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# MULTICULTURAL LEARNING FOR STRENGTHENING THE LEARNING CAPACITY OF HOUSEHOLD MOTHERS AND ISOLATED COSTAL COMMUNITY

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## MULTICULTURAL LEARNING FOR STRENGTHENING THE LEARNING CAPACITY OF HOUSEHOLD MOTHERS AND ISOLATED COSTAL COMMUNITY

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### ABSTRACT

Among *the* indicators widely-used in determining human resources quality is years of schooling; it is assumed that the longer the years of education and the higher the educational levels received by people, the better the quality of their learning capacity. For this reason, learning programs are established to prevent dropout rates. The programs continuously strive to increase net enrollment rates in every period. Although it is likely to yield fruitful results, some people demand a specific education that is in accordance with personal needs. Fishermen's housewives living in the northern coastal area of Gorontalo Regency, specifically in Bilato Sub-district and Biluhu Sub-district, experiences some problems in learning due to. (1) Fishers often go fishing, leaving their wives at home for months. (2) The fishermen families are living under poor conditions. (3) The housewives struggle with inefficient time usage, and (4) lack of knowledge in developing business by utilizing coastal natural resources. Such issues hindering productivity lead to welfare improvement issues. Thus, multicultural education is designed to tackle the concerns revolving around the needs of the housewives in the coastal area. This type of education offers learning resources, which allow the women to sustain their needs for studying accordingly. Multicultural education encompasses the principle of assimilation and learning competency enhancement from multiple sources, innovative and creative culture, development of work relation, and self-evaluation in learning. The study finds that: (1) multicultural learning is applicable for fulfilling the needs of community learning for which it supports people's productivity, increases learning capacity, and minimizes risks of cultural clash; (2) multicultural learning, encompassing steps, such as assimilation, empowerment, and learning competency, should maximize the use of all learning resources to minimize the role facilitators in their work wherever possible; (3) multicultural learning for housewives significantly contributes to the reinforcement of learning capacity, particularly in the management of coastal resources in Gorontalo Utara. One of the examples is processing nike fish (typical fish species of Gorontalo) into various food products, such as crackers, floss, and pudding; (4) housewives in the research site are in needs of an institution that facilitates their commitment to socialize, share, learn, as well as discover innovation to actualize shared goals. Some of the respondents (7.14%) perceive the implementation of multicultural learning positively, while the others (92.86%) are highly satisfied with the activities in the program.

**KEYWORDS:** *multicultural, learning, coastal area, Gorontalo, and nike.*

### INTRODUCTION

In 2017, a study identified some problems of fishermen's housewives living in the northern coastal area of Gorontalo Regency, specifically in Bilato Sub-district and Biluhu Sub-district. The study has shown that: (1) Fishermen often go fishing, leaving their wives at home for months; (2) the fishermen families are living under poor conditions; (3) the

housewives struggle with inefficient time usage, and (4) lack of knowledge in developing business by utilizing coastal natural resources. A year later, in 2018, a prospective learning model had been designed to improve community learning capacity; the model is called multicultural learning.



Multicultural learning is specifically designed to increase learning capacity effectively; its stages involve (1) assimilation and (2) enhancement of learning competency. This learning model uses various sources which are expected to minimize the roles of facilitators wherever possible. Adult education serves as multicultural learning main approach. The implementation of multicultural learning is supposed to develop learning capacity, which encompasses self-evaluation, development of work relation, creative and innovative culture, and work ethic.

Assimilation has been the basis in multicultural learning as this aspect enables effective communication and prevents inclusive behaviors. This stage allows a person to recognize the identity and uniqueness of other people vice versa. Acknowledging identity and different traits of each other functions to bridge gap of diversity by which pluralism becomes something invaluable that make people stick together in social life. On top of that, the process prevents misjudgment, misbehavior, and wrong aligning behaviors.

Processes of learning capacity improvement in multicultural learning, in addition to promoting the assimilation (the way the participants of the learning interact with their peers and community) aspect, includes exploration of people's willingness to share knowledge, attitude, and skills. That the acculturation of competence through capacity enhancement is central to instilling creativity and innovation among society, Gagne considers the process as the assimilation in knowledge development. Such a process requires a set of information that is obtained from the assimilation stage.

The capability to assimilate with others and to express willingness to share with other people represent the initiation to build the community. A community which is built on the ground of initiative movement is crucial compared to other groups which are the products of authoritative force. Forming a group becomes the strength to cope with conflicts caused by different cultures among people in society. Multicultural learning serves to unite the differences of people through assimilation (socialize with peers and community) and knowledge, attitude, as well as skills exchange.

## RESULTS AND DISCUSSION

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Social networking could be seen as a technology. Outnumbering Google in terms of traffic, the social networking site MySpace logged almost 46 million users in June 2006 (Albanese, 2006). These sites allow the user to do it all: post a profile, photos, videos, chat, blog, and connect with their peers through individual bulletin boards, private groups, and forums (2009)<sup>1</sup>. The above situation reveals that a person can build social network and connect with others through one website only. Imagine a condition where the website is replaced by a learning platform which provides almost all information needed by people. The platform will, in turn, help people to learn a lot.

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Education technology in society<sup>2</sup> directed towards problem-solving aspect. Educational Technology in Society: is a goal-oriented problem-solving systems approach utilizing tools, techniques, theories, and methods from multiple knowledge domains, to: (1) design, develop, and evaluate, human and mechanical resources efficiently and effectively in order to facilitate and leverage all aspects of learning, and (2) guide change agency and transformation of educational systems and practices in order to contribute to influencing change in society. System: the total of parts interrelated within one another and the whole structure or organization, Systems Approach: a logical process or complex strategy to identify needs, analyze problems and possible solutions, or design procedures to improve systems operations and eliminate needs. Technology (process): construction uses and the organization of knowledge for the achievement of practical purposes in intellectual and social contexts. Technology (tool): material construction and operation of physical systems based on systematic knowledge of how to design artifacts, (2005)<sup>2</sup>.

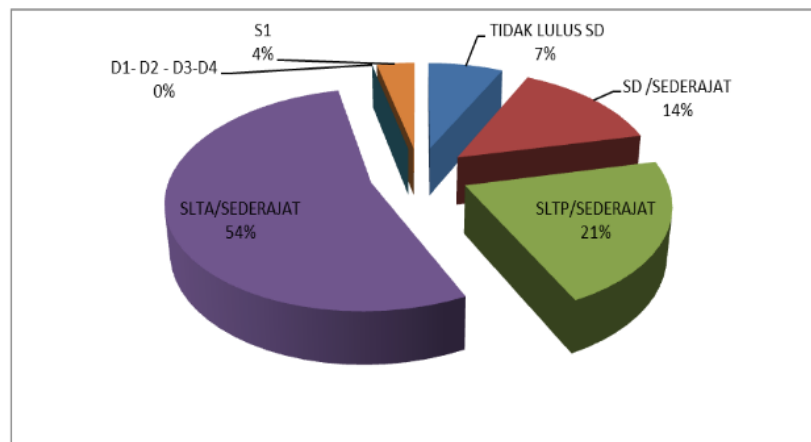
A study conducted in 2017 identified that housewives living in coastal area have plenty of time to stay productive by working on activities that contribute to family earning<sup>3</sup>. One of the examples of productive activities, according to a study in 2018, involves processing native fish species into food products. A specific design of the integration of technology in learning is needed to facilitate the housewives.

As a target-oriented<sup>2</sup> problem-solving system, learning technology utilize tools, techniques, theories and methods from various disciplines to (1) design, develop, and evaluate human capital and technology

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resources efficiently and effectively to facilitate and improve all learning aspects, and (2) direct institutions to bring changes in the system and practice of education in Indonesia in contributing to transformation within society<sup>4</sup>. Educators can design a comprehensive education program for schools and people<sup>5</sup>. This is to enable the learning process in community, which also help the people to address their problem. In other words, the output of the learning is solutions to all issues in the community.

The object of this present study is mostly housewives aged 35 with different educational background, experience, and needs for varied learning activities.



**Figure 1**

Educational Background of Housewives in the Coastal Area

Description:

*Tidak lulus SD*: Uneducated

*SD/Sederajat*: Elementary graduates

*SLTP Sederajat*: Junior high graduates

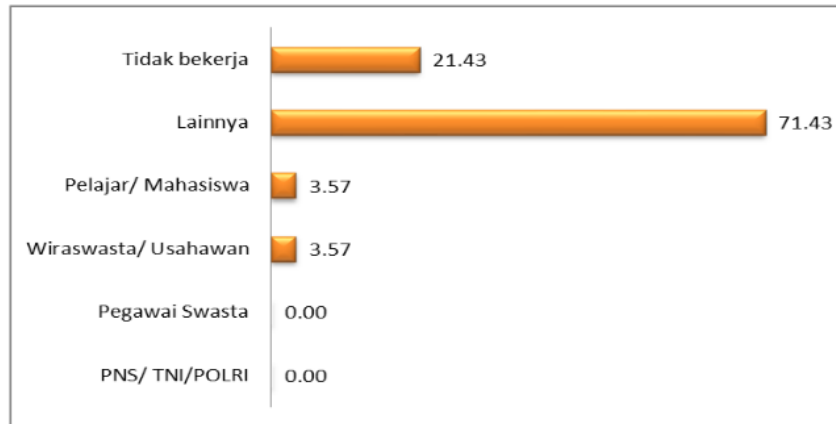
*SLTA Sederajat*: Senior high graduates

D1, D2, D3, and D4: Associate degree

S1: Bachelor degree

From the above chart, the housewives or the participants of multicultural learning in the research site have a different educational background. None of them are university graduates (0%) since most of the women are senior high graduates (54%). Those who had graduated from junior high and elementary level comprise 21% and 14% respectively. A small portion of the participants are uneducated (7%). The data signify that, despite the importance of skills in enhancing work qualities, women's skills are yet explored during their previous education.

The data of the occupation of the housewives in the northern coastal area of Gorontalo Regency reported that almost all women do not work full-time (71.43%) and the others are unemployed (21.43%). Moreover, 92.86% of women still tend to be job-seekers. They later run home industries, which process the products from coastal resources.

**Figure 2**

Occupation of Housewives in the Northern Coastal Area of Gorontalo Regency

Description:

*Tidak bekerja* : Unemployed*Lainnya* : Others*Pelajar/Mahasiswa* : Student/university student*Wiraswasta/usahawan*: entrepreneur*Pegawai swasta*: private employee*PNS/TNI/POLRI*: civil servant, army, police

The category “others” refers to *nike* product by the previously mentioned home industries, which process the fish into various food products, such as crackers (57.69%), floss (30.77%), pudding (3.85%), as well as other culinary products (7.69%). Respondents working in this sector have a different opinion on multicultural learning.

Even though the respondents tend to agree with the research instrument, the responses show different conditions. Respondents who tend to agree on several items are categorized into groups based on

the separation value of Rasch analysis. Further, this model functions to classify the responses of the respondents as well. The grouping can be identified using person strata analysis.

$$H = \frac{[(4 \times \text{SEPARATION}) + 1]}{3}$$

Provided in the following table is the obtained separation values.





**Table 1**  
**Separation Value**

SUMMARY OF 28 MEASURED Person									
	TOTAL SCORE	COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	
MEAN	52.5	15.0	3.47	.63	1.04	.02	1.01	.07	
SEM	.6	.0	.25	.01	.11	.25	.16	.18	
P. SD	3.3	.0	1.30	.06	.59	1.29	.83	.93	
S. SD	3.4	.0	1.32	.06	.60	1.31	.85	.95	
MAX.	58.0	15.0	5.93	.83	2.92	3.81	3.51	2.62	
MIN.	45.0	15.0	.81	.48	.39	-2.02	.27	-1.22	
REAL RMSE	.71	TRUE SD	1.09	SEPARATION	1.55	Person RELIABILITY	.70		
MODEL RMSE	.64	TRUE SD	1.13	SEPARATION	1.78	Person RELIABILITY	.76		
S.E. OF Person MEAN = .25									

The value of separation index, according to Table 1, is 1.55. Using the person strata formula, the H would be  $= [(4 \times 1.55) + 1] / 3 = 2.4$ . The obtained value 2.4 is rounded down to 2, meaning that the respondents are grouped into two; group one comprises of those with

the tendency to agree on the question item, while those who are not likely to agree on several items of the research instrument are in group two. The detail of the grouping is shown in the following table.

**Table 2**  
**The Grouping of the Respondents Based on the Logit Scale**

Person STATISTICS: MEASURE ORDER														
ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PTMEASUR-CORR.	AL-EXP.	EXACT OBS%	MATCH EXP%	Person	
8	58	15	5.93	.83	.72	-.48	.37	-.12	.51	.35	93.3	86.7	08P4K5JK1	
3	57	15	5.33	.73	.69	-.81	.41	-.19	.58	.42	86.7	81.9	03P4K5JK1	
21	57	15	5.33	.73	1.29	.85	1.24	.59	.26	.42	73.3	81.9	21P3K5JK4	
2	56	15	4.85	.67	.62	-1.32	.41	-.47	.67	.47	86.7	77.1	02P3K5JK1	
25	56	15	4.85	.67	1.22	.76	1.06	.38	.36	.47	60.0	77.1	25P4K5JK4	
4	55	15	4.42	.64	2.57	3.81	2.55	1.67	.59	.50	80.0	76.1	04P3K5JK1	
13	55	15	4.42	.64	.78	-.70	.60	-.35	.62	.50	86.7	76.1	13P4K5JK1	
19	55	15	4.42	.64	.49	-2.02	.37	-.84	.76	.50	100.0	76.1	19P2K5JK1	
27	55	15	4.42	.64	.49	-2.02	.37	-.84	.76	.50	100.0	76.1	27P1K6JK2	
9	54	15	4.01	.63	1.38	1.22	1.15	.43	.37	.53	60.0	75.8	09P4K5JK1	
12	54	15	4.01	.63	.65	-1.21	.52	-.70	.71	.53	86.7	75.8	12P4K5JK1	
1	53	15	3.62	.62	.86	-.37	.87	-.04	.61	.55	86.7	75.3	01P4K6JK1	
5	53	15	3.62	.62	1.24	.80	1.26	.62	.42	.55	73.3	75.3	05P4K5JK3	
7	53	15	3.62	.62	1.24	.80	1.26	.62	.42	.55	73.3	75.3	07P2K6JK1	
11	53	15	3.62	.62	.94	-.10	.78	-.22	.60	.55	73.3	75.3	11P4K5JK1	
17	53	15	3.62	.62	1.25	.83	1.08	.33	.45	.55	60.0	75.3	17P4K6JK2	
18	53	15	3.62	.62	1.00	.12	.83	-.12	.57	.55	73.3	75.3	18P2K6JK2	
6	52	15	3.23	.63	.98	.07	.85	-.10	.58	.57	73.3	75.0	06P4K5JK2	
10	52	15	3.23	.63	.80	-.50	.72	-.36	.66	.57	86.7	75.0	10P4K5JK1	
24	51	15	2.84	.63	.95	.02	.88	-.02	.58	.57	80.0	75.9	24P3K5JK2	
23	50	15	2.44	.63	2.92	2.73	3.51	2.62	.47	.57	60.0	78.1	23P3K5JK2	
26	50	15	2.44	.63	.65	-.65	.50	-.74	.72	.57	80.0	78.1	26P4K5JK2	
14	49	15	2.04	.62	1.47	.89	1.87	1.19	.10	.56	66.7	80.1	14P6K4JK1	
15	49	15	2.04	.62	.48	-.90	.39	-.84	.74	.56	93.3	80.1	15P4K5JK1	
16	49	15	2.04	.62	.58	-.65	.46	-.68	.69	.56	80.0	80.1	16P4K5JK1	
22	47	15	1.35	.55	1.92	1.41	3.33	2.23	.46	.53	73.3	77.6	22P2K5JK2	
20	46	15	1.06	.52	.39	-1.22	.27	-1.22	.53	.53	86.7	77.9	20P3K6JK1	
28	45	15	.81	.48	.53	-.85	.37	-.95	.00	.54	80.0	77.4	28P1K3JK2	
MEAN	52.5	15.0	3.47	.63	1.04	.0	1.01	.1			79.0	77.4		
P. SD	3.3	.0	1.30	.06	.59	1.3	.83	.9			11.2	2.7		



Table 2 shows two data in the column of measure and person highlighted in red and blue mark. The column highlighted red represents the respondents who disagree with several items; this condition is evidenced by the logit scale in the "measure" column, which ranges from 0.81 to 3.23 logit. On the other hand, the value highlighted in blue mark refers to respondents who agree with almost all item in the research instrument. The logit scale of this data

ranges from 3 to 6. The result is based on the value in the "measure" column highlighted blue whose logit scale ranges from 3.62 to -5.93.

In addition to the grouping of the respondents, the measurement explaining the categorization of the item responses were performed. The item responses are grouped based on the tendency of the "agree" responses by considering the separation value of the item as shown in the table below.

**Table 3**  
**Grouping of Item Responses Based on Its Level**

SUMMARY OF 15 MEASURED Item									
	TOTAL SCORE	COUNT	MEASURE	MODEL S.E.	INFIT		OUTFIT		
					MNSQ	ZSTD	MNSQ	ZSTD	
MEAN	98.0	28.0	.00	.48	1.00	-.04	1.01	.06	
SEM	2.0	.0	.42	.03	.11	.31	.19	.34	
P. SD	7.3	.0	1.58	.10	.41	1.17	.72	1.26	
S. SD	7.6	.0	1.63	.11	.43	1.21	.75	1.30	
MAX.	110.0	28.0	2.60	.78	2.38	3.64	3.34	3.88	
MIN.	84.0	28.0	-3.13	.37	.68	-1.33	.30	-1.20	
REAL RMSE	.52	TRUE SD	1.49	SEPARATION	2.89	Item	RELIABILITY	.89	
MODEL RMSE	.49	TRUE SD	1.50	SEPARATION	3.05	Item	RELIABILITY	.90	
S.E. OF Item MEAN = .42									

According to the above table, the value of separation of the item gets 2.89; this value is further calculated using the person strata analysis. The result of the analysis is  $H = [(4 \times 2.89) + 1] / 3 = 4.18$  (which is rounded down to 4). Such a result signifies four

groups of strata item based on the tendency of the "agree" response of the respondents. The item's level of difficulty in the questionnaire can be seen in the following table.

**18** **Table 4**  
**The Grouping of Item's Level of Difficulty Based on Its Logit Value**

	Item Category	Item Number
Higher tendency of disapproval	Difficulty level I	B6 (NLI= 2.60)
		B5 (NLI=1.65)
		B3 (NLI=1.46)
		B4 (NLI= 1.46)
	Difficulty level II	B13 (NLI=1.28)
		B11 (NLI=0.91)
		B7 (NLI=0.35)
	Difficulty level III	B10 (NLI= - 0.03)
		B8 (NLI= - 0.23)
		B2 (NLI= - 0.43)
Higher tendency of approval		B9 (NLI= - 0.63)





Item Category	Item Number
Difficulty level IV	B1 (NLI = - 1.07)
	B14 (NLI= - 1.58)
	B12 (NLI= -2.61)
	B15 (NLI= -3.13)

Description: (B; item number, 1-17; the number of the response item).

*NLI = Item's Logit Value (See Item Statistic Measure Order Table → measure column)*

The person fit analysis involved 28 respondents; most of them tend to agree with the responses in the research instrument. Following this step is the analysis of the validity of the questionnaire responses. This process is to identify any respondents with incompatible patterns and thus, considered invalid for the criteria set. There are three criteria used to examine the person and item fit:

a. The obtained value of *Outfit Mean Square (MNSQ)* should be:  $0.5 < \text{MNSQ} < 1.5$

b. The obtained value of *Outfit Z-Standard (ZSTD)* should be:  $-2.0 < \text{ZSTD} < +2.0$

c. The obtained value of *Point Measure Correlation (Pt Mean Corr)* should be:  $0.4 < \text{Pt Measure Corr} < 0.85$

By referring to the above conditions, some respondents do not meet the criteria. On top of that, several respondents only satisfy two and even one criteria for which, they are categorized as invalid. Only those who fulfill all three criteria are considered valid.

**Table 5**  
**Person Fit Order Analysis**

Person STATISTICS: MISFIT ORDER

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PTMEASUR-AL CORR.	EXP.	EXACT OBS%	MATCH EXP%	Person
23	50	15	2.44	.63	2.92	2.73	3.51	2.62	A .47	.57	60.0	78.1	23P3K5JK2
22	47	15	1.35	.55	1.92	1.41	3.33	2.23	B .46	.53	73.3	77.6	22P2K5JK2
4	55	15	4.42	.64	2.57	3.81	2.55	1.67	C .59	.50	80.0	76.1	04P3K5JK1
14	49	15	2.04	.62	1.47	.89	1.87	1.19	D .10	.56	66.7	80.1	14P6K4JK1
9	54	15	4.01	.63	1.38	1.22	1.15	.43	E .37	.53	60.0	75.8	09P4K5JK1
21	57	15	5.33	.73	1.29	.85	1.24	.59	F .26	.42	73.3	81.9	21P3K5JK4
5	53	15	3.62	.62	1.24	.80	1.26	.62	G .42	.55	73.3	75.3	05P4K5JK3
7	53	15	3.62	.62	1.24	.80	1.26	.62	H .42	.55	73.3	75.3	07P2K6JK1
17	53	15	3.62	.62	1.25	.83	1.08	.33	I .45	.55	60.0	75.3	17P4K6JK2
25	56	15	4.85	.67	1.22	.76	1.06	.38	J .36	.47	60.0	77.1	25P4K5JK4
18	53	15	3.62	.62	1.00	.12	.83	-.12	K .57	.55	73.3	75.3	18P2K6JK2
6	52	15	3.23	.63	.98	.07	.85	-.10	L .58	.57	73.3	75.0	06P4K5JK2
24	51	15	2.84	.63	.95	.02	.88	-.02	M .58	.57	80.0	75.9	24P3K5JK2
11	53	15	3.62	.62	.94	-.10	.78	-.22	N .60	.55	73.3	75.3	11P4K5JK1
1	53	15	3.62	.62	.86	-.37	.87	-.04	n .61	.55	86.7	75.3	01P4K6JK1
10	52	15	3.23	.63	.80	-.50	.72	-.36	m .66	.57	86.7	75.0	10P4K5JK1
13	55	15	4.42	.64	.78	-.70	.60	-.35	l .62	.50	86.7	76.1	13P4K5JK1
8	58	15	5.93	.83	.72	-.48	.37	-.12	k .51	.35	93.3	86.7	08P4K5JK1
3	57	15	5.33	.73	.69	-.81	.41	-.19	j .58	.42	86.7	81.9	03P4K5JK1
12	54	15	4.01	.63	.65	-1.21	.52	-.70	i .71	.53	86.7	75.8	12P4K5JK1
26	50	15	2.44	.63	.65	-.65	.50	-.74	h .72	.57	80.0	78.1	26P4K5JK2
2	56	15	4.85	.67	.62	-1.32	.41	-.47	g .67	.47	86.7	77.1	02P3K5JK1
16	49	15	2.04	.62	.58	-.65	.46	-.68	f .69	.56	80.0	80.1	16P4K5JK1
28	45	15	.81	.48	.53	-.85	.37	-.95	e .00	.54	80.0	77.4	28P1K3JK2
19	55	15	4.42	.64	.49	-2.02	.37	-.84	d .76	.50	100.0	76.1	19P2K5JK1
27	55	15	4.42	.64	.49	-2.02	.37	-.84	c .76	.50	100.0	76.1	27P1K6JK2
15	49	15	2.04	.62	.48	-.90	.39	-.84	b .74	.56	93.3	80.1	15P4K5JK1
20	46	15	1.06	.52	.39	-1.22	.27	-1.22	a .53	.53	86.7	77.9	20P3K6JK1
MEAN	52.5	15.0	3.47	.63	1.04	.0	1.01	.1			79.0	77.4	
P. SD	3.3	.0	1.30	.06	.59	1.3	.83	.9			11.2	2.7	

Table 6  
Item Fit Order Analysis

Item STATISTICS: MEASURE ORDER

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S. E.	INFIT MNSQ ZSTD	OUTFIT MNSQ ZSTD	PTMEASUR-AL CORR. EXP.	EXACT MATCH OBS% EXP%	Item
6	84	28	2.60	.37	1.22 .67	1.51 1.00	.08 .51	78.6 75.3	B6
5	90	28	1.65	.42	.69 -.74	.69 -.58	.44 .45	82.1 77.3	B5
3	91	28	1.46	.43	.91 -.12	.88 -.14	.35 .45	71.4 75.9	B3
4	91	28	1.46	.43	.90 -.15	.87 -.14	.35 .45	71.4 75.9	B4
13	92	28	1.28	.43	1.31 .92	1.67 1.44	-.01 .46	67.9 74.7	B13
11	94	28	.91	.43	2.38 3.64	3.34 3.88	.67 .48	75.0 72.6	B11
7	97	28	.35	.43	.72 -1.33	.67 -.95	.67 .50	85.7 70.8	B7
10	99	28	-.03	.44	.91 -.34	.78 -.62	.58 .51	71.4 72.3	B10
8	100	28	-.23	.44	.75 -1.18	.64 -1.20	.68 .51	82.1 73.5	B8
2	101	28	-.43	.45	.99 .02	1.19 .66	.48 .51	78.6 74.7	B2
9	102	28	-.63	.46	.87 -.51	.73 -.71	.60 .51	78.6 75.9	B9
1	104	28	-1.07	.48	.72 -1.12	.55 -1.08	.68 .49	78.6 78.3	B1
14	106	28	-1.58	.53	1.09 .40	.98 .16	.41 .46	82.1 82.1	B14
12	109	28	-2.61	.67	.68 -.70	.30 -.62	.58 .36	89.3 89.2	B12
15	110	28	-3.13	.78	.84 -.11	.35 -.21	.44 .31	92.9 92.8	B15
MEAN	98.0	28.0	.00	.48	1.00 .0	1.01 .1		79.0 77.4	
P. SD	7.3	.0	1.58	.10	.41 1.2	.72 1.3		6.8 6.0	

**Item Fit Order Analysis** reveals that the average logit value is set to 0.0, indicating the starting point of the scale. The value also signifies the 50% probability, which is the same measurement of the ability level of the respondents and the difficulty level of the questionnaire items (Rasch, as cited in

Three criteria mentioned earlier (which were used in analysis of person fit) are also used to identify the level of item fit. According to the above table, the item B6 and B13 do not meet two criteria for Outfit MNSQ and Pt Corr where the value of Outfit MNSQ for the item B6 and B13 gets 1.51 and 1.67 respectively. In other words, the value of both item are beyond the acceptable range. The Pt Corr value of item B6 (0.08) and B13 (-1.01) also exceeds the accepted limit. Item B11 does not meet the two criteria in the indicator of Outfit MNSQ (3.34) and Outfit ZTD (3.88) since the value is beyond the acceptable range.

Item B3 and B4 do not satisfy one criterion of Pt. Corr as both items get the same value 0.35, which exceed the acceptance range. Similarly, item B12 (0.30) and

Sumintono and Widhiarso, 2015:5). Overall, the instrument is applicable for the measurement purpose as the average value of the item of the instrument (from the result of item fit order analysis) gets 0.0; please see the above table in the section below the "measure" column.

B15 (0.35) do not fulfill one condition in the indicator of Outfit MNSQ as the value of these items are not within the acceptable limit. The items, in this case, can be considered invalid not because it does not fulfill one or two among three previously mentioned prerequisites. Despite this condition, the items can be accounted since it complies with at least one of the prerequisites or the criteria. Only an item which does not comply with all three conditions should be substituted. In this study, however, all of the items can be used as most of them fulfill at least one condition or criteria.

The whole information of the **instrument-level Reliability analysis data** is provided in the statistics summary table below.

**Table 7**  
**Instrument-level Reliability Analysis**

SUMMARY OF 28 MEASURED Person								
	TOTAL SCORE	COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	ZSTD	OUTFIT MNSQ	ZSTD
MEAN	52.5	15.0	3.47	.63	1.04	.02	1.01	.07
SEM	.6	.0	.25	.01	.11	.25	.16	.18
P.S.D	3.3	.0	1.30	.06	.59	1.29	.83	.93
S.S.D	3.4	.0	1.32	.06	.60	1.31	.85	.95
MAX.	58.0	15.0	5.93	.83	2.92	3.81	3.51	2.62
MIN.	45.0	15.0	.81	.48	.39	-2.02	.27	-1.22
REAL RMSE	.71	TRUE SD	1.09	SEPARATION	1.55	Person	RELIABILITY	.70
MODEL RMSE	.64	TRUE SD	1.13	SEPARATION	1.78	Person	RELIABILITY	.76
S.E. OF Person MEAN = .25								
Person RAW SCORE-TO-MEASURE CORRELATION = 1.00								
CRONBACH ALPHA (KR-20) Person RAW SCORE "TEST" RELIABILITY = .74 SEM = 1.68								
SUMMARY OF 15 MEASURED Item								
	TOTAL SCORE	COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	ZSTD	OUTFIT MNSQ	ZSTD
MEAN	98.0	28.0	.00	.48	1.00	-.04	1.01	.06
SEM	2.0	.0	.42	.03	.11	.31	.19	.34
P.S.D	7.3	.0	1.58	.10	.41	1.17	.72	1.26
S.S.D	7.6	.0	1.63	.11	.43	1.21	.75	1.30
MAX.	110.0	28.0	2.60	.78	2.38	3.64	3.34	3.88
MIN.	84.0	28.0	-3.13	.37	.68	-1.33	.30	-1.20
REAL RMSE	.52	TRUE SD	1.49	SEPARATION	2.89	Item	RELIABILITY	.89
MODEL RMSE	.49	TRUE SD	1.50	SEPARATION	3.05	Item	RELIABILITY	.90
S.E. OF Item MEAN = .42								
Item RAW SCORE-TO-MEASURE CORRELATION = -.99								
Global statistics: please see Table 44.								
UMEAN=.0000 USCALE=1.0000								

The value depicting the level of the reliability of the measurement of the research respondents gets 0.70. In other words, the consistency of the responses in the research instrument is categorized efficient. The examination of the instrument item shows that the item reliability value reaches 0.89, which is still in the acceptable range. Further, the value of Cronbach

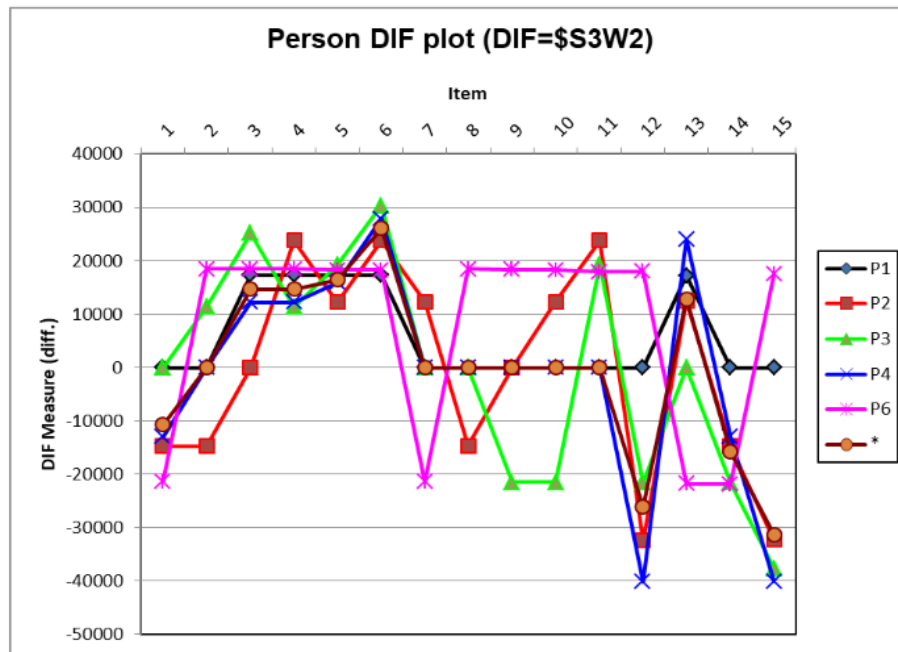
alpha at 0.74 indicates the reliability level of the correlation between the respondents and response items in the research instrument. This value is also categorized good.

The following table shows the value used to indicate the criteria of the reliability level.

**8** **Table 8**  
**Person reliability, item reliability criteria and Cronbach alpha ( $\alpha$ ) criteria**

Person reliability and item reliability criteria			Cronbach alpha ( $\alpha$ ) value criteria		
< 0.67	:	Low	< 0.5	:	Very poor
0.67 - 0.80	:	Adequate	0.5 - 0.6	:	Poor
0.8 - 0.90	:	Good	0.6 - 0.7	:	Adequate
0.91 - 0.94	:	Very good	0.7 - 0.8	:	Good
> 0.94	:	Excellent	> 0.8	:	Very good

The characteristics of the respondents based on their educational background and types of food product that they produce are depicted in the following figure.



Recent education:

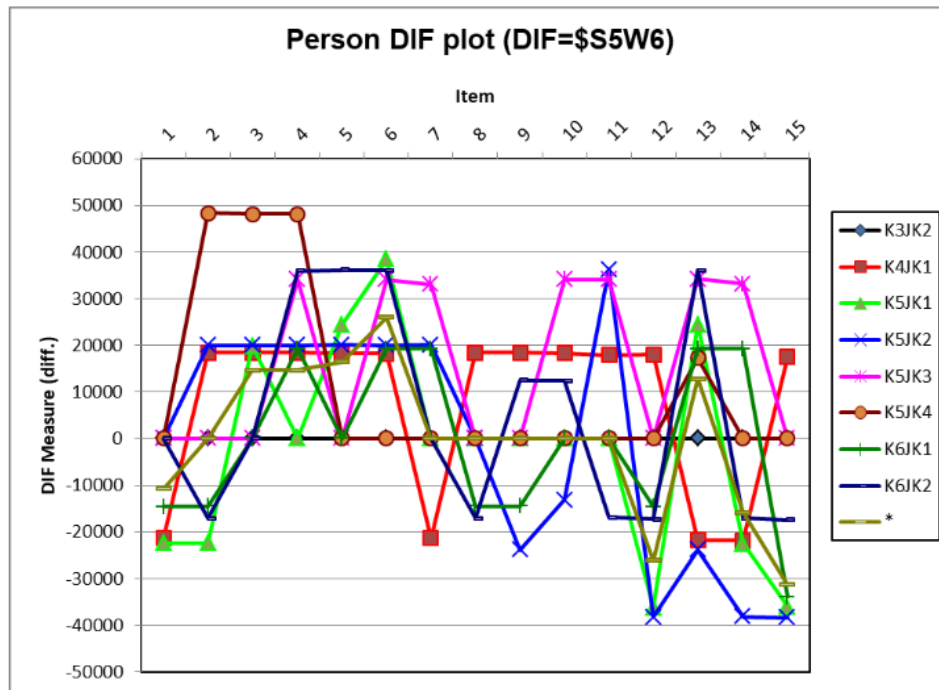
1. Uneducated 2. Elementary and its equivalence 3. Junior high and its equivalence 4. Senior high and its equivalence 5. Associate degree (D1 - D2 - D3 - D4) 6. Bachelor degree (S1) 7. Masters or Doctor

**Figure 3**

#### **Respondents' Education and Responses Tendency**

The above figure depicts blue line on item B12 and B15, which is located at the bottom of the curve area. This line represents the items which are mostly accepted by almost all respondents, especially those who are senior high or its equivalent graduates (P4). Item B1, B7, B13, B14 are also accepted by respondents P6 or those with bachelor degree compared to other respondent groups. Those who are

junior high graduates or P3 mostly agree with item B9 and B10. On the other hand, item B4 and B11 are not likely to be accepted by respondents P2 or those who are elementary school graduates. Item B3 and B6 are not likely accepted by junior high graduates or respondents P3, while item B11 is not preferred by the senior high graduates (P4).



**Figure 4**  
**Respondents' Occupation and Preferred Food Product**

\*Preferred food product:

1. Crackers 2. Fish Floss 3. Pudding 4. Others

In regards to the occupation and preferred food products, the above figure shows that item B2, B3, and B4 are not likely to be accepted by K3JK2 respondents or the entrepreneurs who prefer fish floss. Item B6 and B11 are not likely to be accepted by K5JK1 (respondents whose occupation listed in category "other" who prefer crackers) and K5JK2 (respondents whose occupation listed in category "other" who prefer fish floss). Similarly, item B7, B10, and B14 are not likely to be accepted by respondents K5JK3 (respondents whose occupation listed in category "other" who prefer pudding). Other items in the research instrument, in terms of the level of acceptance of most respondents with different occupations and preferred food products, are not significantly different.

In the lower part of the curve shows item B9, B10, B12, B13, B14, and B15 highlighted in the blue

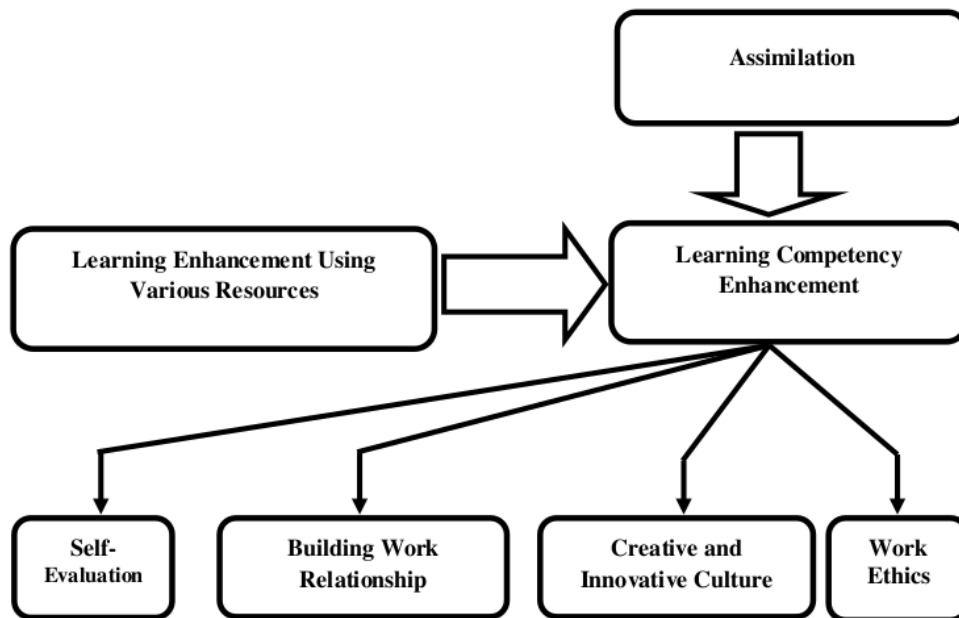
line which indicates that respondents K5JK2 (those whose occupation is listed in "other" category with fish floss as their food preference). The line represents that these respondents are easy to accept these six items. Respondents K5JK1 (those whose occupation listed in category "other" who prefer crackers) accept item B1 and B2, while respondents K6JK2 (unemployment who prefer fish floss) agree with item B8 and B11. Lastly, respondents K4JK1 (university students who prefer fish floss) agree with item B7.

Multicultural learning is managed in one classroom setting. What makes this system different from other conventional learning is that the learning activity requires less and even no instructors. Students learn in groups, and they rely on the availability of the learning resources, including information of the theories and practical activities that



correlate with the needs of the learners. The following figure provides the components of

multicultural learning.



**Figure 5**  
**Multicultural Learning Scheme**

Most participants opt to partake in multicultural learning as they consider that the activity is essential. This is based on the response of the participants who argue that multicultural learning is needed to enhance their learning capacity. As many as 28.57% of the participants believe that multicultural learning is important, and 71.43% believe that multicultural learning is significantly important. On top of that, the respondents claim that

the implementation of multicultural learning meets their need to learn the production of *nike*-based food product. The percentage of those who consider the learning is appropriate and highly appropriate is 39.29% and 60.71% respectively.

Other responses explaining the reason for the respondents to participate in the learning are depicted in Table 9 below.



**Table 9**  
**Reasons for Participating in Multicultural Learning**

No.	Questions	Average Score (in the scale 1 to 4)	Satisfaction Score (Situation/Condition Experienced)
1	Is learning to enhance self-capacity necessary?	3.71	a. 0% Not necessary at all b. 0% Not necessary c. 28.57% Necessary d. 71.43% Highly necessary
2	Is the current learning activities relevant to your needs to learn how to process <i>nike</i> fish into various food products?	3.61	a. 0% Irrelevant b. 0% Less relevant c. 39.29% Relevant d. 60.71% Highly relevant

Students' needs have become the fundamental principle that underpins the implementation of multicultural learning. For this reason, the designing process should begin by identifying the needs of the students. In this study, the needs of the participants correlate with information about the management of the production of *nike* food product.

These aspects are considered in examining the quality of multicultural learning in the research

site: the ease of learning activities, the required duration for the participants to understand the lesson, the provision of new information, learning resources that can be applied in other situations, the enrichment of knowledge, instilment of motivation, skill development, and cultivating the discovery of new ideas. The following table provides a glimpse of the aspects above.

**Table 10**  
**Multicultural Learning Quality**

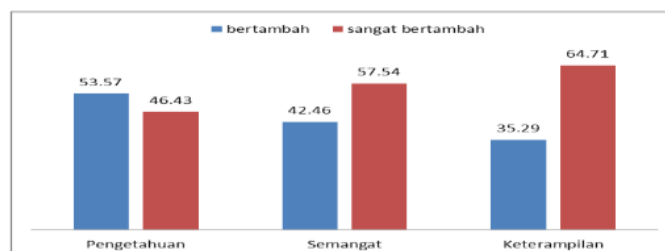
No.	Questions	Average Score (in the scale 1 to 4)	Satisfaction Score (Situation/Condition 16 Experienced)
3	Do you agree that the activities provide ease to you in the implementation of multicultural learning?	3.25	a. 0% Strongly disagree b. 0% Disagree c. 75.00% Agree d. 25.00% Strongly agree
4	Are the activities significant to speed up your ability to understand every lesson?	3.25	a. 0% Not significant b. 0% Less significant c. 75% Significant d. 25% Very significant
5	Is multicultural learning significant to help you learn new information?	3.21	a. 0% Not significant b. 0% Less significant c. 78.57% Significant d. 21.43% Very significant
6	Are the learning resources in the multicultural learning easy to use in other situations?	3.00	a. 3.57% Very difficult b. 0% Difficult c. 89.29% Easy d. 7.14% Very easy

No.	Questions	Average Score (in the scale 1 to 4)	Satisfaction Score (Situation/Condition Experienced)
7	Are the activities significant to help you broaden your knowledge?	3.46	a. 0.00% Not significant b. 0.00% Less significant c. 53.57% Significant d. 46.43% Very significant
8	Are the activities significant to motivate your work performance?	3.57	a. 0.00% Not significant b. 0.00% Less significant c. 42.86% Significant d. 57.14% Very significant
9	Are the activities significant to help improve your skill?	3.64	a. 0.00% Not significant b. 0.00% Less significant c. 35.29% Significant d. 64.29% Very significant
10	Are the activities significant to help discover innovation regarding your business?	3.54	a. 0.00% Not significant b. 0.00% Less significant c. 46.43% Significant d. 53.57% Very significant

The above table shows that the multicultural learning provides an ease to its participants (75.00% agree with this notion, and the remaining 25% strongly agree with this notion). The ease of the multicultural learning resources is also depicted in the responses of the participants in regards to the applicability to use the learning resources in other situations. Most of the participants agree that the resources can be applied outside the class (89.29% agree, 7.14 strongly agree), and only few of them have a different opinion on this (3.57% disagree).

This study also finds that most of the participants (75%) can speed up their capacity to comprehend the lesson. The progress of the

participants can be seen after they accomplished the learning program. As many as 53.57% and 46.43% of respondents claim that multicultural learning is significant to the improvement of their knowledge. The progress is also seen in terms of the motivation and skills of the respondents (42.86% of the respondents agree that the learning is significant and 57.14% claim that the learning is very significant to their learning motivation). Furthermore, the implementation of multicultural learning is significant (35.29%) and very significant (64.11%) to the enhancement of their skills. These results are provided in the following figure.



Percentage of the Improvement of the Participants' Knowledge, Motivation, and Skills

Description:

*Bertambah*: Improved

*Sangat bertambah*: Significantly improved

*Pengetahuan*: Knowledge

*Semangat*: Motivation

*Keterampilan*: Skills



The participants find that they discover new information from multicultural learning; 78.57% and 21.43% of them believe that multicultural learning is significant and very significant. As a result, the participants' ideas in managing their business are 46.43% improved and 53.57% improved significantly.

The multicultural learning also helps the participants to socialize with others to exchange their knowledge and other insights on attitudes and skills. This is seen in the responses of the participants

regarding the way they socialize with their peers in the learning activities (please see Table 11). Despite that 7.14% of the participants were yet to socialize with other peers, almost all participants (92.86%) can develop a positive social relationship.

The aspect of social skills (assimilation) is different from the variable of collaboration with society where most respondents or the participants (89.29) consider that integrating collaborative projects with society is significantly important.

**Table 11**  
**Assimilation and the Needs for Sharing Knowledge, Attitude, and Skills among the Participants of Multicultural Learning**

No.	Questions	Average Score (in the scale 1 to 4)	Satisfaction Score (Situation/Condition Experienced)
11	Are the activities in multicultural learning help you to socialize with your peers?	3.36	a. 7.14% Strongly disagree b. 0.00% Disagree c. 42.86% Agree d. 50.00% Strongly agree
12	Is it essential to integrate collaborative activities in multicultural learning to exchange information and skills, as well as understanding other people's behavior?	3.89	a. 0.00% Not necessary b. 0.00% Less necessary c. 10.71% Necessary d. 89.29% Significantly necessary

The above table shows that integrating collaborative activities in multicultural learning is essential to exchange information and skills, as well as understanding other people's behavior.

This is based on the positive responses by the participants (71.43% of the participants consider that the collaborative activities are necessary, and the other

28.57% think that the programs are significant). Moreover, the participants opine that they need an institution that can mediate NGOs to maximize community programs. All participants consider that such organizations are essential to unite people with different backgrounds.



**Table 12**  
**The Importance of Social Organization**

No.	Questions	Average Score (in the scale 1 to 4)	Satisfaction Score (Situation/Condition Experienced)
13	Do you think that a social organization is needed to mediate the diversity of people in society?	3.29	5 a. 0.00% Not necessary b. 0.00% Less necessary c. 71.43% Necessary d. 28.57% Highly necessary
14	Is active participation important to support different activities of the member of social organization?	3.79	a. 0.00% Not necessary b. 0.00% Less necessary c. 21.43% Necessary d. 78.57% Highly necessary

In the context of the study, the social organization is a legal institution that can help the housewives to manage the coastal resources, which ultimately prevent any unlawful acts.

Generally, the participants of multicultural learning are satisfied with every activity in the program. This is shown in the table below.

**Table 13**  
**Students' Satisfaction in Multicultural Learning**

No.	Questions	Average Score (in the scale 1 to 4)	Satisfaction Score (Situation/Condition Experienced)
15	Do you satisfy with the activities in multicultural learning?	3.93	a. 0.00% Not satisfied b. 0.00% Less satisfied c. 7.14% Satisfied d. 92.86% Very satisfied

Provided in Table 14 are the <sup>14</sup>ult of the **normality test** of the data from the questionnaire containing 15 questions item to 28 respondents using SPSS.

**Table 14**  
**Output of Normality Test Using SPSS Application**

**Normality Test**

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistics	Df	Sig.	Statistics	df	Sig.
Housewives' Learning Capacity	.162	28	.057	.949	28	.187

a. Lilliefors Significance Correction





The above table shows that the value of Shapiro-Wilk is significant at 0.187, which is greater than the significance level 0.05. Such a result signifies that the data are normally distributed. Moreover, the adequacy

of the research respondents has met its requirement. The respondents have represented the condition of the housewives in the northern coastal area of Gorontalo.

Table 15  
Output of One-sample Test Using SPSS Application

One-Sample Test

	Test Value = 75					
	T	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Housewives' Learning Capacity	-33.021	27	.000	-22.50000	-23.8981	-21.1019

The result of the one-sample test using SPSS application shows that  $t = -33.02$  with the significance  $p = 0.00$ . In other words, multicultural learning significantly enhances the learning capacity of the housewives living in the northern coastal area of Gorontalo.

## CONCLUSIONS

1. Multicultural learning is applicable for facilitating the needs of learning of people which help them to support their productivity. On top of that, this approach functions to increase learning capacity and minimizing the risk of conflict due to cultural diversity.
2. Stages in multicultural learning, involving assimilation, reinforcement, and learning competency, can help facilitators in teaching the participants. The learning competency encompasses self-evaluation, development of work relation, creative and innovative culture, and work ethic.
3. The implementation of multicultural learning for the housewives in the northern coastal area, Gorontalo, contributes to the improvement of their learning capacity. In this case, the focus of the learning is to improve the knowledge of the housewives to process *nike* fish into various food products, such as crackers, floss, and pudding.
4. In managing the business, an institution or organization which mediate the activities (such as assimilating, sharing, learning with others,

and discovering innovation to actualize shared goals) of the housewives is essential.

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