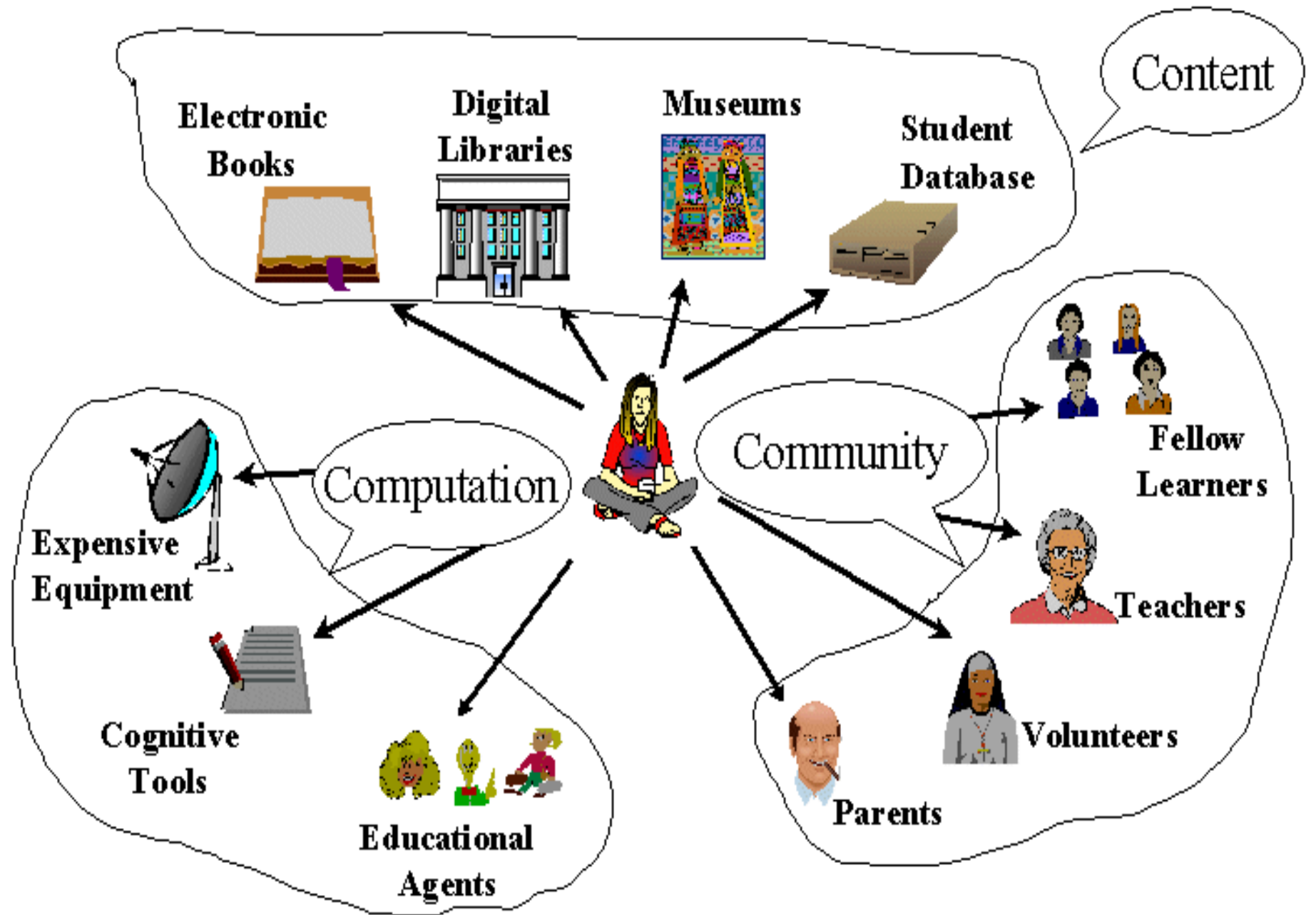
National Science Council

Taiwan

Was

- 20 years ago, there were only a handful of researchers in Taiwan conducting research in designing education related computer games.
- 1998-2002: Learning Technology Excellent Research Program
- Key persons: TW Chan, Ovid Tzeng, CH Liu

	<p style="text-align: center;">Same Location</p>	<p style="text-align: center;">Different Locations</p>
<p style="text-align: center;">Same Time</p>	<p>^{4th} Teaching in Classrooms Group Discussion in Classrooms Individual Learning at Home</p>	<p>^{1st} Telephone Video Conferencing Network Chat Room Discussion</p>
<p style="text-align: center;">Different Times</p>	<p>^{3rd} Bulletin Board Work by Taking Turns</p>	<p>^{2nd} Email Exchange Bulletin Board Systems</p>



Space of Network Learning Models

Change of Physical Learning Environment

Change of Purposes & Content

Emerge of Networked Societies

Future Classroom Learning

Structural Knowledge Learning

Complex Problem Learning

Community-Based Learning

Target-Based Learning

Subject-Based Learning

Project-Based Learning

Theme-Based Learning

Task-Based Learning

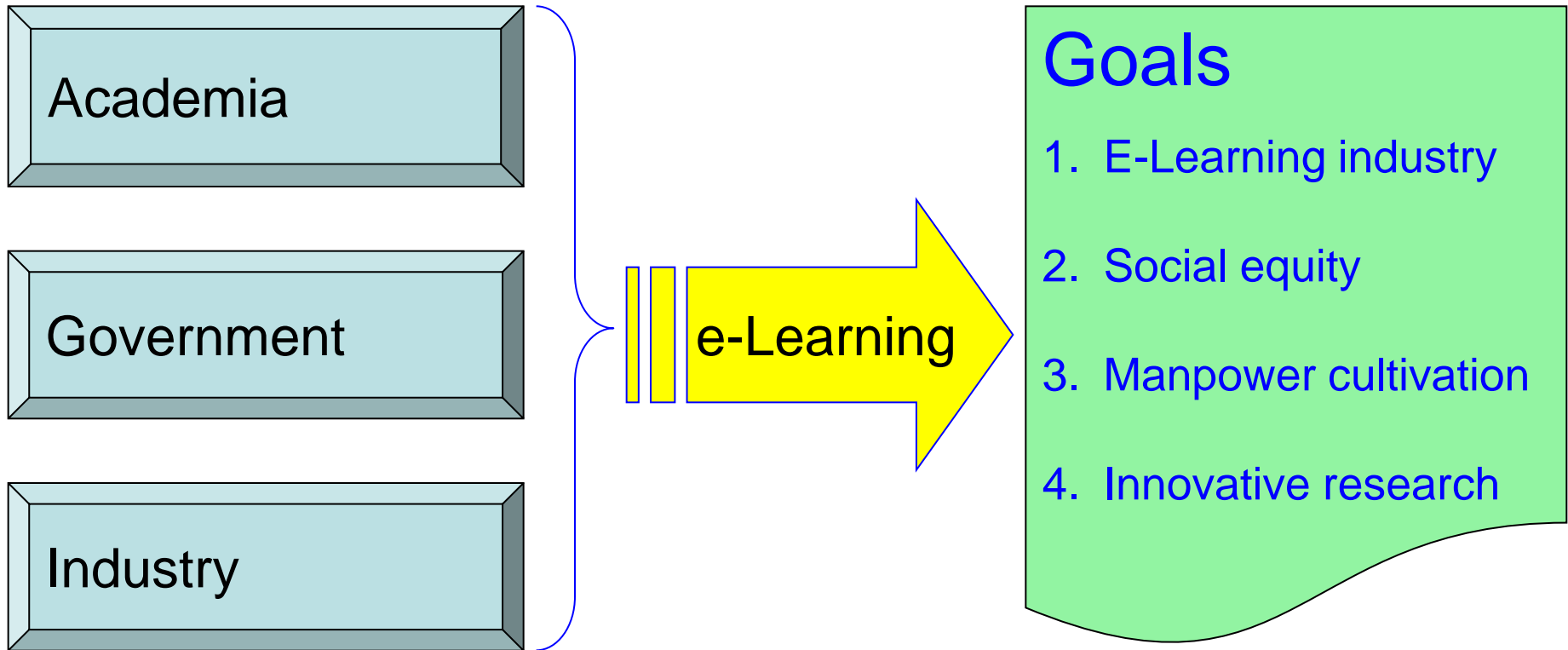
Creative Problem Solving

Was

- 2003-2007: E-learning National Research Program
- Title: The National Science and Technology Program for e-Learning in Taiwan

Goals

Period: from Jan. 2003 to Dec. 2007



• e-Learning National Program

• -Program Architecture(3 main axes) -Program

Contents(7 tracks)

Upgrading Taiwan's Overall
Competitiveness in the Era of
Knowledge Economy.

Stimulating the Development of
Industries Related to e-Learning.

Bringing forth New Waves of
Academic Research.

1. e-Learning for every one.
2. Narrowing the digital divide.

3. Mobile learning devices –
multi-function e-schoolbag.
3. Virtual science park for e-Learning.

5. R&D of advanced e-Learning
technology.
6. Fundamental research on learning
and cognitive sciences.

7.
Policy guidance and
manpower cultivation

Is

- 2008-2012: E-learning National Research Program
- Title: Taiwan e-Learning and Digital Archives Program (TELDAP)

Goals

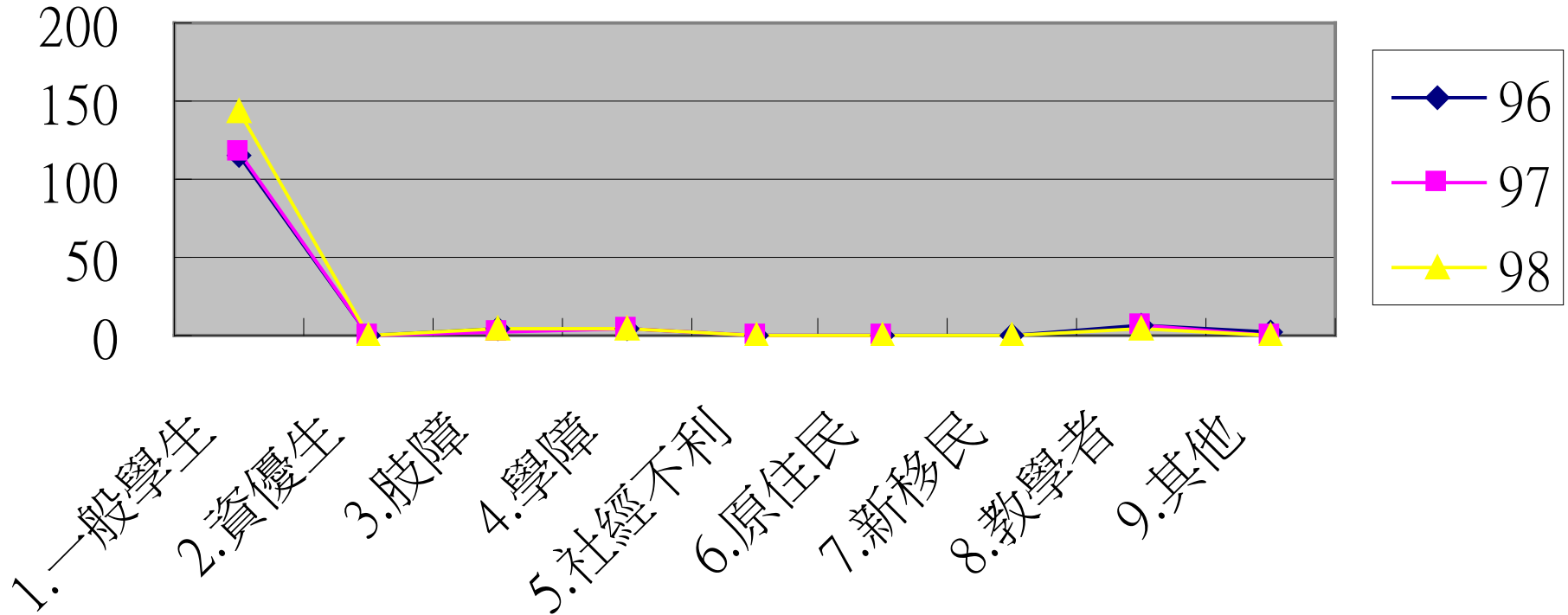
- The aim of TELDAP is to make e-learning and digital archives available and accessible to the general public, moving towards the establishment of a knowledge society, with the ultimate goal of strengthening national competitiveness.
- The main overall objectives of TELDAP are ***archiving the diversity of Taiwan and deepening e-learning in Taiwan.***

Eight Sub-projects

- 1. Taiwan Digital Archives Expansion Project
- 2. Research and Development of Digital Archives and e-Learning Technologies Project
- 3. Core Platforms for Digital Contents Project
- 4. Academic and Social Promotions and Applications of Digital Archives and
- e-Learning Project
- 5. Industrial Development and Promotion of Digital Archives and e-Learning Project
- 6. Digital Education and e-Learning Project
- 7. e-Learning for Chinese Language Project
- 8. International Collaboration and Promotion of Taiwan e-Learning and Digital Archives Program

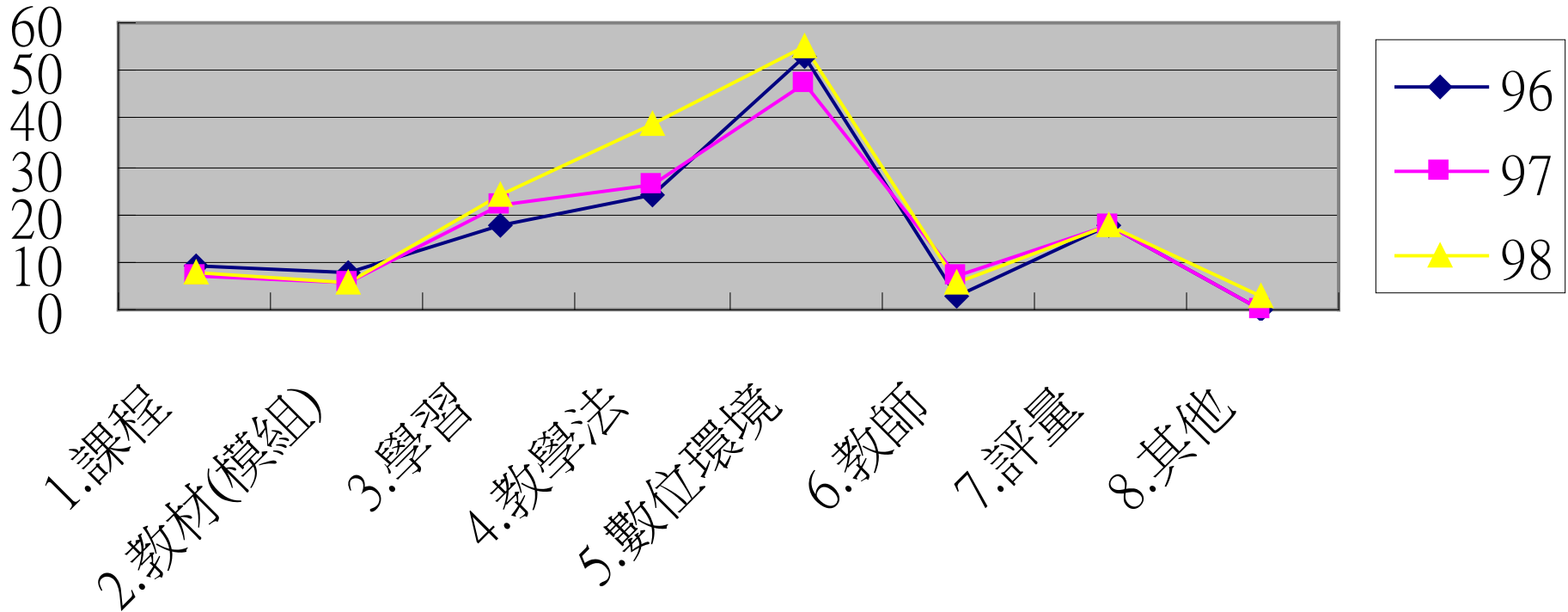
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96-98資教學門計畫統計(對象)



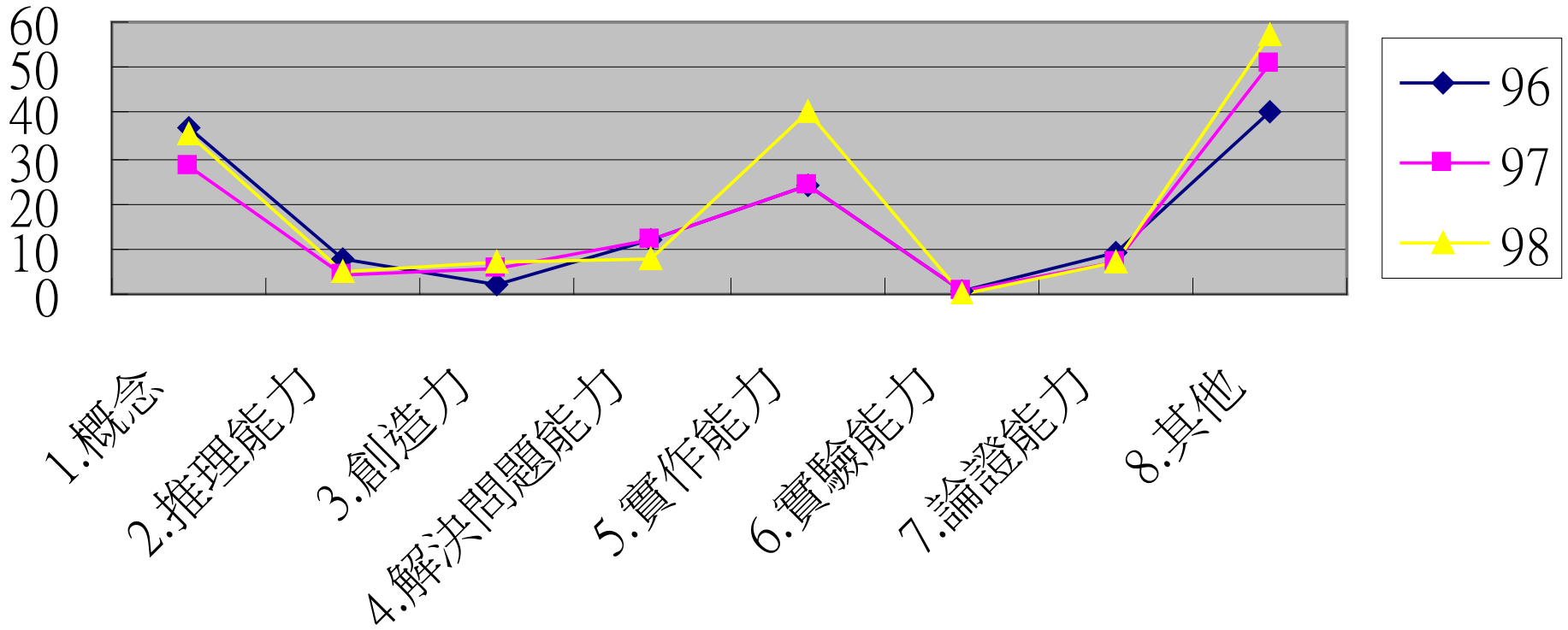
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96-98資教學門計畫統計(領域)



Is

96-98資教學門計畫統計(重點)



Performance of the “Science Education” Program

International Journal of Science Education
2008, 1–22, iFirst Article



RESEARCH REPORT

Research Trends in Science Education from 2003 to 2007: A content analysis of publications in selected journals

Min-Hsien Lee^a, Ying-Tien Wu^b and Chin-Chung Tsai^{c*}

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Table 1. Country ranks of publications from 2003 to 2007 (top 10) for the three journals (IJSE, SE, and JRST)

Rank	2003–2007		2003		2004		2005		2006		2007	
	Country	Score	Country	Score	Country	Score	Country	Score	Country	Score	Country	Score
1	USA	356.82	USA	69.78	USA	69.23	USA	60.75	USA	67.42	USA	89.64
2	UK	92.28	UK	13.73	UK	22.85	UK	14.31	UK	23.89	UK	17.50
3	Australia	50.02	Australia	9.55	Australia	14.14	Taiwan	11.47	Canada	9.4	Taiwan	14.37
4	Canada	43.68	Israel	6.41	Canada	11.23	Israel	10.78	Australia	8.73	Canada	9.56
5	Taiwan	42.04	Canada	6.28	Israel	8.03	Australia	9.92	Israel	8.01	Australia	7.68
6	Israel	38.64	Taiwan	5.60	Taiwan	5.61	New Zealand	8.00	Netherlands	7.44	Spain	7.00
7	Spain	28.79	Germany	5.47	Greece	5.40	Canada	7.21	Spain	5.00	Israel	5.41
8	Netherlands	21.24	Spain	4.79	Spain	5.00	Spain	7.00	Taiwan	4.99	South Africa	5.00
9	Turkey	16.67	New Zealand	3.73	Netherlands	5.00	Netherlands	6.59	Turkey	4.75	Turkey	4.77
10	South Africa	15.16	South Africa	3.2	France	4.68	Sweden	4.20	Greece	4.00	Sweden	4.00

Will be

- Phenomena observed
- Gap between research and education practice
- Gap between research and cultural expectation
- Gap between research's target population and local population structure
- Gap between research's quantitative output (publications) and qualitative impact (original theoretical ideas)