Enhancing Learning Outcomes in Garments Trade: A Needs-based Intervention Approach for Students

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Authors' contributions

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

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ABSTRACT

The study focused on the development and validation of Strategic Intervention Materials (SIMs) to enhance the least mastered skills of Grade 10 Garments Trades students. It covered topics on Sewing Machine Operations, Preparation and Cutting of Materials and Assembling the Blouse and Skirts. The Strategic Intervention Materials were validated by five (5) technical experts.. A 5-point rubric scale and interpretation based on the Standard criteria issued by the Department of Education (DepEd) Bureau of Secondary Education in 2005 was used in rating the materials. Descriptive statistics, particularly frequencies, percentages and means were used in the analysis and interpretation of data. The study was conducted at the Ilocos Norte College of Arts and Trades (INCAT) in Laoag City. This research employed universal sampling. The Grade 10students specializing in Garments Trades of INCAT for the school years 2013-2014, 2014-2015 and 2015-16 were used as respondents for the first phase of the study to analyze their least mastered competencies based on the results of their NC II certification. The sample consisted of 238 students, purely females, who are enrolled in Garments Trade for school years 2013-2014 (73 students), 2014-2015 (100 students) and 2015-2016 (65 students). Results of experts' validation and evaluation revealed that the guide card, activity card, assessment card, enrichment card and

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reference card of three SIMs developed were found to be valid. The developed SIMs have met the standards set by DepEd in developing such materials and are valid to enhance students least mastered skills along Garments Trade.

1. INTRODUCTION

"Philippine education is currently embarking on its most comprehensive basic education reform initiative to date," remarked former Secretary Armin Luistro of the Department of Education [1]. This reform, known as the K to 12 Program, encompasses Kindergarten and 12 years of education. The curriculum comprises six years of primary education, four years of Junior High School, and two years of Senior High School [2]. The primary goal of the program is to allow ample time for students to master concepts and skills, cultivate a lifelong love for learning, and equip graduates for further education, skills development, employment opportunities, and entrepreneurship. This transformative initiative holds great promise for the future of Philippine education [3].

The challenges are great and the task is daunting. The impetus for meaningful education is clear, which requires a different kind of Filipino – one who is capable to meet the realities of the modern world [4]. Philippine education aims to develop every Filipino to the fullest. The Filipino must be a lifelong learner, holistically developed, globally-oriented and locally-grounded [5].

With the K to 12 curriculum, Filipino graduates are envisioned to possess sufficient mastery of basic competencies to develop themselves to the fullest; be emotionally developed and competent to live a meaningful life [6]; be socially aware, pro-active, and involved in public and civic affairs; and be of contribution to the development of a progressive, just and humane society; be adequately prepared for the world of work or entrepreneurship or higher education; and be legally employable and globally competitive [7].

The present system aims for holistic development and acquisition of 21st century skills with emphasis to consider the nature and needs of the learners, and at the same time, responding to global needs [8]. It is also outcomes-based and is anchored on the principles of inclusive education, learner's growth and development, and teaching and learning and assessment. The

desired outcomes include content and performance standards. The former includes what the student should know (facts and information), what they do (process/skills) and what understanding they construct as they process the information. The later includes what the students could do or how they use their learning and understanding. The students are expected to produce products and/or performances to prove that they can apply what they learn in real-life situations [5].

The K to 12 Secondary Education is a spiral progression curriculum that starts from simple to complex which requires revisiting prior knowledge [9]. Through this, the students could master the desired competencies by revisiting the subject matter several times and relating new knowledge and skills with the previous one. Moreover, students progress effectively in their learning, as it entails going from simple to complex knowledge and skills [10].

In the case of Technology and Livelihood Education (TLE), since this subject is geared toward the development of technological proficiency and is anchored on knowledge and information, entrepreneurial concepts, process and delivery, work values and life skills, it means teaching facts, concepts, skills and values in their entirety [11]. This means that TLE is built on adequate mastery of knowledge and information, skills and processes, and acquisition of right work values and life skills [12].

Subsequently, TLE is, by nature, dominantly a skill subject, the teacher then must engage students in an experiential, contextualized, and authentic teaching-learning process [13]. It is a subject in which students learn best by doing. It is integrative in approach, such as integrating entrepreneurship with all the areas of TLE [14]. That is why, at present, learning modules have been provided and are used in teaching the different trade areas [12].

But, it has been observed that the learning modules prepared have been found to have used high-sounding language and technical terms that

are difficult to use by the students who are beginners in the trade areas [15]. They might be able to read the information but could hardly understand or digest it [16]. Or, they could not interpret the directions or steps to accomplish the given task in their performance tests for they are not stated clearly and simply for their level [17]. It seems that the learning modules are designed for experts or those who are already working in the fields, and not for beginners [18]. Furthermore, students need the help or assistance of their peers to facilitate learning concepts and skills before they could perform the basic skills they need to acquire or master in a particular trade skill [19].

With this scenario, there is a need to go back to the less mastered concepts and skills of the students without repeating the whole learning process. This is made possible by using Strategic Intervention Material (SIM), an instructional material meant to reteach concepts and skills. This is given to students to help them master a competency-based skill which they were not able to develop during the regular classroom teaching with minimal intervention or guide of teacher and fun activities. It is in this respect that the researcher had thought of developing Strategic Intervention Materials (SIMs) in Garments Trade that would facilitate the mastery of learned facts, concepts, skills and values. SIM is an instructional material customarily designed to reteach the least mastered competencies. It focuses on letting students revisit what they have not so much learned.

1.1 Statement of the Problem

This study aimed to develop and validate Strategic Intervention Materials (SIM) in Garments Trade for Grade 10 students that would enhance learning and facilitate the mastery of skills of the students based on the needs of learners.

Specifically, it sought to answers to following questions:

1. What are the least mastered competencies based on the results of the NC II assessment of students for the school years 2013-2014, 2014-2015 and 2015-2016?
2. What SIMs can be developed based on the least mastered competencies of students in the last three school years?

3. What is the content validity of the SIM as evaluated by experts in terms of:
   a. Guide Card?
   b. Activity Card?
   c. Assessment Card?
   d. Enrichment Card? and
   e. Reference Card?

1.2 Significance of the Study

This study aims to give a clear picture of how students perform and interact with given situations or interventions and would inspire people who work with them to understand their nature and create more effective classroom experiences. In particular, the study is important for the following:

The findings of the study serves as a basis for administrators to plan appropriate interventions to suit the needs of students, especially those with learning difficulties. This will contribute to the attainment of quality education in public schools.

Through this study, curriculum makers may be able to develop a curriculum that uplifts the competencies of the students and helps achieve quality education.

The result of the study may serve as the basis for TLE supervisors to improve instructional methods and strategies and identify other measures for achieving better competencies in TLE areas.

This could also be helpful to TLE teachers in planning and initiating appropriate strategic intervention materials for teaching TLE at any learning level inside the classroom and encouraging other teachers to upgrade their methods and techniques in their teaching.

This study could greatly help and motivate students to cope with their learning difficulties and be inspired to study hard to overcome their weaknesses in the Garments Trade.

Finally, this study may also serve as a valuable source of data for future researchers conducting their studies along the same lines.

1.3 Scope and Delimitations

This study developed and validated Strategic Intervention Materials for Grade 10 students of the Ilocos Norte College of Arts and Trades (INCAT).

The SIMs developed and validated were based on the results of the NC II Assessment derived from school years 2013–2014, 2014–2015, and 2015–2016. Moreover, this research is limited to the development and validation phases only. However, it was pre-tested with five learners to initially find out its effectiveness.

The validity of the SIMs is limited to the results of the evaluation made by the panel of experts.

Moreover, the SIMS are developed to address the specific gaps of learning within the confines of a specific time frame as employed in the study. Any changes to the educational landscape could not be addressed, since learning challenges and problems are changing and evolving.

2. METHODOLOGY

This presents the research design, locale of the study, population and sampling procedures, research instruments, data gathering procedure, statistical treatment of data and ethical consideration.

2.1 Research Design

This research is descriptive, employing a research and development (R and D) design. It developed Strategic Intervention Materials (SIMs) in dressmaking based on the least mastered competencies of Grade 10 students in the last three school years.

The first phase is competency analysis, where information is gathered about the students' least mastered competencies during their NC II assessment in dressmaking for school years 2013–2014, 2014–2015, and 2015–2016.

The second phase is the development of SIMs based on the needs of students as reflected by the results of the competency analysis. Here, tasks were identified and broken down to be more manageable. Activities were determined to enhance the least-mastered skills along the core competencies. It is in this stage that the blueprints for the design phase are assembled.

The third phase is content validation, whereby the developed SIMs were evaluated by five technical experts to ensure that they achieved the desired goals and that they were congruent with learning outcomes as needed by the learners.

2.2 Locale of the Study

The study was conducted at the Ilocos Norte College of Arts and Trades (INCAT) in Laoag City. INCAT has the biggest enrollment among all tech-voc providers in Region I, being an accredited skills assessment center for different occupational areas.

2.3 Population and Sampling Procedures

This research employed universal sampling. The Grade 10 students specializing in Garments Trade at INCAT for the school years 2013–2014, 2014–2015, and 2015–16 were used as respondents for the first phase of the study to analyze their least mastered competencies based on the results of their NC II certification. The sample consisted of 238 purely female students who were enrolled in the Garments Trade for the school years 2013–2014 (73 students), 2014–2015 (100 students), and 2015–2016 (65 students). These respondents came from heterogeneous sections handled by the researcher. The researcher had a total contact time with the students' of ten hours in a week, or two hours a day.

In the validation phase of the study, whereby the developed SIMs were subjected to content validations, five technical experts were employed as respondents: two (2) professors of MMSU teaching educational technology along with tech-voc education; two (2) experts in garments trade who are NC III holders; and one (1) education supervisor in TLE, particularly in the Department of Education, Division of Laoag City. The validators were chosen using the purposive sampling technique.

The technical experts were selected according to the facets of in the development of a SIM: the two professors teaching educational technology looked into the pedagogical quality of the material; two experts in garments technology assessed the content of the materials; and the educational supervisor evaluated the relevance of the material with the present curriculum, thus, ensuring its adaptability and relatability.

2.4 Research Instrument

The SIMs were validated using a validation tool using the following scale and interpretation based on the Standard criteria issued by the Department of Education (DepED) Bureau of Secondary Education in 2005:

Scale:	*Interpretation:*
5	VE- Very Evident
4	E- Evident
3	ME - Moderately Evident
2	LE - Less Evident
1	LtE - Least Evident

2.5 Data Gathering Procedure

After the approval for the conduct of this research, a request was made for the conduct of the study to the Vocational School Superintendent of INCAT. After which, the results of their competency assessment were used as a basis for developing SIMs. After the analysis of their least-mastered competencies and skills included therein, the SIMs needed were developed.

The content validation was done after consultation with other classroom teachers at INCAT and the research adviser, after which the SIMs were validated by five experts. After the validation, the suggestions, comments, and ratings of the experts were incorporated and considered in the further improvement of the developed SIMs.

2.6 Statistical Treatment of Data

Descriptive statistics, particularly frequency counting, percentage and mean were utilized to treat and analyze the data that were gathered in the study. In the validation of the developed SIMs the ranges of means used by issued by the Department of Education (DepED) Bureau of Secondary Education in 2005 were used:

Scale:	*Interpretation:*
4.20 - 5.00	VE - Very Evident
3.41 - 4.19	E - Evident
2.61 - 3.40	ME - Moderately Evident
1.81 - 2.60	LE - Less Evident
1.00 – 1.80	LtE - Least Evident

3. RESULTS AND DISCUSSION

This chapter presents a summary of the findings, conclusions and recommendations of the research. The summary presented in this chapter includes a restatement of the problem, research design, methodology and findings.

3.1 Least Mastered Competencies in Dress Making

Dressmaking NC II is the required certification for Grade 10 students under the new K to 12 curriculum, particularly under the Special Technical and Vocational Education Curriculum (STVEC). As a result, it becomes crucial for INCAT students to be well-prepared for the final NC certification. The results of this assessment not only showcase the quality of instruction but also demonstrate the effectiveness of preparing students for lifelong learning.

3.1.1 Results of the analysis of the NCII assessment results

Table 1 shows the least mastered skills and competencies of students based on the results of the assessment of students for Dressmaking NC II for the school years 2013-14, 2014-15, 2015-16.

Among the four blocks of core competencies, it can be gleaned from the Table 4 that the least mastered competencies based on the result of NC II assessment of the grade 10 for the last three years are: (1) *Prepare and Cut Materials of Casual Apparel;* (2) *Sew Casual Apparel;* and (3) *Apply Finishing Touches on Casual Apparel*. The least mastered competencies were not satisfactorily demonstrated by the candidates/students during the assessment, so the majority of them failed in these aspects.

Prepare and Cut Materials includes the following learning outcomes under its TESDA manual: (1) laid out and pinned patterns according to the grain line of the fabric; and (2)traced drafted pattern on the material or fabric. In the analysis made on the output of students during their NC II certification, majority of them fail to perform the following skills under this core competency: (1) straightening fabric ends; (2) re-aligning grain of the fabric and marking them, ready for the pattern drafting; (3) identifying the right side of the fabric; and (4) correct folding of fabrics for cutting, and (5) correct pinning of pattern ready for cutting.

One student remarked:

> "*Ti ngamin narigat a partena ket diay usto a panangikupin ti tela. Masapul nga ammom diay usto a linya ti telana. No madi diay kupin nan, madi metten diay putol nanton.*"

> [The difficult part is the correct folding of the fabric. You must know the correct line of the fabric. If the folding is wrong, the cutting would also be wrong].

Table 1. Least mastered competencies of students in Dressmaking based on NC II results

Core Competencies	SY 2013-2014				SY 2014-2015				SY 2015-2016			
	Passed	%	Failed	%	Passed	%	Failed	%	Passed	%	Failed	%
Draft and cut pattern for ladies casual apparel	73	100	0	-	100	100	0	-	65	100	0	-
Prepare and cut materials for ladies casual apparel	53	72.6	20	27.4	82	81.2	19	19.8	52	80	13	20
Sew ladies' casual apparel	53	72.6	20	27.4	82	81.2	19	19.8	52	80	13	20
Apply finishing touches on ladies casual apparel	53	72.6	20	27.4	82	81.2	19	19.8	52	80	13	20

Table 2. Mean Ratings of the Guide Cards of SIMs as perceived by the evaluators

Indicators	SIM 1		SIM 2		SIM 3	
	WM	DI	WM	DI	WM	DI
G 1. Gives a preview of what students will Learn	5.00	VE	5.00	VE	5.00	VE
2.Stimulates interest in the topic	5.00	VE	5.00	VE	5.00	VE
3. Presents the focus skills	5.00	VE	5.00	VE	5.00	VE
4.Mentions the learning competency (LC)	5.00	VE	5.00	VE	5.00	VE
5.States at least 3 sub-tasks (activities)	5.00	VE	5.00	VE	5.00	VE
6.Builds on prior learning/ prerequisite skills	5.00	VE	5.00	VE	5.00	VE
7. Mentions the concrete outcome or product students are expected to demonstrate/ produce	5.00	VE	4.80	VE	4.80	VE
8. Cites briefly the activities	4.80	VE	4.80	VE	4.80	VE
9.Challenges the learner in performing the tasks	5.00	VE	5.00	VE	5.00	VE
COMPOSITE MEAN	**4.98**	**VE**	**4.96**	**VE**	**4.96**	**VE**

Another student commented:

> "*Narigat ko pay ketdi nga ikabesa no ana't mausar iti panag-fold. Isu nga saan nga napintas nukua diay panakaputol na diay tela. Aglalo diay panagipan ti pin based iti pattern diak unay masurotan.*"

[It is really difficult to memorize what are to be used in the fabric folding. That is why the cutting of the fabric is not so much good. I particularly could not follow the pin placement based on the pattern.]

On the other hand*, Sew Casual Apparel* specifically includes the following learning outcomes: (1) prepared sewing machine for operation, and (2) sewed and assembled garment parts of casual apparel.

Admittedly, based on the researcher's observations as an assessor and classroom teacher, most students fail in this competency because of its technical qualities. Specifically, students and candidates fail in the following: (1) identification and operation of sewing machine parts; (2) needle threading; (3) performing sewing machine operations; and (4) assembling garments parts. Based on the interviews conducted among the students about why they encountered such difficulties, some students said that they had difficulty in threading the sewing machine which they used during the assessment. Others mentioned that they were not sure in lay-outing pattern on the fabric, confused about fabric folds and hard up in marking methods. Still others replied that they have problems in attaching collars, zipper and pockets which consumed too much of their time.

On sewing machine operation, one student interestingly said:

> "*Diak masurotan ti agipan ken agikkat ti bobbin. Uray diay agipan ti panait. Isu't mangibayag.*"

[I could not follow the putting and removing the bobbin. Even the threading. It is so time consuming.]

Another student disclosed:

> "*Karigatan iti NC II ti Dressmaking ket diay panagisilpo mismo ti partes diay daiten a bado. Ti permi a diak ammo ket diay kuelio, sleeves, ken zipper. Agtigerger nukua ti*

imakon. Diak nukua ammo ti sumaruno ng ubrakon.Aglalo ket time pressured."

[The most difficult in NC II Dressmaking is the assembling of parts of the dress to be sewed. I specifically could not perform putting the collar, sleeves and the zipper. My hands usually tremble and I could not decipher my next step. Especially that it is time pressured.]

The above reasons have caused the students not to perform core competency number 4 which is *Apply Finishing Touches on Ladies Casual Apparel*, which, according to the students, is already basic and easy, but they were not able to do it because they do not have time anymore. It consists of the following learning outcomes: (1) altered or modified completed casual apparel, (2) applied finishing touches; (3) trimmed excess threads of casual apparel; (4) pressed finished casual apparel; (5) packed the finished garment; and (6) observed safe work procedures.

When given a separate test regarding the last core competency, all students perfected it. Hence, the researcher is convinced that the students have mastered the competency. It is just the fact that they cannot perform such during their NC II assessment because they are stuck up at competency no. 3 and could not move on to the next. More so that in such assessments, they are not allowed to skip a competency without finishing the preceding ones.

The above findings indicate the need develop Strategic Instructional Materials (SIMs) along critical areas of Competency 2 (*Prepare and Cut Materials)*and 3 (*Sew Casual Apparel)*.

3.2 SIMs Developed Based on the Needs of Students and Teachers

Based on the findings and results of the analysis made on the least mastered competencies of students, particularly their performance on specific learning outcomes, three SIMs are needed by the students to relearn and master learning outcomes in Competency 2 (*Prepare and Cut Materials)*and 3 (*Sew Casual Apparel)* as core competencies in Dressmaking NC II.

Under Competency 2, the following are the salient points to be included: (1) straightening fabric ends; (2) re-aligning grain of the fabric and marking them ready for the pattern drafting; (3) identifying the right side of the fabric; and (4)

correct folding of fabrics for cutting; and (5) correct pinning of pattern ready for cutting.

On the other hand, under Competency 3, the following lessons should be highlighted: (1) identification and operation of sewing machine parts; (2) needle threading; (3) performing sewing machine operations; and (4) assembling garments parts.

Guided by the findings, three SIMs were developed with components as identified by DepEd Memorandum No. 117, series of 2005, namely: Guide Card, Activity Card, Assessment Card, Enrichment Card and Reference Card.

SIM 1 deals with *Preparing and Cutting Materials* in Garments Trade. Topics included are straightening fabric ends, identifying the right side of the fabric, lay-outing the pattern to the fabric, types of fabric folds, marking methods, laying patterns in plaids and stripes, cutting techniques, steps in preparing fabrics for cutting, and hands on activity. These topics were chosen based on the assessed needs on the students.

SIM 2 is all about *Sewing Machine Operations*. It includes topics on tension assembly, removing the bobbin, threading the lower portion of the machine, threading the bobbin, inserting the bobbin, needle and its parts, inserting the needle, and regulating stitches with hands on activity(threading the sewing machine)

SIM 3 focuses on *Assembling the Blouse and Pants*. It enables students to master steps in attaching the different parts of the blouse and pants particularly shawl collar, set-in sleeves, fly-front zipper and seam pocket with hands on activity.

3.3 Validity of the Strategic Intervention Materials

The developed SIMs for Garments Trade Grade 10 students were validated by a panel of experts composed of two dressmaking experts who are both TESDA NC III holders in Dressmaking; two professors in educational technology along technical and vocational education (TVE); and the Education Program Supervisor for Technical

Vocational Education (TVE) of the Department of Education-Division of Laoag City.

3.3.1 Technical experts' evaluation on the guide cards

The results of the technical experts' evaluation on the guide cards of the three SIMs are shown in Table 2.

It is reflected in the Table 2 that the panel of experts believed that the Guide Card of the three SIMs has met the standard elements of guide cards as indicated by the composite mean of 4.98 (SIM 1), 4.96 (SIM2) and 4.96 (SIM 3). This implies that the elements needed in the Guide Cards are Very Evident and had exhibited to present the focus skills like mentioning the learning competency (LC), stating at least 3 sub-tasks (activities), building on prior learning/ prerequisite skills and mentioning the concrete outcome or product students are expected to demonstrate/ produce.

3.3.2 Evaluation of the technical experts to the SIMs' activity card

Table 3 discloses the evaluation of the technical experts to the SIMs' Activity Card.

With the obtained composite means of 4.97(SIM 1), 4.96 (SIM 2) and 4.96 (SIM 3), respectively, it implies that the Activity Cards are Very Evident as in including focus skills that are transmitted into activities which are organized, with clear directions, concretize concepts, allows discoveries, provides questions, and provides transition statements.

3.3.3 Evaluation of the experts on the assessment cards of the developed SIMs

Table 4 shows the evaluation of the experts on the Assessment Cards of the developed SIMs. It can be deduced from the Table 4 that the assessment cards of the SIMs provides effective exercises, drills or activities that are formulated in standard form with clear directions. It implies that the assessment provided are very evident as indicated by the composite mean of 4.84(SIM 1), 4.92 (SIM 2) and 4.96(SIM 3), respectively.

Table 3. Mean Ratings of the Activity Cards of SIMs as perceived by the evaluators

Indicators	SIM 1		SIM 2		SIM 3	
	WM	**DI**	**WM**	**DI**	**WM**	**DI**
1. Translates the focus skills into 3 activities	5.00	VE	5.00	VE	5.00	VE
2. Provides activities that:	5.00	VE	5.00	VE	5.00	VE
• Are organized based on the sequence of the focus skills (in the Guide Card).						
• Have clear directions.	5.00	VE	4.80	VE	4.80	VE
• Provide examples to concretize the concepts, particularly those drawn from real-life experience.	4.80	VE	5.00	VE	5.00	VE
• Students can complete independently, in pairs, or in small groups	5.00	VE	4.80	VE	5.00	VE
• Allow students to make discoveries and formulate ideas on their own.	5.00	VE	5.00	VE	5.00	VE
3. Provides transition statements that recognize students' accomplishments	5.00	VE	5.00	VE	5.00	VE
4. Provides questions that:	5.00	VE	4.80	VE	4.80	VE
• Guide the development of concepts/focus skill.						
• Elicit the message or meaning that a student can take away from an activity/ experience.	5.00	VE	5.00	VE	4.80	VE
• Elicit an explanation, not one-word answers.	5.00	VE	5.00	VE	5.00	VE
• Establish the relationship between the topic/lesson and what students already know or are familiar to them.	5.00	VE	5.00	VE	5.00	VE
• Develop the skills in the three domains	5.00	VE	5.00	VE	5.00	VE
COMPOSITE MEAN	**4.97**	VE	**4.96**	VE	**4.96**	VE

Legend:

	Ranges of Means	*Interpretation*:
	4.20 - 5.00	*Very Evident (VE)*
	3.41 - 4.19	*Evident (E)*
	2.61 - 3.40	*Moderately Evident (ME)*
	1.81 - 2.60	*Less Evident (LE)*
	1.00 – 1.80	*Least Evident (LtE)*

Table 4. Mean Ratings of the Assessment Cards of SIMs as perceived by the evaluators.

Indicators	SIM 1		SIM 2		SIM 3	
	WM	DI	WM	DI	WM	DI
1. Provides exercises, drills or activities that allow students to:						
• Assess their understanding of what they have learned and correct errors when appropriate.	5.00	VE	5.00	VE	5.00	VE
• Monitor their learning and use feedback about their progress.	5.00	VE	5.00	VE	5.00	VE
2. Formulates in standard test formats to give students practice in test-taking techniques.	4.60	VE	4.80	VE	5.00	VE
3. Gives clear directions.	4.60	VE	4.80	VE	4.80	VE
4. Provides an Answer Key (in a separate card)	5.00	VE	5.00	VE	5.00	VE
COMPOSITE MEAN	**4.84**	VE	**4.92**	VE	**4.96**	VE

Legend:

Ranges of Means	Interpretation:
4.20 - 5.00	*Very Evident (VE)*
3.41 - 4.19	*Evident (E)*
2.61 - 3.40	*Moderately Evident (ME)*
1.81 - 2.60	*Less Evident (LE)*
1.00 – 1.80	*Least Evident (LtE)*

Table 5. Mean Ratings of the Enrichment Cards of SIMs as perceived by the evaluators

Indicators	SIM 1		SIM 2		SIM 3	
	WM	DI	WM	DI	WM	DI
1. Provides activities that reinforce the content of the lesson	5.00	VE	5.00	VE	5.00	VE
2. Provides opportunities for students to:	5.00	VE	4.60	VE	5.00	VE
• Apply what they have learned to other subject areas or in new contexts.						
• Work independently or in groups to explore answers to their own questions	5.00	VE	5.00	VE	5.00	VE
COMPOSITE MEAN	**5.00**	VE	**4.87**	VE	**5.00**	VE

Legend:

Ranges of Means	Interpretation:
4.20 - 5.00	*Very Evident (VE)*
3.41 - 4.19	*Evident (E)*
2.61 - 3.40	*Moderately Evident (ME)*
1.81 - 2.60	*Less Evident (LE)*
1.00 – 1.80	*Least Evident (LtE)*

Table 6. Mean Ratings of Reference Cards of SIM 1-3 as perceived by the evaluators

Indicators	SIM 1		SIM 2		SIM 3	
	WM	DI	WM	DI	WM	DI
1. Provides readings that relate content with students' life experiences	5.00	VE	5.00	VE	5.00	VE
2. Provides a carefully researched list of resources that:	5.00	VE	5.00	VE	5.00	VE
• Will reinforce concepts/ skills learned.						
• Provide additional content not found in the textbook.	4.60	VE	5.00	VE	4.60	VE
• Students may refer to for further reading.	4.80	VE	5.00	VE	4.80	VE
COMPOSITE MEAN	**4.85**	**VE**	**5.00**	**VE**	**4.85**	**VE**

Legend: *Ranges of Means*   *Interpretation:*
                4.20 - 5.00   *Very Evident (VE)*
                3.41 - 4.19   *Evident (E)*
                2.61 - 3.40   *Moderately Evident (ME)*
                1.81 - 2.60   *Less Evident (LE)*
                1.00 – 1.80   *Least Evident (LtE)*

Table 7. Summary of the results of the validation of SIM 1 to 3 as perceived by the evaluators

Indicators	SIM 1		SIM 2		SIM 3	
	WM	DI	WM	DI	WM	DI
Guide Card	4.98	VE	4.96	VE	4.96	VE
Activity Card	4.97	VE	4.96	VE	4.96	VE
Assessment Card	4.84	VE	4.92	VE	4.96	VE
Enrichment Card	5.00	VE	4.87	VE	5.00	VE
Reference Card	4.85	VE	5.00	VE	4.85	VE
OVERALL Rating	**4.93**	VE	**4.94**	VE	**4.95**	VE

Legend: *Ranges of Means*   *Interpretation:*
                4.20 - 5.00   *Very Evident (VE)*
                3.41 - 4.19   *Evident (E)*
                2.61 - 3.40   *Moderately Evident (ME)*
                1.81 - 2.60   *Less Evident (LE)*
                1.00 – 1.80   *Least Evident (LtE)*

3.3.4 Evaluation of the technical experts on the enrichment cards of the three SIMs

Table 5 shows the evaluation of the technical experts on the enrichment cards of the three SIMs. The results revealed that the enrichment cards provide activities that reinforce what the students learned and give them opportunities to apply them. It implies that the elements in the cards are very evident as indicated by the composite mean of 5.0 (SIM 1), 4.87 (SIM 2) and 5.0 (SIM 3).

3.3.5 Evaluation of the technical experts on the reference cards of the three SIMs

Table 6 presents the evaluation obtained by the reference cards as perceived by the experts. As indicated, SIM 1(4.85), SIM 2(5.0) and SIM 3 (4.85) have been believed to have very evident elements. This implies that the reference cards have provided related reading materials that would enhance further the knowledge and skills of the students in the different competencies to be mastered.

3.3.6 Summary of the results of the validation of SIM 1 to 3

Table 7 presents the overall mean responses of the five technical experts' validation to the cards of the three SIMs developed. The results clearly depict that the materials' content validity is very evident. The ratings meet the standard as to guide card, activity card, assessment card, enrichment card and reference card as indicated by the overall ratings of 4.93(SIM 1), 4.94 (SIM 2) and 4.95 (SIM 3) respectively. This implies that the SIMs are valid and are ready to address the identified least mastered competencies of garments trade students.

4. CONCLUSION

Based on the findings of the study, the developed Strategic Intervention Materials are valid to enhance the least mastered competencies in Garments Trades, such as operating the sewing machine, preparing and cutting materials and assembling blouse and pants which are needed to pass the National Certificate (NC) II for Grade 10 students.

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COMPETING INTERESTS

Authors have declared that no competing interests exist.

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