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#### **Research Article**

### Grade 11 Students' Multiple Intelligences: Inputs Towards Developing and Evaluating Technologically-Mediated Learning Materials on Discourse Development Patterns

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#### ABSTRACT

Learners around the world possess varying degrees of intelligence. With that, teachers should be aware of the multiple intelligence of the learners to consider them when preparing teaching materials or classroom activities. This is to aid the deteriorating performance of the learners specifically in language learning. As seen in the results of international assessments or even in national achievement tests, learners showed that they were not able to master the required competencies and one of the reasons is the ability to comprehend. This study aimed to determine the extent of use of the multiple intelligences of the Grade 11 students of Cainta Senior High School in the Division of Rizal which served as inputs in developing and evaluating technologically-mediated learning materials on discourse development patterns during the school year 2020-2021. With two groups of respondents, the students and the teachers, the developed material based on the multiple intelligence of the learners was evaluated in terms of authenticity, automaticity, clarity, comprehensibility, meaningfulness, and technicality. Using t-test, the gathered data was treated. The results revealed that there is no significant difference between the evaluation of students and teacher respondents whom both said that the technologically-mediated language learning material is very highly acceptable for teaching and learning the different discourse development patterns using the students' multiple intelligences.

*Keywords*: Discourse, Multiple Intelligences, Patterns, Reading and Writing, Senior High School

#### Introduction

In the current workstation of this researcher, the result of the Senior High School Exit Assessment showed that only ten (10) or 0.14% out of 7,165 senior high school students who took the test in the entire Division of Rizal

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Discutido, R. A. (2022). Grade 11 Students' Multiple Intelligences: Inputs Towards Developing and Evaluating Technologically-Mediated Learning Materials on Discourse Development Patterns. *International Journal of Multidisciplinary: Applied Business and Education Research. 3* (12), 2641 – 2654. doi: 10.11594/ijmaber.03.12.17 belonged to a moderate proficiency level in the Language and Communication examination. The largest number of examinees which was 4,190 or 58.48% belonged to low proficiency level. These results implied the deteriorating language performance of the students in the national examination. The result of the said assessment is one of the many assessment including the international assessments add to evidence that there is an existing problem to be addressed. In response, this study aimed to determine the extent of use of the multiple intelligences of the Grade 11 students of Cainta Senior High School in the Division of Rizal. The multiple intelligence profile of the learners served as inputs in developing and evaluating technologically-mediated learning materials on discourse development patterns. The study attempted to developed a material that would help the senior high school learners to easily learn the different discourse development patterns in response to the pressing issue.

### Methods

The descriptive method of research was used with three sets of data gathering instruments to gather the following data:

 the multiple intelligence profile of the learners Through checklist, the learners provided their multiple intelligence profiles. Weighted mean was used to determine the (5) five most prominent intelligence which served as the basis for developing language learning material.

- 2) the prescribed discourse development patterns by the teachers of English The teachers of English rank the most prescribed discourse development patterns that will be useful or challenging for the learners . The rank of discourse development pattern helped the researcher determine the (5) patterns to develop a material.
- 3) the evaluation of the students and teacher respondents on the developed learning materials. Through a questionnaire, the two groups of respondents evaluated the developed material. Using t-test, the researcher determine the significant difference between the evaluation of the two groups of respondents.

## **Results and Discussion**

### Extent of Use of the Multiple Intelligences of the Grade 11 Student Respondents as Perceived by Themselves

Table 2 shows the extent of use of multiple intelligences of Grade 11 students in Cainta Senior High School for School Year 2020-2021.

Multiple Intelligences	Weighted Mean	Verbal Interpretation	Rank
Verbal-Linguistic	3.63	Very High Extent (VHE)	1
Visual-Spatial	3.59	Very High Extent (VHE)	2
Logical	3.57	Very High Extent (VHE)	3
Interpersonal	3.55	Very High Extent (VHE)	4
Naturalist	3.50	Very High Extent (VHE)	5
Bodily-Kinesthetic	3.44	Very High Extent (VHE)	6
Musical	3.42	Very High Extent (VHE)	7
Intrapersonal	3.35	Very High Extent (VHE)	8
Existential	3.23	High Extent (HE)	9

Table 2. Extent of Use of the Multiple Intelligences of Grade 11 Student Respondents

It can be gleaned from the table that the Grade 11 student respondents used eight of their multiple intelligences at a Very High Extent (VHE) as evidenced by the weighted means

ranging from 3.35-3.63. Of the nine MIs, only existential was used at a High Extent (HE) as shown by its weighted mean of 3.23.

These findings imply that the Grade 11 student respondents use their multiple intelligences in language learning. This further implies that teachers should consider the MI of their students when preparing their learning materials. This finding is supported by the study of Sener and Cockalistan which claimedthat its respondents in their study also used almost all their multiple intelligences.

### Identified Top Six Discourse Development Patterns as Perceived by Grade 11 English Teachers

Table 3 presents the identified top six discourse development patterns as perceived by Grade 11 English Teachers which could be developed into technologically-mediated learning materials using the prominent multiple intelligences of the students.

Table 3. Identification of the Top Six Discourse Development Patterns as Perceived by Grade 11 English Teachers

Discourse Development Patterns	Frequency	Rank
Narration	10	1
Description	9	2.5
Definition	9	2.5
Classification	8	4.5
Comparison and Contrast	8	4.5
Cause and Effect	7	6
Process Analysis	4	7
Exemplification	3	8
Problem Solution	2	9
Total	60	

It could be gleaned from the data in the table that the top six patterns for developing a discourse based on the perceptions of ten English teachers are, as follows: narration, ranked 1; description, ranked 2.5; definition, ranked 2.5; classification, ranked 4.5; comparison and contrast, ranked 4.5; and cause and effect, ranked 6.

#### Evaluations of the Teachers and the Student Respondents on the Developed Technology-Mediated Learning Materials in Discourse Development Patterns

**Authenticity.** Table 4 shows the evaluations of the two groups of respondents on the developed TMLM on discourse development patterns in terms of authenticity.

Table 4. Teachers and Student Respondents Evaluations on the Developed Tea	chnologically-Mediated
Learning Materials as to Authenticity	

On Authoritisity		Respondents			
Un Authenticity The learning materials have	Stud	lents	Teachers		
i ne learning materials have:		VI	WM	VI	
1. practical and meaningful overview.	3.77	VHA	3.87	VHA	
2. learning goals which are realistic to achieve.	3.67	VHA	3.93	VHA	
3. inputs that match students' learning needs and interests.	3.57	VHA	3.87	VHA	
4. learning tasks using multiple intelligences which show real communicative situations.	3.73	VHA	3.93	VHA	
5. reflective activities that encourage the learners to look back on their growth and see clearly their progress.	3.70	VHA	3.87	VHA	
6. worthwhile and meaningful measurement of the learners' accomplishment.	3.57	VHA	3.93	VHA	
7. feedback which are correctly related to the learning as- sessment.	3.77	VHA	3.87	VHA	

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On Authenticity			Respondents			
			Students		chers	
The learning materials have:		WM	VI	WM	VI	
8. illustrations that make the learning tasks meaningful.		3.70	VHA	3.80	VHA	
<b>Overall Weighted Means</b>		3.68 VHA 3.88 V		VHA		
Standard Deviations		0.	42	0.	28	
Legend: WM - Weighted Mean VI - Verbal Interpretation HA - Highly Accept			table			

As shown in the table, both the students and the teacher respondents evaluated the developed technologically-mediated learning materials in discourse development patterns in terms of authenticity as **Very Highly Acceptable** as evidenced by the overall weighted means of 3.68 and 3.88 with 0.42 and 0.28 standard deviations, respectively. These finding could imply that the developed TMLM are based on situations which are reflective of what is actually happening in the community.

This further implies that the developed technologically-mediated learning materials on discourse development patterns have parts which are aligned to the real-world activities and situations. Learners can then relate to the content of the developed materials since these reflect their daily-life situations.

**Automaticity.** Table 5 shows the evaluations of the two groups of respondents on the developed technologically-mediated learning

materials on discourse development patterns in terms of automaticity.

It can be seen in the table that the students and teacher respondents perceived the developed materials as **Highly Acceptable** as evidenced by the overall weighted means of 3.65 and 3.87 with the standard deviations of 0.42 and 0.23, respectively. Although all the indicators had been perceived as highly acceptable, the student respondents, nevertheless evaluated the overview, learning goals, and learning tasks with the lowest weighted means. These findings imply the need to revisit the developed materials on the three aforecited parts which need to be improved.

**Clarity.** Table 6 shows the evaluation of the two groups of respondents on the developed technologically-mediated learning materials on discourse development patterns in terms of clarity.

Table 5. Teachers and Student Respondents'	Evaluations on the Developed Technologically-Mediated
Learning Materials as to Automatic	ity

On Automaticity	Respondents			
Un Automaticity The learning materials have	Stud	lents	Теас	chers
The learning materials have:		VI	WM	VI
1. presented an overview which could be easily understood or performed with minimal effort.	3.50	VHA	3.87	VHA
2. learning goals which are easily activated by the learners' behavior.	3.53	VHA	3.80	VHA
3. learning tasks that stimulate the multiple intelligences of the learners to automatically respond.	3.53	VHA	3.80	VHA
4. presented guide questions or statements that automati- cally formulate the generalizations.	3.73	VHA	3.87	VHA
5. included activities that elicit the learners' critical thinking about what they have learned and what to do next.	3.63	VHA	3.87	VHA
6. provided exercises to determine what they have gained from the learning tasks.	3.67	VHA	4.00	VHA
7. feedback which are readily recognized by the learners.	3.87	VHA	3.80	VHA

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Respondents				
Stud	ents	Teac	Teachers	
WM	VI	WM	VI	
3.70	VHA	3.93	VHA	
3.65	VHA	3.87	VHA	
0.4	42	0.	23	
	<b>Stud</b> WM 3.70 <b>3.65</b> 0.4	Respon   Students   WM VI   3.70 VHA   3.65 VHA   0.42 VHA	Respondents   Students Teac   WM VI WM   3.70 VHA 3.93   3.65 VHA 3.87   0.42 0.5	

Legend: WM – Weighted Mean VI – Verbal Interpretation VHA – Very Highly Acceptable

It can be gleaned in the table that the students and the teacher respondents' evaluations on the developed technologically-mediated learning materials on discourse development patterns as to clarity are **Very Highly Acceptable** as evidenced by the overall weighted means of 3.62 and 3.69 with 0.48 and 0.34 standard deviations, respectively. Based on the evaluations of the two groups of respondents, this finding implies that the developed learning materials have clearly stated the overview and the learning goals, logically presented the learning tasks, and stated the generalizations simply that guided the learners in their reflections and performance. The questions to measure the students' performance, the feedback, and the illustrations were also clearly presented in simple language.

Table 6. Teachers and Student Respondents' Evaluations on the Developed Technologically-MediatedLearning Materials as to Clarity

On Clarity The learning materials have:		Respondents				
		Students		chers		
		VI	WM	VI		
1. clearly stated overview.	3.50	VHA	3.80	VHA		
2. stated the learning goals in simple and concise words.	3.53	VHA	3.93	VHA		
3. included learning tasks involving the multiple intelligences which are clearly and logically presented.	3.70	VHA	3.80	VHA		
4. provided easy questions and stated to elicit simple general- izations about the learning tasks.	3.53	VHA	4.00	VHA		
5. simple directions to guide the learners in giving their reflec- tions about the lessons.	3.67	VHA	3.93	VHA		
6. clearly and simply stated questions to measure the perfor- mance of the learners in the lessons.	3.63	VHA	3.93	VHA		
7. feedback which are stated in simple language.	3.60	VHA	3.87	VHA		
8. illustrations which are clearly presented.	3.80	VHA	3.87	VHA		
Overall Weighted Means	3.62	VHA	3.89	VHA		
Standard Deviations	0.48 0.34					
Legend WM Weighted Mean VI Verhal Interpretation		wy High	V Accor	tabla		

Legend: WM – Weighted Mean VI – Verbal Interpretation VHA – Very Highly Acceptable

It further implies that the developed learning materials could be adapted for the use of the Grade 12.

**Comprehensibility.** Table 7 shows the evaluation of the students and the teacher

respondents on the developed TMLM on discourse development patterns in terms of comprehensibility.

On Comprehensibility	Respondents			
The learning materials have:		Students		hers
		VI	WM	VI
1. organized the overview in a language which is easy to under- stand.	3.70	VHA	3.80	VHA
2. learning goals which can easily be understood by the learners.	3.77	VHA	3.93	VHA
3. included learning tasks with simple directions to follow and understand.	3.70	VHA	3.93	VHA
4. used simple language in guiding the learners to state the gen- eralizations about the lessons learned.	3.67	VHA	4.00	VHA
5. guided the learners with simple statements necessary to elicit their reflections about the lessons.	3.70	VHA	3.93	VHA
6. provided assignment questions and exercises which could be easily understood by the learners.	3.63	VHA	3.87	VHA
7. stated the feedback using simple language.	3.50	VHA	3.87	VHA
8. presented simple illustrations to assist the learners in under- standing the tasks.		VHA	4.00	VHA
Overall Weighted Means	3.68	VHA	3.92	VHA
Standard Deviations	0.4	17	0.1	17

Table 7. Teachers and Student Respondents' Evaluations on the Developed Technologically-MediatedLearning Materials as to Comprehensibility

Legend: WM – Weighted Mean VI – Verbal Interpretation VHA – Very Highly Acceptable

It can be seen in table that the students and the teacher respondents' evaluation on the developed TMLM on discourse development patterns in terms of comprehensibility is Very Highly Acceptable as evidenced by overall weighted means of 3.68 and 3.92 with 0.47 and 0.17 standard deviations, respectively. These findings mean that the learning materials have organized parts such as the overview, learning goals, learnings tasks, generalizations, questions, exercises, and feedback thus making all the contents easy to understand. However, it is noticeable that the student respondents perceived the feedback with the lowest weighted mean. This could mean that the answers to the learning tasks should be reviewed so that the students will understand the responses better especially when open ended questions were asked. This is evidenced by the students' standard deviation of 0.47 which is quite big.

**Meaningfulness.** Table 8 shows the evaluation of the students and the teacher respondents on the developed TMLM on discourse development patterns in terms of meaningfulness.

It can be gleaned from the data in the table that the students and the teacher respondents

rated the developed TMLM on discourse development patterns in terms of meaningfulness as Very Highly Acceptable as evidenced by the overall weighted means of 3.70 and 3.88 with 0.38 and 0.25 standard deviations, respectively. The big standard deviation of the student respondents could mean that there are students who were not convinced of the meaningfulness of the materials. The overall findings could mean that the developer of the learning materials have considered the prior knowledge, experiences, and relevance of the materials to the learners so as to be meaningful and significant to them.

These findings further imply that the learning materials are well-thought of and thus they are very well-acceptable to the target clientele, the students and the teachers. However, a close look at the results further imply that the overview and situations used in the lessons should be improved as the evaluators gave the overview, relevance of the learning, the situations in the materials the lowest weighted means of 3.63. Thus, the overview and the situations reflected in the materials must be revisited to make them more meaningful to the students.

On Maaningfulnaag	Respondents				
Uli Medilingiulless	Stuc	lents	Tead	chers	
The learning materials have:	WM	VI	WM	VI	
1. presented the overview by linking the students' prior knowledge to the new lesson.	3.63	VHA	3.87	VHA	
2. provided learning goals which are relevant to the daily lives of the learners.	3.73	VHA	3.87	VHA	
3. included learning tasks which are significant and relevant to the learners.	3.67	VHA	3.87	VHA	
4. provided relevant and interesting situations to guide the learners in stating the general concepts gained from the lessons.	3.63	VHA	3.93	VHA	
5. linked the lessons learned to their previous practices which could be the basis for improvement.	3.80	VHA	3.87	VHA	
6. stated questions which are related to learners' everyday activ- ities.	3.80	VHA	3.93	VHA	
7. presented the feedback to the assessment questions in mean- ingful context.	3.67	VHA	3.80	VHA	
8. provided the lessons with interesting and significant pictures, diagrams, and the like.	3.67	VHA	3.93	VHA	
Overall Weighted Means	3.70	VHA	3.88	VHA	
Standard Deviations	0.	38	0.	25	

Table 8. Teachers and Student Respondents' Evaluations on the Developed Technologically-MediatedLearning Materials as to Meaningfulness

**Technicality.** Table 9 shows the evaluation of the students and the teachers respondents on the developed technologically-mediated learning materials on discourse development patterns in terms of technicality.

developed TMLM on discourse development patterns as to technicality as **Very Highly Acceptable** as shown by the overall weighted means of 3.70 and 3.94 with 0.44 and 0.28 standard deviations, respectively.

It can be seen in the table that the students and teacher respondents evaluated the

Table 9. Teachers and Student Respondents'	Evaluations on the Developed Technologically-Mediated
Learning Materials as to Technicalit	у

On Tachnicality	Respondents					
Un recinicality The learning materials have (are:	Stud	lents	Teac	chers		
i në learning materiais nave/are:	WM	VI	WM	VI		
1. well-organized format or structure.	3.73	VHA	3.93	VHA		
2. been presented using a learning management system (LMS) which is user-friendly.	3.70	VHA	3.93	VHA		
3. graphic user interface which is appealing and appropriate to the learners' level of interest.	3.73	VHA	3.93	VHA		
4. LMS icons and buttons which are easy to understand.	3.57	VHA	4.00	VHA		
5. accessible to the learners through android phones, laptop computer, CD's and USB.	3.67	VHA	3.93	VHA		
6. used in different platforms such as online, offline, classroom setting, etc.	3.70	VHA	4.00	VHA		
7. observed correct mechanics such as spelling, punctuation, capitalization, spacing and format.	3.63	VHA	3.87	VHA		

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On Technicality	Respondents					
The learning materials have (area	Stud	ents	Teachers			
The learning materials have/are:	WM	VI	WM	VI		
8. well-planned overall design reflecting good planning of all parts.	3.83	VHA	3.93	VHA		
Overall Weighted Means	3.70	VHA	3.94	VHA		
Standard Deviations	0.	44	0.	28		

It can be seen in the table that the students and teacher respondents evaluated the developed TMLM on discourse development patterns as to technicality as Very Highly Acceptable as shown by the overall weighted means of 3.70 and 3.94 with 0.44 and 0.28 standard deviations, respectively. These results indicate that the learning materials have an acceptable format with correct mechanics such as spelling, punctuation, capitalization, and spacing. The materials are also user friendly since the icons and buttons are easy to understand and that these materials are accessible through android phones, laptop computer, CDs, and USB whether these are online, offline, in face to face classroom setting, etc. With these characteristics, it is implied that the developed learning materials are highly recommended by the respondents for use. However, some student respondents rated the LMS icons and the buttons with the lowest weighted mean of 3.57. This finding is also reflected in the big standard deviation of the student respondents.

Table 10 presents the summary of the two groups of respondents' evaluations on the TMLM learning materials on discourse development patterns in terms of authenticity, automaticity, clarity, comprehensibility, meaningfulness, and technicality.

The table clearly manifests that the developed TMLM on discourse development patterns are **Very Highly Acceptable** to the students and teacher respondents in terms of the six criteria with overall weighted means ranging from 3.62 to 3.70 and the grand weighted mean of 3.67 for the students and the teachers' weighted means ranging from 3.87 to 3.94 and the grand weighted mean of 3.90. These results imply that the developed learning materials are very highly acceptable to both groups of respondents.

Technologically-Mediated Learning Materials	
Table 10. Summary of the Teachers and the Student Respondents' Evaluations on the Deve	eloped

		Respo	ndents	
Criteria	Stud	ents	Teac	hers
	OWM	VI	OWM	VI
a. Authenticity	3.68	VHA	3.88	VHA
b. Automaticity	3.65	VHA	3.87	VHA
c. Clarity	3.62	VHA	3.89	VHA
d. Comprehensibility	3.68	VHA	3.92	VHA
e. Meaningfulness	3.70	VHA	3.88	VHA
f. Technicality	3.70	VHA	3.94	VHA
Grand Weighted Means	3.67	VHA	3.90	VHA

Note: OWM – Overall Weighted Mean

These findings are supported by the study of Magtagad which remarked that the multiple intelligences of the students should be taken into consideration when preparing learning materials. Significant Difference between the Evaluations of the Two Groups of Respondents on the Developed Technologically-Mediated Learning Materials on Discourse Development Patterns The computed results of the significant difference with the evaluations of the two groups of respondents on the developed technologically-mediated learning materials on discourse development patterns are shown in Tables 11 to 16.

**Authenticity.** Table 11 shows the test of significant difference in the respondents' eval-

uations on the developed technologically-mediated learning materials on discourse development patterns in terms of authenticity.

The table shows that at 5% significance level with 43 degrees of freedom, the critical t value is 2.02 which is greater than the computed t value of 1.65. Therefore, the statistical decision is not to reject the null hypothesis.

Table 11. Test of Significant Difference between the Evaluations of the Two Groups of Respondentson the Developed Technologically-Mediated Learning Materials Regarding Authenticity

Respondents	n	OWM	s	Computed t-Value	Critical t-value	Decision		Interpretation
Students	30	3.68	0.42	1.45	2.02	Failed to	reject	Not Cignificant
Teachers	15	3.88	0.28	1.05	2.02	the H <sub>0.</sub>		Not Significant
Note: n – number of respondents				s – Standard Deviation			H <sub>0</sub> – Null Hypothesis	
Level of Significance, $\alpha = 5\%$				Degrees of I	Freedom, o	df = 43		

This means that there is no significant difference in the evaluations of the students and the teacher respondents on the developed technologically-mediated learning materials in discourse development patterns in terms of authenticity. This finding implies that the students and the teacher respondents strongly agree that the developed materials have been

well-prepared considering their practicality and relevance to real life situations.

**Automaticity.** Table 12 shows the test of respondents' evaluation on the developed technologically-mediated learning materials on discourse development patterns in terms of automaticity.

Table 12. Test of Significant Difference between the Evaluations of the Two Groups of Respondentson the Developed Technologically-Mediated Learning Materials Regarding Automaticity

Respondents	n	OWM	S	Computed t-Value	Critical t-value	Decision	Interpretation
Students	30	3.65	0.42	1.00	2.02	Failed to reject	Not Significant
Teachers	15	3.87	0.23	1.90	2.02	the H <sub>0.</sub>	Not Significant

A perusal of the data in the table show that the computed t-value of 1.90 is less than the critical t value of 2.02. Hence, the statistical decision is not to reject the null hypothesis. At 5% level of significance, this means that there is no significant difference between the evaluations of the students and the teacher respondents on the developed technologically-mediated learning materials in discourse development patterns in terms of automaticity.

This finding implies that the two groups of respondents both believe that the learning materials could develop the language skills of the students in developing discourse patterns in a fast and easy way through the varied activities **Clarity.** Table 13 shows the test of significant difference in the respondents' evaluations on the developed technologically-mediated learning materials on discourse development patterns in terms of clarity.

As reflected in the table, the computed t value of 1.94 is below the critical

t value of 2.02. At 5% significance level, this means that the null hypothesis cannot be rejected. Thus, there is no significant difference in the evaluations of the students and the teacher respondents on the developed technologicallymediated learning materials in discourse development patterns in terms of clarity.

Respondents	n	OWM	S	Computed t-Value	Critical t-value	Decision	Interpretation
Students	30	3.62	0.48	1.0.4	2.02	Failed to reject	Not Cignificant
Teachers	15	3.89	0.34	1.94	2.02	the H <sub>0.</sub>	Not Significant

Table 13. Test of Significant Difference Between the Evaluations of the Two Groups of Respondentson the Developed Technologically-Mediated Learning Materials Regarding Clarity

This implies that the respondents agree that the developed materials are very clear.

**Comprehensibility.** Table 14 shows the test of significant difference in the respondents'

evaluations on the developed technologicallymediated learning materials on discourse development patterns in terms of comprehensibility.

Table 14. Test of Difference Between the Evaluations of the Two Groups of Respondents on the Devel-<br/>oped Technologically-Mediated Learning Materials Regarding Comprehensibility

Respondents	n	OWM	S	Computed t-Value	Critical t-value	Decision	Interpretation
Students	30	3.68	0.47	1.02	2.02	Failed to reject	Not Significant
Teachers	15	3.92	0.17	1.92	2.02	the H <sub>0.</sub>	Not Significant

It could be seen in the table that the computed t-value of 1.92 is lower than the critical t value of 2.02. At 5% level of significance, the statistical decision is not to reject the null hypothesis. This means that there is no significant difference in the evaluations of the students and the teacher respondents on the developed technologically-mediated learning materials in discourse development patterns in terms of comprehensibility.

This implies that the two groups of respondents believe that the developed learning materials could be easily understood by the users.

**Meaningfulness.** Table 15 shows the test of significant difference in the respondents'

evaluations on the developed technologicallymediated learning materials on discourse development patterns in terms of meaningfulness.

As clearly shown in the table, the computed t value of 1.70 is smaller than the critical t value of 2.02. Therefore, the statistical decision is to not to reject the null hypothesis. At 5% level of significance, this concludes that there is no significant difference in the evaluations of the students and the teacher respondents on the developed technologically-mediated learning materials in discourse development patterns in terms of meaningfulness.

Table 15. Test of Significant Difference between the Evaluations of the Two Groups of Respondents on the Developed Technologically-Mediated Learning Materials Regarding Meaningfulness

Respondents	n	OWM	S	Computed t-Value	Critical t-value	Decision	Interpretation
Students	30	3.70	0.38	1 70	2.02	Failed to reject	Not Significant
Teachers	15	3.88	0.25	1.70	2.02	the H <sub>0.</sub>	Not Significant

This implies that the respondents strongly agree that the developed technologically-mediated learning materials on discourse development patterns are significant and relevant to the daily lives of the learners. **Technicality.** Table 16 shows the test of significant difference in the respondents' evaluations on the developed technologically-mediated learning materials on discourse development patterns in terms of meaningfulness. Checking on the table, the computed t value of 1.92 is less than the critical t value of 2.02. At 5% level of significance, this means that the null hypothesis cannot be rejected. As a result, there is no significant difference in the

evaluations of the students and the teacher respondents on the developed technologicallymediated learning materials in discourse development patterns in terms of technicality.

Table 16. Test of Significant Difference between the Evaluations of the Two Groups of Respondentson the Developed Technologically-Mediated Learning Materials Regarding Technicality

Respondents	n	OWM	S	Computed t-Value	Critical t-value	Decision	Interpretation
Students	30	3.70	0.44	1 0 2	2.02	Failed to reject	Not Significant
Teachers	15	3.94	0.28	1.92		the H <sub>0.</sub>	

This implies that the two groups of respondents strongly agree that the developed technologically-mediated learning materials in discourse development patterns and the LMS used are user friendly, easy to navigate, and have well-planned overall design reflecting good planning of all parts.

### Summary of Test of Significant Difference between the Evaluations of the Two Groups of

### Respondents on the Developed Technologically-Mediated Learning Materials

Table 17 shows the summary of the test of significant difference in the respondents' evaluation on the developed technologically-mediated learning materials on discourse development patterns in terms of authenticity, automaticity, clarity, comprehensibility, meaningfulness, and technicality.

Critoria	Students		Teachers		t <sub>computed</sub>	Decision	Internetation
Criteria	OWM	S	OWM	S	Value	Decision	interpretation
a. Authenticity	3.68	0.42	3.88	0.28	1.65	Failed to Reject the $H_{0.}$	Not Significant
b. Automaticity	3.65	0.42	3.87	0.23	1.90	Failed to Reject the $H_{0.}$	Not Significant
c. Clarity	3.62	0.48	3.89	0.34	1.94	Failed to Reject the $H_{0.}$	Not Significant
d. Comprehensibility	3.68	0.47	3.92	0.17	1.92	Failed to Reject the H <sub>0.</sub>	Not Significant
e. Meaningfulness	3.70	0.38	3.88	0.25	1.70	Failed to Reject the H <sub>0.</sub>	Not Significant
f. Technicality	3.70	0.44	3.94	0.28	1.92	Failed to Reject the $H_{0}$ .	Not Significant
Note: a = 5%	df = 43				Cri	tical t Value = 2.02	

Table 17. Summary of Test of Significant Difference between the Evaluations of the Two Groups ofRespondents on the Developed Technologically-Mediated Learning Materials

Based on the table, the evaluations of the students and the teacher respondents on the developed technologically-mediated learning materials in discourse development patterns with respect to authenticity, automaticity, clarity, comprehensibility, meaningfulness and technicality do not show significant differences in their respective computed t-values which are all below the critical t values. These data indicate that the respondents' evaluations are similar to each other.

These findings imply that both the students and the teacher respondents strongly agree believe that the technologically-mediated learning materials on discourse development patterns are very much acceptable in terms of authenticity, automaticity, clarity, comprehensibility, meaningfulness, and technicality. It is worthy to note that the developed materials based on the multiple intelligences of the learners as evaluated by both respondents are effective in improving the language skills of the students in developing discourse patterns.

### Comments and Suggestions Offered by the Respondents to Further Improve the Developed Technologically-Mediated Learning Materials on Discourse Development Patterns

The following are the comments and suggestions of the two groups of respondents to further improve the developed technologicallymediated learning materials on discourse development patterns.

# Comments

The following are the comments of the students and the teacher respondents on the developed technologically-mediated learning materials on discourse development patterns:

- 1. The developed materials are presented artistically which can motivate the learners to understand better the materials.
- 2. The contents are suited to the level of the learners.
- 3. The materials are helpful not only to the learners but also to the teachers. It is very evident that the multiple intelligences of the students were considered in the development of the learning materials.
- 4. The learning materials were well-crafted. They were very useful especially in this time of pandemic.
- 5. The materials are accessible for digitized modular distance learning to students.
- 6. The materials have activities with varying levels of difficulty.
- 7. The materials are interesting because of the presented graphics
- 8. The materials could enhance the learners writing ability, most specifically the senior high school students in doing their research studies.

- 9. The developed materials could serve as inputs in designing more engaging learning materials to improve the learning performance and engagement of the students.
- 10. The developed technologically-mediated learning materials are very relevant to the present-day learners' needs.

# Suggestions

The following are the suggestions offered by the respondents to further improve the developed technologically-mediated learning materials.

- 1. Add activities that are across disciplines or other subjects.
- 2. Include transitional sentences to guide the learners from one activity to the next and to make them more self-directed.
- 3. Video tutorials can also be included.

# Conclusion

Based on the results of this study, the following conclusions are drawn:

- 1. The students from Cainta Senior High School very highly utilized eight of the multiple intelligences, namely: verbal-linguistic, visual spatial, logical-mathematical, interpersonal, naturalist, bodily-kinesthetic, intrapersonal, and musical while used existentialist intelligence to a high extent.
- 2. The TMLM could be developed using top six discourse development patterns namely narration, description, definition, classification, comparison/contrast, and cause and effect.
- 3. The TMLM could be developed based on the five multiple intelligences prominently used to a very high extent.
- 4. The developed technologically-mediated learning materials are appropriate for teaching and learning the different discourse development patterns using the students' multiple intelligences.
- 5. Both teachers and student evaluators very highly accepted the TMLM for teaching and learning use.
- 6. The developed TMLM could be improved by considering the comments and suggestions of the teachers and the students.

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