"Can I Just Do the Math Please?" Interdiscursivity in a Novice Teacher's Classroom

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"Can I Just Do the Math Please?"
Interdiscursivity in a Novice Teacher's Classroom

Presentation of Work-in-Progress
Working Conference on Discourse Analysis in Education
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Context of study:

- A high school geometry classroom in an urban public charter school
- The teacher is a first year teacher who completed an undergraduate teacher preparation program
- The students are mostly in their second year of high school. All but two have been at this school since seventh grade.
- Class typical begins with the teacher going over homework. Students are then given guided notes and the teacher spends the majority of class time going through those, asking questions along the way. Class normally ends with five to ten minutes for students to work on classwork or homework.

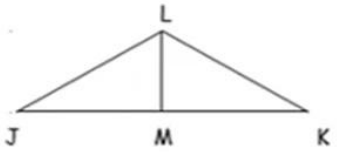
Interdiscursivity: relationship of discourses, genres and styles (Fairclough, 2003)

- Teacher's discourse of mathematics
- Students' discourse of mathematics
- Discourse of mathematics class

Context for clip

This is the second day back in January after winter break. Students have been reassigned class sections, so while these students all had this teacher for first semester geometry, this is their second day in this particular grouping. Earlier in class, the teacher introduced a new theorem for students to use in proofs about congruent triangles. Just prior to the clip, the teacher said they were going to do some proofs together and then changed the projector to show the theorem (picture below). The students have this exact diagram in their packet in front of them.

Ex 1) Given: $\overline{LM}$ bisects $\angle JLK$
$\overline{JL} \cong \overline{KL}$
Prove: $\overline{JM} \cong \overline{MK}$



Word Bank: Given, Given, $\overline{JM} \cong \overline{MK}$, SSS, SAS, AAS, ASA, HL, CPCTC, $\angle J \cong \angle K$, $\angle JLM \cong \angle KLM$, Def. of Bisector, Reflexive Property

Statements	Reasons
$\overline{LM}$ bisects $\angle JLK$	
$\overline{JL} \cong \overline{KL}$	
$\overline{LM} \cong \overline{LM}$	
$\Delta JLM \cong \Delta KLM$	

Line	Speaker	Message Unit
1	T:	Again these proofs I'm gonna have
2	T:	a nice little word bank for you guys to use
3	T:	I'll give you more than you need
4	T:	ok
5	K:	For why?
6	T:	So you guys can think a little bit
7	T:	k
8	T:	um
9	T:	so let's walk through it ok?
10	T:	we'll do two together then you can try one on your own
11	T:	ok?
12	T:	so
13	T:	first thing that we have
14	T:	LM line segment LM
15	T:	bisects
16	T:	angle JLK
17	S:	Given
18	T:	Yes
19	T:	Make sure you always look at what you're given
20	T:	in your proofs
21	T:	and also where you want to go
22	T:	what you want to prove
23	T:	are we given that's a reason
24	F:	I got a question
25	T:	Yes
26	F:	When are we ever gonna use this in real life
27	N:	Mr. C *(raises hand)*
28	T:	Logical thinking, proving
29	T:	You use it everyday
30	N:	Mr. C
31	T:	K you start with you start with
32	T:	it might not necessarily be triangles and such
33	T:	ok
34	T:	but like
35	N:	*(puts hand down)*
36	T:	you're in a certain situation
37	T:	you only have like
38	T:	you know
39	T:	certain things you can do but you want a different outcome
40	T:	how can you logically think through it
41	T:	*(nods, points to board)* that's how
42	N:	*(raises hand again)*
43	T:	you do it in your head

44	C:	*(talking to K)* you put what you gotta prove at the end
45	C:	*(points at N)* yes
46	N:	can you
47	N:	am I allowed
48	N:	this is what I would used to do *(inaudible)* last semester
49	T:	*(walks to N)*
50	N:	am I allowed to uh
51	N:	the ones that's blank in both sides
52	N:	just skip em and then use these to like *(inaudible)*
53	T:	Mmm that might sometimes work
54	T:	other times
55	T:	you typically want to go in order
56	T:	k
57	N:	*(nods)*
58	T:	so like this one *(points to board)* you don't want to skip
59	T:	when we say
60	T:	LM
61	T:	this little line segment in the middle is bisecting an angle
62	K:	*(to C)* No C
63	T:	what do we do
64	T:	what happens when you bisect an angle
65	C:	*(to K)* I said you got to put what you prove at the end
66	J:	you get two equal angles
67	C:	This is what you prove
68	T:	Yes
69	J:	so it's JLM is congruent to KLM
70	T:	and that's what goes in the blank
71	C:	*(taps K on head with pencil)* duh
72	T:	ok
73	T:	k so since that next line's completely blank
74	T:	we have to fill the whole thing
75	K:	*(pointing to paper)* J L M
76	T:	use what's right above it ok
77	K:	K L M
78	T:	say that the two resulting adjacent angles are then also congruent
79	J:	the reason def of bisectors?
80	K:	*(Points emphatically to paper)*
81	T:	*(nods and points at J, writes on board)*
82	C:	why'd you put this at the end
83	C:	we're going to put that right here
84	K:	*(sits back, then motions to board)*
85	C:	*(raises voice to be heard full class)* what did I tell you
86	C:	ya, you listen to me
87	T:	*(turns to C and K)* Is everything ok
88	C:	Ya she just didn't have no faith

References

Fairclough, N. (2003). *Analysing discourse: Textual analysis for social research.* London: Rutledge.