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: (NCTM, 2000)

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.(Sherin, 2002)

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.(NCTM, 2000:62)

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.(NCTM, 2000: 60)

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.(NCTM, 2000:53)

.(NCTM, 2000:61)

.(Cobb and Bauersfeld, 1995)

(Taplin, 1999)

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.(Pugalee, 2001)

(Wood, 1999)

(Jane et al., 1994)

.(Ruben Stein and Thompson, 2002)

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(Yackle and Cobb, 1994)

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.(NCTM, 2000:62)

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(Borasi, 1998)

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(Tunner and

Rossman, 1997)

.(Moyer, 2000)

(Garaham, 1998)

(De Pillo and Sovchik, 1997)

(Jane et al, 1994; Wood, 1999; Johanning, 2000; Bay and Regan, 2000; Borasi, 1998; Garaham, 1997; Tunner and Rossman, 1997; De Pillo and Sovchik, 1997; Cobb, 1994; Yackle and Mccronc and Marie, 1997).

(Mccronc and Marie, 1997)

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(Bay and Regan, 2000)

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(Huberman
 .and Middlebrooks, 2000)

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.(MacMillan and Schumacher, 2001: 436-437)

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(MacMillan and Schumacher,

.2001: 405)

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	106	105	104	103	102	101	
%94	1	1	1	1	%78	1	1
%91	%86	%86	1	1	%88	%89	2
%86	%86	%88	%89	%88	%78	%9	3
%90	%86	%91	%96	%96	%81	%93	

(2)

	96	95	94	93	92	91	
%9	%88	%89	%1	%86	%9	%89	1
%88	%88	%75	%1	%1	%78	%89	2
%83	%67	%67	%9	%89	%78	%75	3
%87	%76	%73	%89	%92	%82	%81	

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	106	105	104	103	102	101	
%88	%83	%83	1	1	%86	%71	1
%83	%8	%83	%8	%86	%83	%83	2
%79	%71	%6	%86	1	%8	%8	3
%83	%78	%76	%89	%95	%83	%78	

(4)

	96	95	94	93	92	91	
%81	%71	%86	1	%86	%71	%71	1
%76	%83	%83	%8	%71	%71	%67	2
%75	%67	%67	%83	%83	%67	%83	3
%77	%74	%79	%89	%8	%7	%74	

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	106	105	104	103	102	101	
%82	%71	%86	1	%71	%83	%86	1
%87	%86	%83	1	%86	%83	%86	2
%74	%71	%71	%83	%6	%71	%67	3
%81	%76	%8	%95	%75	%79	%8	

(6)

	96	95	94	93	92	91	
%81	%83	%67	%1	%83	%67	%86	1
%78	%71	%71	86 %	%86	%71	%86	2
%72	%71	%57	%83	%71	%83	%67	3
%77	%75	%65	%9	%8	%74	%8	

(%83) (104)
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	106	105	104	103	102	101	
%74	%63	%78	%86	%78	%75	%67	1
%78	%56	%63	%88	%7	%75	%63	2
%73	%71	%71	%75	%78	%78	%63	3
%75	%63	%71	%83	%77	%76	%64	

(8)

	96	95	94	93	92	91	
%69	%63	%63	%88	%75	%67	%63	1
%67	%57	%57	%8	%8	%6	%78	2
%71	%63	%63	%78	%78	%56	%67	3
%68	%61	%61	%81	%78	%61	%69	

(9)

%89	%87	%90	
%80	%77	%83	
%79	%77	%81	
%72	%68	%75	
%80	%77	%82	

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.(Wilson, 1993: 226)

(Heaton, 2000)

(Mendez, 1998; Smith, M.S., 2000)

(Stigler, et al., 2000)

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Mathematical Communication Strategies Used by Talented Students in the Upper Basic Stage in Jordan

*Sumailah A. Sabbagh**

ABSTRACT

The purpose of this study is to investigate mathematical communication strategies used by talented students of the upper basic stage in Jordan in the light of the National Council of Mathematics standards, (NCTM, 2000). The study responds to the following question in particular:

What are the mathematical communication strategies used by the talented students in the Upper Basic Stage? To answer the afore-mentioned question, the researcher randomly selected two sections randomly from the tenth and ninth grade in Jubilee School. Then six students from each section were selected according to the purposeful sample selection, as a case study. The data was collected from different sources: observations, interviewing and documents. The data was analyzed in the light of the communication standards recommended by (NCTM, 2000). To increase the internal validity, the researcher used the validation through triangulating resources.

The study results showed that talented students could successfully apply the communication mathematics strategies such as the organizing and consolidating of their mathematical thinking strategies; communicating their mathematical thinking coherently and clearly; analyzing and evaluating the mathematical thinking and strategies of others. The results of the study asserted the professional application of the communication strategies were used by some students more often than the others. The study also showed that the tenth grade, talented students used more of these strategies compared to the ninth grade students. Using clear mathematical language when given mathematical definitions showed that they need more attention.

The study urges mathematics teachers to give more attention to the communication strategies while teaching.

Keywords: Mathematical Communication, Talented Student.

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