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Investigation of middle school students' visual math literacy self-efficacy perceptions

Sare Sengul ^a;A n A fA n A ;A A AG ;AN n A w ;A5211;A

c ;A

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Selda Ozdisci ^c;AN n A ;A7211;A n ;A A

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New Trends and Issues Proceedings on Humanities and Social Sciences.] 52;A 575
572 A w c fA n A

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Abstract

A A ;A A n A A w An A A 'Aw An A A fb ffb A A n A fA ffb A
w c A ;A A w ;An A w n ;A [AG A A ;A An A An A A A A
A A A 571An A A A n A fb n Afb n A A'W AN A A fb ffb A
A "A A A A A A An A A 'Aw An A A fb ffb A
Afb A Ac A An A w A A A A fb A ffb Ac A A 'Aw An A A fb
ffb A A A A A A w A A A A ;A A A fb A ffb Ac A A
w An A A fb ffb A A A An A w n A A 'A A w AA Ac w A
A Aw An A A fb ffb A A A An n A w n A AA A n A
A A AA fb An A w A Ac Aw An A A fb ffb A A An A
w n AC ;Aw An A A fb ffb A A A 'A A w A A
.AV An A :A fb ffb A :An A A A

*A AG A . Yasemin Kaba;A n A fA n A ;AG A fA ;A

A w ;52491;A ;A A

E-mail address.A n @AA .A¹1373[4142111

1. Introduction

C A A n A r n Afb A A A Ac A A n Afb w A A A A
A A fb n A A A AwA ;A A A c A A Ac A A w ;A fb ;A ;A
A A A ffb A A fba A A A w A A fba A A A n A
;A A ;An A ;Av A A An n A A A A3114:A ;A
3121[AG A w n A A fb n A A A w A n A An A fba
n n A A) N;A2'9'1[AN n A A A c A An n A A
Afb A A w A ffb A A A A A) ;A2'1'1[A A A)3117[;A A
n A Ac Ac A A A A A A A A fbn n A A A nn A
N A A A3119[A A An n A A w w A A A A
A A A A A A A An n A A A w A A c n A
N n A A A w A An n A fb n A A fba A A A A
A A ;A3119[A
A A A A Ac Aw A A A Ac A Aw An A A A A
A An ;A n A A A Av A n A A A ffb A ;A ;A n A
fb A A ;A3119[A c A AA A A A A A AfbA An A A A :A A
n A A A Ac A n nc An A A A An A A A AA An ;A
w A A An A Acj w A A w A A n A A A A A A
Aw An An AA A c Afb An w A A An n A)C n &A
;A3123[A ;A A AA A Ac An n A A Aw A A
) ;A3114[A A A A Afb A Ac A c A2'79[A AA A Afbw A
n n A 'A A AC n A A A)3123[A c Aw An n A
A A Aw Aw Afb A c n A An n Aw Afb A Afb n A
A A A A3115[;Aw A An n A A w A A A A A A
A A A y A w A A ;A ;A n A An wn A A A
w Afb A A
A A A ;A A A w A An n A A Aw A A A A
fb A An w ;A A Ac w Afb w A A fb ffb A j ;A3112[A fb ffb A
A fb A A A w 'A j n A w A A A A fb A n A r A
w A A A A w A A A)C ;A2'97[A w A A A Afb ffb A
An A Afb A A fb n AA :A A A A w A A A A Ac A
A A A A A w ;A w A A A Afb ffb An An A
fb ffb A A Aw An A Afb A) &A n ;A3112:A n ;A311'1[A A A
fb n A A) nn n ;A3111[;A A A A A A A A w A Aw A
n n A fb ffb A Afb A A A A A A n A A w A Aw A
n n A A w Afb A A A A A n Afb ffb Av c A ;A ;An A
wn A [A A A A Ac Ac Afb n A A A Afb A A n Afb A A
A A A w Afb :A A A A A Av A A c Afb Ay A A A A
A

2. Method

2.1. Research method and study group

A An AAn A A A A A An A A c A A Afb
An A A n AA An AA Ac A AA Afb Ay A Ac A A
Afb A A)C ;A n ;A ;A &A n ;A3123[A A A ;A A A
n Afb A A Av An n A A fb ffb A Afb A A A
A A A A A AA c An A A A A Afb A w A571An A
A A A A A A A A Afb A37Afbn A59'12 [A A47An A

;A ;A c ;A &A ;A A3129[w A fbn A A 'Aw An A A fb ffb A A
 New Trends and Issues Proceedings on Humanities and Social Sciences.] A5)2[;A A575 572 A w c Afb n .A
 A
)72 1¹ [A57A fba A A42 95 [A A Ay A :A37A A39 29 [A A Ay A :A1A
 A29 4¹ [A A A9 A A A21¹ A A34 7¹ [A A A9 A A

2.2. Data collection and data collection tools

A A r Afb A A A Ac A A A n A fb n Afb n A A A
 A A A n A fb n Ac A A A A'W AN n A A
 fb ffb A A A VN [" A A A n A fb n Afb n ;A A A A A
 fb A A A ;A ;An A w n A fba A A A A w A fba A A
 y A c A AN A A w Ac A A A A A A A A2¹ 34A
 n c A3127;A A A A A51An [A

2.2.1. Visual math literacy self-efficacy perception scale (VMLSEPS)

A A An A Aw An A A fb ffb A A fba ;A Aw An A
 A fb ffb A A A VN [A w Ac AC n A A A3123[A A A
 A A A fba9A n A Afb A Afb A :fb A ;A A A A A
 A A A Ac Ac Afb n A A A A9A A A A A2¹ 1 AA A A A AA
 Aw An A A fb ffb A A A A A Ac A2¹ 1 259A A A A
 A A A :A259 95A A An n A A An n A :A4 49A A Ac A A
 Ac A A A c ' A A c A ffb Afb A A A A A1¹ 54A A c A
 ffb A w A A Afb A A A 774:A 1 39A A 94¹ A w A
 A A A ;A A c ' A A c Afb A A A A A A Afb A
 A Afb A Ac A 1 42A Afb A A c A ffb Afb A A c fb ;A A A 554:A 1 2¹ A
 A 931A w A A A ;A A c A ffb Ac A A A A A A
 ffb A A A A A Afb Ac A A w A AC ;A A fbn Afb A
 A fba A A A A A AfbA y Ac AY³/ 3 45:AN A 175:A G A 1 7:A
 G A 1 9:A G A 1 9:A G A 97:A G A 94[A n A A A A Afb Afb A A ;A
 3117:A ;A3119:A n ;A3111:A n ;A3115[A

2.3. Data analysis

G A fba ;A597A A A A c A A A A fba A A A w A
 y n Ac A A AA ;AA A n A A A A A Afb AA A n A
 fb n Afb n A AA A A Ay A A A A Afb n A A A A A
 fb A A A n A Afb AA A Ac An A A A w A A A A
 n Ac A A A ;AA A A A n A A A A A A Afb n A
 A A A A ;A A A A Afb n A Ayth

;A ;A c ;A &A ;A A3129[w A fAn A A 'Av An A A fb ffb A A
New Trends and Issues Proceedings on Humanities and Social Sciences.] A5)2[;A A575 572 A w c Afb n .A
A

Table 4. Visual math literacy self-efficacy perception & math achievement

N A w n A A A N A A

4. Conclusions, Implications and Recommendations

A A A A An A A 'Aw An A A fb ffb A A A
w ;A A A n A A Aw An A A fb ffb A A A A A
n A w A A A A A A c Afb n A A A A Ac AC A A
c A)3125[A w ;A n ;A A A A)3127[A A A A A 'A
w An A A fb ffb A A A c w A An A w A A A ;A A Ac A
A An A A 'Aw An A A fb ffb A A A A An A A
A w A A A A A A A A A A w A An w A 'A
A An A A A A w n A w Ac A A n A An n A A
A A A A A 'Aw An A A fb ffb A A A Ac A Ac A
A A c j A An A A c A

A Aw An A A fb ffb A A A fbn A A A A A A A
Aw c ;A A A A A A A A fb A ffb A An A Afbn A 'A
A A A A A A A A fbn A A A A AC &A c ;A
3125:A ;A3122[AC ;A A Ac A A Afbn A 'Aw An A A fb ffb A
A A A A A A A A A fbn A A n AA ffb A
Aw An A A fb ffb A A A fbn A Afbw Afbn A A n ;A A
&A ;A3127:A ;A &A c ;A3123:A ;A &A ;A3125[A w ;A A
A A A A A A Aw An A A fb ffb A A ffb A fb A
Afbw A fbn A A A &AC ;A3122:A ;A &A ;A3123[A A Afb n A
A w ;A A A A c A An AA A n A c A An fb A A ffb A A
Aw An A A fb ffb A A A A A A A Aw c AG A A
;A A A A A A Ac A fb A A w A A A Afb A A An A A A
fb n A A ffb A A A A A A 'A A A A w n A Aw A A A
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A A A AC &A c ;A3125:A ;A &A ;A3125[A A A n A A
A A A A A A A A A A A A A A A A A An A
A A 'A A A A A A A A A A A A A An A
Afb n A Afb A A An A c j Ac n An A ffb A A A A A A

AA A fbn A A ;A A A Afb A A A A Aw An A A fb ffb A
A fbn A ffb A fb A A An n A w n A A A fb
fb A A A A c j A A A A w n A j ;A3112:A n ;A3111[;A
A A AA AA A A A A A AC &A c ;A3125:A &AC ;A
3122:A ;A &A c ;A3123:A ;A &A ;A3125[A A A A Aw A
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Ac A Afb n An A A A A An A w n A A A Afb A A
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w n A Aw An A A fb ffb A A A

A AA fb A ffb A A Aw An A A fb ffb A A A fbn A A
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A A A fbn A A A A A A w A A A n A A
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Aw An A fb ffb A A A fbn A A Afb 'A A w Ac A
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 Hacettepe Universitesi Egitim Fakultesi Dergisi. 21;A 9 A
 C ;A A21 97[A social foundations of thought and action: A social cognitive theory A A .A A A
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