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Assessing Written Narratives:
A Comparison of Two Narrative Analysis Tools

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Why analyze older students' narratives?

- Narrative production is an extremely important component of overall language and communication abilities. Narrative skills are crucial for social and academic success.
- Narrative skills are evaluated from grades 1-12 (Common Core Standards Initiative, 2010).
- By the third and fourth grades, students are expected to "write narratives to develop real or imagined experiences or events using effective technique, well-chosen details and well-structured event sequences" (Common Core Standards Initiative, 2010).
- It is within the SLP's scope of practice to assess and intervene with respect to all levels of language ability, including discourse (which includes narration)
- It is within the SLP's scope of practice to address written, as well as oral language skills (ASHA, n.d.).
- Language sample analysis (LSA) is considered a best practice for school-based SLPs in the assessment of students

Barriers to Using Narrative Analysis

Although LSA is a best practice according to ASHA, many school-based SLPs are not engaging in this practice with upper elementary students. Recent surveys revealed the following barriers to LSA usage:
- Amount of time needed to obtain, transcribe, and analyze language samples
- Limited access to resources
- Limited training and expertise
- Inconsistency in analysis procedures

Purpose of Study

The purpose of this study is to examine the two proposed narrative analysis rubrics to determine:
- which is more time consuming
- which is more easily understood
- what the unique benefits of each individual scoring rubric are

Methods

Participants were four Communicative Sciences and Disorders students. Materials included 58 written narratives produced by students in grades 4 & 5, the INC and NSS scoring rubrics, and a stopwatch.

Each narrative was scored twice (once using INC & once using NSS) by two raters who were provided training in use of each rubric. Each rater was blinded to other raters' results until all analyses were completed. Raters noted the time in seconds needed to complete each analysis and kept notes about rubric instructions they found to be potentially confusing after scoring each narrative sample. Lastly, information obtained using each scoring rubric was analyzed for unique differences. Independent samples t-tests were conducted to determine interrater agreement for each scoring category.

Narrative Analysis Rubrics

Index of Narrative Complexity rubric (INC)

Narrative Element	0 Points	1 Point	2 Points	3 Points
Character – *Any reference to the subject of a clause in a narrative.*	No main character is included, or only ambiguous pronouns are used.	Includes at least 1 main character with nonspecific labels only.	Includes 1 main character with a specific name for the character.	Includes > 1 main character with specific names.
Setting – *Any reference to a place or time in a narrative.*	No reference to a general place or times.	Includes reference to a general place or times.	1 or more references to specific places or times.	
Initiating Event – *Any reference to an event or problem that elicits a response from the character(s) in a narrative.*	An event or problem likely to elicit a response from the character is not stated.	Includes at least 1 stated event or problem that is likely to elicit a response from the character, but there is no response directly related to that event.	Includes at least 1 stated event or problem that elicits a response from the character(s).	≥2 distinct stated events or problems that elicit a response from the character(s).
Internal Response – *Any reference to info about a character's psychological state including emotions, desires, feelings, or thoughts.*	No overt statement about a character's psychological state.	1 overt statement about a character's psychological state not causally related to an event or problem.	≥1 overt statements about a character's psychological state casually related to an event or problem.	
Plan – *Any cognitive verb reference that is intended to act on or solve an initiating event. It must include a "cognitive verb" that indicates a plan.*	No overt statement is provided about the character's plan to act on or solve the event or problem.	1 overt statement about how the character might solve the complication or problem.	2 overt statements about how the character might act on or solve the event(s) or problem(s).	≥ 3 overt statements about how the character might act on or solve the event(s) or problem(s).
Action/Attempt – *Actions are taken by main characters but are not directly related to the IE. Attempts are taken by the main character(s) that are directly related to the IE.*	No actions are taken by the main character(s).	Actions by main character are not directly related to the IE.	Attempts by main character are directly related to the IE.	
Complication – *An event that prohibits the execution of a plan or action taken in response to an initiating event.*	No complications.	1 complication that prohibits a plan or action from being accomplished.	Two distinct complications that prohibit plans or actions from being accomplished.	
Consequence – *Resolves the complication or does not resolve the problem. It must be related to the IE and be explicitly stated.*	No consequence to the action/attempt is explicitly stated.	1 consequence.	2 consequences.	≥3 consequences.
Formulaic Markers – *Any standard utterance used to mark the beginning or ending of a narrative.*	No formulaic markers.	1 formulaic marker.	≥2 formulaic markers.	
Temporal Markers	No temporal markers.	1 temporal marker.	≥ 2 temporal markers.	
Causal Adverbial Clauses	No causal adverbial clauses.	1 causal adverbial clause.	≥1 causal adverbial clauses.	
Knowledge of Dialogue – *Registered by a comment or statement made by a character or by characters engaging in conversation.*	No dialogue.	1 character makes a comment or statement.	≥2 characters engage in conversation.	
Narrator evaluations – *Any explanation provided in the story of justify why an action or event took place.*	No narrator evaluations.	1 narrator evaluation.	≥2 narrator evaluations.	

Narrative Scoring Scheme Rubric (NSS)

Narrative Element	Proficient 5 pts	Emerging 3 pts	Minimal/ Immature 1 pt
Introduction	**Setting** Child states general place and provides some detail about the setting. Setting elements are stated at appropriate place in story. **Characters** Main characters are introduced with some description or detail provided.	**Setting** Child states general setting but provides no detail. Description or elements of story are given intermittently through story. Child may provide description of specific element of setting OR Characters of story are mentioned with no detail or description.	Child launches into story with no attempt to provide the setting.
Character Development	Main character(s) and all supporting character(s) are mentioned. Throughout story it is clear that child can discriminate between main and supporting characters, but there is no clear narrates in the first person using character voice.	Both main and active supporting characters are mentioned. Main characters are no clearly distinguished from supporting characters.	Inconsistent mention is made of involved or active characters. Characters necessary for advancing the plot are not present.
Mental States	Mental states of main and supporting characters are expressed when necessary for plot development and advancement. A variety of mental state words are used.	Some mental state words are used to develop character(s). A limited number of mental state words are used inconsistently throughout the story.	No use is made of mental state words to develop characters.
Referencing	Child provides necessary antecedents to pronouns. References are clear throughout story.	Referents/antecedents are used inconsistently.	Pronouns are used excessively. No verbal clarifiers are used. Child is unaware listener is confused.
Conflict Resolution	Child clearly states all conflicts and resolutions critical to advancing the plot of the story.	Description of conflicts and resolutions critical to advancing the plot of the story is underdeveloped OR not all conflicts and resolutions critical to advancing the plot are present.	Random resolution is stated with no mention of cause or conflict OR conflict is mention without resolution. OR many conflicts and resolutions critical to advancing the plot are not present.
Cohesion	Events follow a logical order. Critical events are included, while less emphasis is place don minor events. Smooth transitions are provided between events.	Events follow a logical order. Excessive detail or emphasis provide on minor events leads the listener astray OR transitions to next event are unclear OR minimal detail is given for critical events OR equal emphasis is placed on all events.	No use is made of smooth transitions
Conclusion	Story is clearly wrapped up using general concluding statements.	Specific event is concluded, but no general statement is made as to the conclusion of the whole story.	Child stopped narrating, and listener may need to ask if that is the end.

Results

Narrative Element	Analysis of Interrater Disagreements using Index of Narrative Complexity Rubric 70% *interrater agreement*
Consequence	Lack of clarity- e.g. *If the narrative elements appear in an order different from the order in the rubric, are students given full credit for producing that element?*
Temporal Markers	Lack of clarity – e.g. *When a temporal marker is used more than once, should each iteration be counted?*
Causal Adverbial Clauses	Lack of clarity – e.g. *Can causal adverbial clauses not listed in the rubric examples be counted?*
Internal Response	Lack of clarity – e.g. *Can causal adverbial clauses not listed in the rubric examples be counted?*

Narrative Element	Analysis of Interrater Disagreements using Narrative Scoring Scheme Rubric 58% *interrater agreement*
Referencing	• Rubric includes subjective terminology • Lack of clarity in instruction of rubric
Conflict Resolution	• Lack of clarity in instruction of rubric – e.g. *Does a "resolution" imply a solution or just a result?*
Cohesion	• Lack of clarity in instruction of rubric – e.g. *What justifies a "smooth transition"?*

An independent samples t-test was conducted to compare the time in seconds to use the INC and the NSS. A statistically significant difference in scoring time was found for INC (M = 297.2, SD = 94.6) and NSS (M = 223.0, SD = 80.3). The magnitude of the differences in the means was large (eta squared = .175)

Conclusion

In response to research questions:
- Time: although the difference of 74 seconds between rubric use is statistically significant, it is not clinically significant
- Ease of use: although all raters agreed that the INC was slightly more time-consuming to use, all also agreed that it was easier to use, largely due to the numerous examples included in the rubric
- Unique contributions of each rubric: INC → more categories, greater detail, emphasis on episodic complexity; NSS → easier to analyze conclusion, flexible rater judgment (5 pt. scale v 3 pt. scale)

In response to SLPs' perceived barriers:
- Time: not a significant barrier
- Clinical expertise: interrater disagreements show this may be a barrier
- Resources: not a barrier - both rubrics are available free of charge
- Analysis procedures: perhaps a barrier due to interrater disagreements

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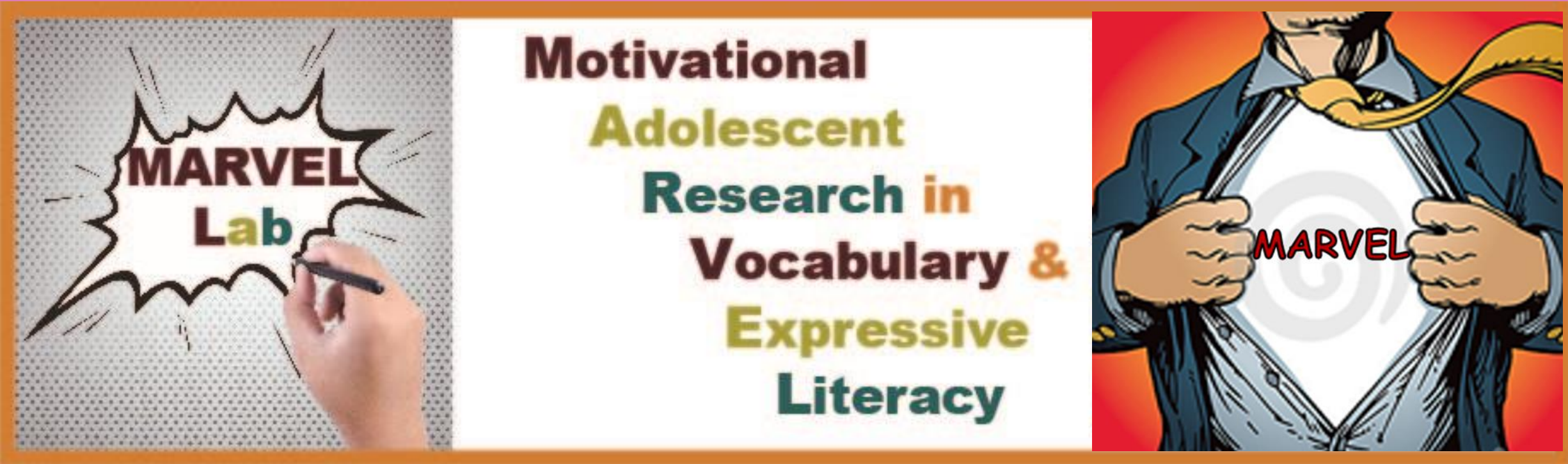
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