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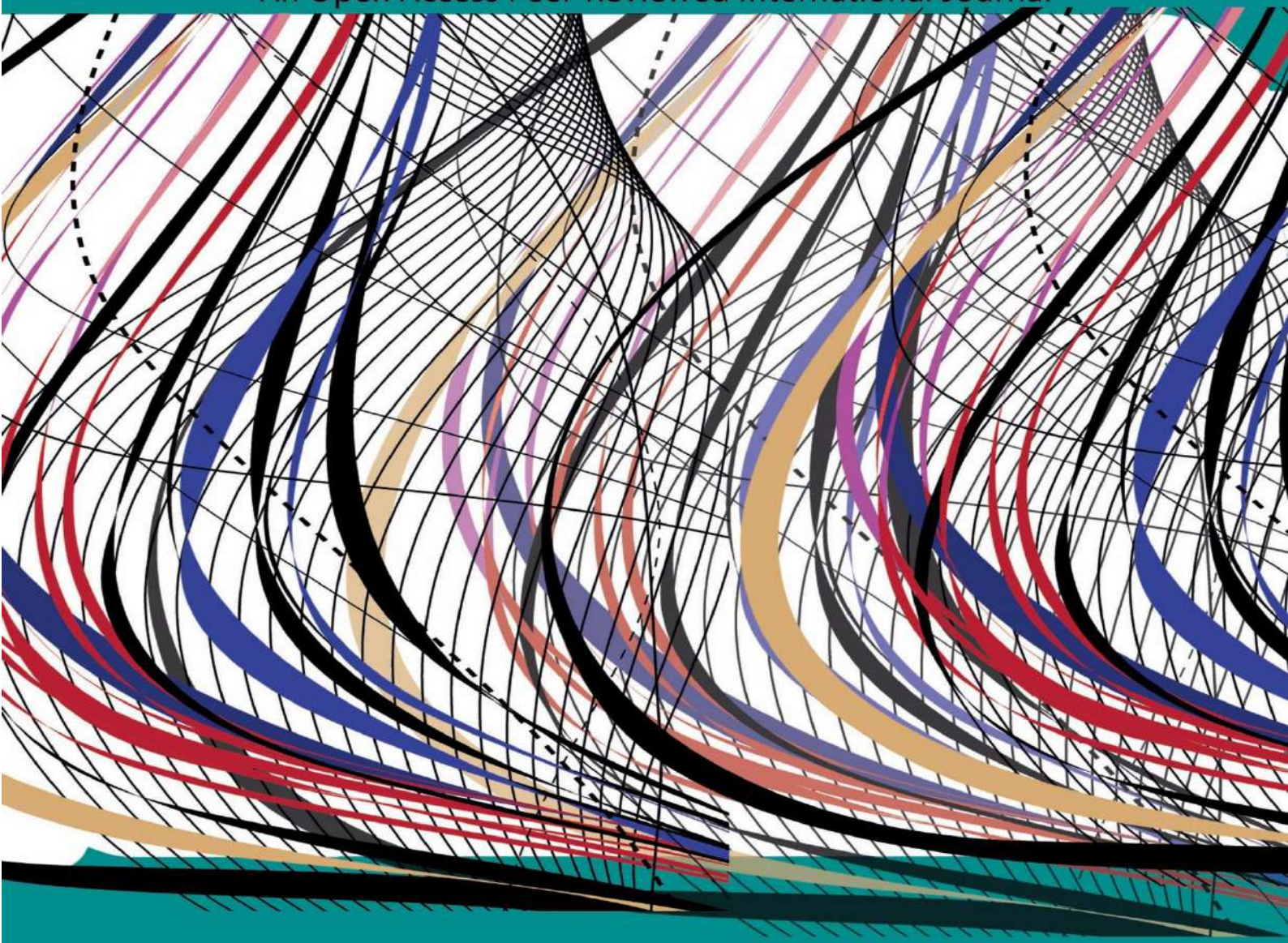

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FOREWORD

I am pleased to put into the hands of readers Volume-7; Issue-4: April, 2021 of "**International Journal of Advanced Engineering, Management and Science (IJAEMS) (ISSN: 2454-1311)",** an international journal which publishes peer reviewed quality research papers on a wide variety of topics related to Science, Technology, Management and Humanities. Looking to the keen interest shown by the authors and readers, the editorial board has decided to release print issue also, but this decision the journal issue will be available in various library also in print and online version. This will motivate authors for quick publication of their research papers. Even with these changes our objective remains the same, that is, to encourage young researchers and academicians to think innovatively and share their research findings with others for the betterment of mankind. This journal has DOI (Digital Object Identifier) also, this will improve citation of research papers.

I thank all the authors of the research papers for contributing their scholarly articles. Despite many challenges, the entire editorial board has worked tirelessly and helped me to bring out this issue of the journal well in time. They all deserve my heartfelt thanks.

Finally, I hope the readers will make good use of this valuable research material and continue to contribute their research finding for publication in this journal. Constructive comments and suggestions from our readers are welcome for further improvement of the quality and usefulness of the journal.

With warm regards.

Dr. Dinh Tran Ngoc Huy
Editor-in-Chief
May, 2021

Editorial Board/ Reviewer Board

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Influence of the Time of Year on the Reproductive Efficiency of Dazu Black and Mongolian White Cashmere Goats in Southwestern China

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Abstract**—** *With the aim to evaluate the reproductive performance of the Dazu Black (DZB) and Mongolian White Cashmere (IMCG) goats' races according to the times of the year. To integrate these reproductive traits, they were compared at different times of the year. At the same time, the prolific, fertility and fertility of herds were evaluated. Significant differences between epochs (P< 0.01) were determined for the fertility variable, although the fertility rate of DZB goats was higher (85.2%) compared to IMCG (79.7%), no significant differences were observed. The variable prolificity shows high values in the four measures, and no statistically significant differences were found for them. As for the number of births per epoch, the highest values were found in the spring for the DZB breed and summer for IMCG. Correlations showed average results with positive correlations of 56.60% for DZB and 62.26% for IMCG. The time of year influenced the number of offspring at birth negatively (r-0.06), the highest number of births occurred in spring for DZB and in summer for MWC and the presence of double births prevailed in both races during the period evaluated. The Dazu Black and Mongolian White Cashmere goats have defined characteristics that have modeled the genetic and phenotypic structure as a standard for each breed through environmental influence and cultural practices. This aspect demonstrates the adaptation and rusticity of goats and their ability to consume and take advantage of available foods. The sample size, distribution and methodology used in this research makes it possible to conclude that DZB goats and IMCG are a valuable genetic resource for adaptation, rusticity and productive efficiency.*

Keywords**—** ***Prolific, fertility, traits, reproductive, genetic.***

I. INTRODUCTION

Knowledge of the reproductive strategies of goats and the identification of the main environmental factor responsible for the annual cycle of reproduction in males and females is necessary to manipulate their reproductive activity and have the opportunity to produce milk, cheese, and goats all year round (Chemineau et al., 2007).

Fertility, prolificity, and embryonic mortality are parameters to consider when conducting studies characterizing the reproductive efficiency of a goat herd (Bedos et al., 2010).

In sheep and goat production, fertility is defined as the percentage of brown females relative to the total number of females exposed to a soaking stone, and prolificity is defined as the percentage of offspring born concerning the total number of brown females. Births are characteristics of great economic importance that have an impact on the number of lambs available to producers, both for sale and replacement of the same population (Delgadillo et al., 2004).

II. MAIN GOAL

Evaluate the reproductive performance of the DZB and IMCG races according to the times of the year.

III. MATERIALS AND METHODS

The breeding behavior for both goats' breeds between the years 2008 – 2018 was recorded. The study used a database, which featured a sample of 709 birthing records of Dazu Black (475) and Mongolia White Cashmere (234) from "Black Goat Etymological Conservation Farm", at Southwest University, Chongqing, China. The information concerning the females, as well as the date and type of the births (single, double, triple, or four offspring), parity, the period of a year, number of females and males born alive, and deaths in the period analyzed were recorded. The response variables of this experiment were fertility rate (F s number of goats brown/number of goats exposed x 100), and prolificity (P s number of goats born/number of goats brown x 100). The interval between deliveries (date of last birth- previous due date) was calculated. With the declared interval between births, fertility was calculated – Fertility rate x Prolificity / Interval between births.

The results obtained were statistically analyzed using the Chi square test, while prolificity was analyzed using variance analysis (ANDEVA) by least squares for a completely random design. In the case of the variables of time of year, parity, sex, number of births and deaths in the period covered by the aforementioned years. In all cases, the Statgraphics Centurion statistical package was used, by comparison of proportions.

IV. RESULTS AND DISCUSSION

In table 1 it is shown the fertility values expressed as % of partition, fertility, and prolificity, depending on the time of the year: winter, spring, summer, and autumn.

Considering that the factors used in this work were mainly the age of the mothers and their parity, a significant interaction was found between these two variables. From the former, it can be said that both factors behave dependently in terms of their influence on the percentages of actual and observed fertility.

Table 1. Fertility rates for different times of the year

Time of year	Race	Fertility rate	Fertility	Prolificity
Winter	DZB	0.91	0.98	1.97
	IMCG	0.78	0.80	2.02
Spring	DZB	0.83	0.94	2.12
	IMCG	0.70	0.75	2.02
Summer	DZB	0.84	0.89	1.98
	IMCG	0.89	0.78	2.00
Autumn	DZB	0.83	0.87	1.92
	IMCG	0.82	0.66	2.06
Average		0.81	0.83	2.01

Significant differences between epochs (c 2 x 13.11, P< 0.01) were determined for the fertility variable, although the fertility rate of DZB goats was higher (85.2%) compared to IMCG (79.7%), no significant differences was observed (Square Chi; p > 0.05). Both results were higher than what is mentioned by Vera et al. (2003) in goats raised in the tropics, and fed with supplemented corn oil, which reported higher fertility rate (73.3%).

Prolificity shows high values for the four periods of time considered, finding no statistically significant differences. The prolificity similarities of goats, from this study, are similar to that recorded by Duricic et al. (2012), who reported an average of 1.96 and 1.98 for Boer goats in a moderate climatic zone.

For the goats of this research, prolificity is superior to that reported by Haniza et al. (2017) who mention that nutrition and mineral salts enrich follicular fluid, whereby its action on follicular cells improves follicular dynamics and ovulation. Hence, they have a greater number of large follicles that can potentially ovulate and thus improve prolificity.

Zhao et al. (2018) in a study of the breed Dazu Black found an interval between births of 237 days, in this research this parameter was quantified in 284 days for the race Dazu

Black and 306 days for Mongolia White Cashmere. This could have influenced fertility values to decrease from the prolificity that was higher.

Fertility rates are lower than those determined by Kaliber et al. (2016) for similar systems in northern Chile, which has similar temperatures to southwestern China.

As can be seen in figure1, the highest values were found in the spring for the Dazu Black breed and summer for Mongolia White Cashmere. These values were. This decrease could be due to a decrease in food availability, or because animals are at a recovery or rest stage as a result of the high demands of the year evaluated, since this is an experimental unit and it is the of studied by all students and teachers in the university.

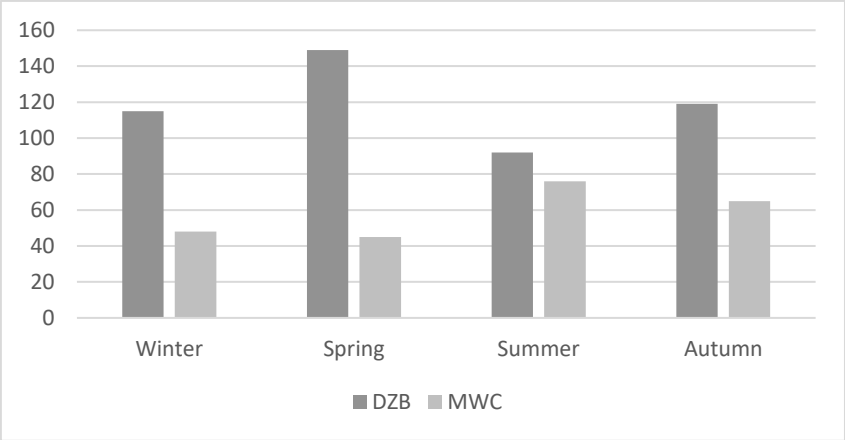

Fig.1: Births according to the time of year.

According to Banerjee et al. (2016), the time of the year where the best productive results are obtained varies a lot according to the area where livestocks are raised, since reproductive seasonality depends on a lot of factors, such as light and temperature.

Table 2 shows the number of births according to the time of year in both races.

Table 2. Birth behavior according to the time of year by race.

Time of year	Races	Single	Double	Triplets	Quadruplets	(±ES) (P-value)
Winter	DZB	25 (17.8)b	59(55.7)a	24(21.0)b	6(5.0)c	0.08 **
	IMCG	10(20.8)b	27(58.3)a	11(22.9)b	0(-)c	0.16*
Spring	DZB	29(19.0)b	78(51.3)a	42(27.6)b	3(1.97)c	0.01**
	IMCG	10(21.7)b	26(56.5)a	9(19.5)b	1(2.17)c	0.14*
Summer	DZB	24(26.2)b	48(52.2)a	17(18.5)b	3(3.2)c	0.07*
	IMCG	22(28.9)b	34(44.7)a	18(23.6)b	2(2.6)c	0.03*
Autumn	DZB	37(31.1)ab	55(46.2)a	26(21.8)b	1(0.8)c	0.11*
	IMCG	13(20.0)b	35(53.8)a	17(26.2)b	0(-)c	0.04**

*(p<0.05) **(p<0.01)

As for the number of births according to the percentages of single, double, triple, and quadruple, we can see that double births showed significant differences in all seasons of the year, with the percentage between 44.7% and 58.3% respectively. While in this study the births with four or more young were lower at all times of the year.

In a study conducted by Zhao et al. (2018) the percentages of singletons, twins, triplets, and quadruplets born were 1.98, 47.27, 40.02, and 10.29 %, respectively. These results

are similar to our findings. Other authors (Duricic et al., 2012; Oliveira et al., 2017) in a study of medium litter sizes of black goats Dazu Black, determined that this type of birth was the highest among the breeds of goats reported.

Hernández *et al.* (2002), in a study in Creole goats and half-breeds foun that the percentage of multiple births appears to be linked to the females' adult weight. . The percentage of multiple births in Creole breeds was 46.5%. The highest percentages (56.6 to 84%) are reported for Boer goats in South Africa, Damascus goats in Lebanon, and Barbari goats in India (Luque, 2011). The lowest percentages (32%) has been reported for Malabari goats in India and Uganda respectively.

There were no differences in sex between them, so the proportion was 51/49% in both races. In the case of births, there is greater evidence in the Dazu Black breed, but this is determined by the number of individuals in each race, which is higher in number compared to the Mongolia White Cashmere.

Table 3. Simple regression between the number of birthing rates, decaying from the time of year.

Indicators	EE	r	R2 (%)	P Value
Time of year/Number of birth pups	0.74	-0.03	0.13	NS
Linear Equation Y-a+b*X	Number of birth pups =2.11237-0.0249145*Time of year			

It can be observed that there was no significant difference between the time of year and the number of births. According to Haniza et al. (2017), there are several factors, genetic and environmental, that can affect the reproductive capacity of herds. On the other hand, many factors affect these indicators such as nutrition and management that can significantly affect reproductive performance. Rhone et al. (2013) also determined that the efficiency of reproduction is determined by many different processes, including age in the first gestation, birth interval, birth type, and litter sizes at birth.

Table 4 shows the behavior of young born alive by births relative to the time of year, during the period evaluated.

Table 4. Simple regression between the number of live births and the time of year.

Indicators	EE	r	R2 (%)	P Value
Time of year/Number of live births	0.02	-0.06	0.31	*
Linear Equation Y-a+b*X	Number of live births=2.15475-0.045627* Time of Year			

The number of live births showed differences from the time of year ($p<0.05$). The correlation coefficient is r-0.06, so it indicates a weak, negative relationship. So, it is determined at 31% of these births by the time of year. This rate expresses the productive potential of a breed and is conditioned on management and feeding factors.

In Tables 5 and 6, the correlation between the years and the reproductive indicators studied are shown.

Table 5. Correlations of the years and times of the year, with the reproductive indicators, studied for the Dazu Black breed.

DZB	Year	Birth	Female	Male	B- Alive	Dead	B W	Parity
Year	1							
Birth	-0.04	1						
Female	-0.06	0.52***	1					
Male	0.02	0.42***	-0.54***	1				
B- Alive	-0.05	0.97***	0.50***	0.42***	1			
Dead	0.04	-0.14*	-0.03	-0.09*	-0.36***	1		
BW	0.18***	-0.12**	-0.01	-0.12**	-0.05	-0.28***	1	
Parity	0.11**	0.29***	0.14**	0.13**	0.29***	-0.08	0.23***	1
	Month	Birth	Female	Male	B- Alive	Dead	B W	Parity
Month	1							
Birth	-0.08	1						

Female	-0.03	0.52***	1					
Male	-0.04	0.42***	-0.54***	1				
B- Alive	-0.07	0.97***	0.50	0.42***	1			
Dead	-0.01	-0.14**	-0.03	-0.09*	-0.36***	1		
BW	-0.04	-0.12**	-0.01	-0.12**	-0.05	-0.28***	1	
Parity	0.04	0.29***	0.14**	0.13**	0.29***	-0.08	0.23***	1

As it can be seen in the table above, univariate analyses using fixed-effect models showed that the year's interaction with reproductive indicators showed weak and negative effects for traits in the number of offspring born and females born in each birth. The number of offspring born concerning sex also yielded significant differences with moderately strong and positive correlations for both sexes ($p \leq 0.001$), with correlations between males and females born in the period studied. On the other hand, the results of deaths based on the number of births showed weak and negative results, which mean that as births increase, deaths decreased at the stage analyzed. Birth weight relative to years showed a weak and positive correlation with statistical differences, as well as the number of births and deaths. As for parity, it can be shown that there are statistical differences for most indicators under study except for deaths that had a negative correlation.

As for the time of year, weak and negative correlations can be observed in most cases. Significant differences ($p \leq 0.001$), as well as the birth weight concerning the number of births, with weak and negative correlation, are evident for traits in the number of births ($p \leq 0.001$), as the number of births increases. Like parity in I show significant differences for most of the characters studied.

Table 6. Correlation of the years and time of the year, with the reproductive indicators, studied for the Mongolian white Cashmere breed

IMCG	Year	Birth	Female	Male	B- Alive	Dead	B W	Parity
Year	1							
Birth	0.08	1						
Female	0.01	0.41***	1					
Male	0.07	0.45***	-0.62***	1				
B- Alive	0.08	0.94***	0.40***	0.41***	1			
Dead	-0.02	0.08	0.01	0.05	-0.22***	1		
BW	0.11	-0.34***	-0.18**	-0.11	-0.30***	-0.09	1	
Parity	0.53***	0.22***	0.11	0.08	0.19**	0.08	0.14*	1
	Month	Birth	Female	Male	B- Alive	Dead	B W	Parity
Month	1							
Birth	-0.01	1						
Female	0.01	0.41***	1					
Male	-0.01	0.45***	-0.62***	1				
B- Alive	-0.01	0.94***	0.40***	0.41***	1			
Dead	0.04	0.08	0.01	0.05	-0.22***	1		
BW	0.06	-0.34***	-0.18**	-0.11	-0.30***	-0.09	1	
Parity	0.02	0.22***	0.11	0.08	0.19**	0.08	0.08	1

As for the Mongolian White Cashmere breed, we found a weak and positive correlation for most of the indicators evaluated. It is important to highlight live births, birth weight, and parity as variables with statistically significant difference ($p \leq 0.001$). By the time of year, these were very similar, so it is emphasized that the birth weight a weak and

negative correlation in terms of the number of births sex, and live births.

V. CONCLUSIONS

• The results found in this research show that the goats under study have a good reproductive efficacy that is 83% fertility; 81 fertility and 2.01 prolificity, which is very

important when it is considered that these are animals bred for research purposes and without any special food supplementation.

• The presentation of double births is higher compared to single, triple, and quadruple births at all times of the year.

• The time of year influences 31% of births that occurred during the period studied.

REFERENCES

[1] Banerjee, D., Upadhyay, R. C., Chaudhary, U. B., Kumar, R., Singh, S., Ashutosh, Das, Das, T. K. and De, S. (2015). Seasonal variations in physio-biochemical profiles of Indian goats in the paradigm of hot and cold climate. Biological Rhythm Research, 46(2): 221-236.

[2] Bedos, M., Flores, J.A., Fitz-Rodríguez, G., Keller, M., Malpaux, B., Poindron, P., Delgadillo, J.A. (2010). Four hours of daily contact with sexually active males is sufficient to induce fertile ovulation in anestrous goats. Hormones and Behavior. 58: 473–477.

[3] Chemineau, P., Malpaux, B., Brillard, J.P., Fostier, A. (2007). Seasonality of reproduction and production in farm fishes, birds and mammals. Animal. 1:419-432.

[4] Delgadillo, J.A., Cortez, M.E., Duarte, G., Chemineau, P., Malpaux, B. (2004). Evidence that the photoperiod controls the annual changes in testosterone secretion, testicular and body weight in subtropical male goats. Reproduction, Nutrition and Development. 44: 183-193.

[5] Duricic, D., Grizelj, J., Dobranic, T., Harapin, I., Vince, S., Kocila, P. and Samardzija, M., (2012). Reproductive performance of Boer goats in a moderate climate zone. Vet. Arh., 82: 351-358.

[6] Haniza, M.Z.H., Ta, M.M. and Husni, I., (2017). Reproductive performance of different goat breeds in Malaysia. Indian J. Anim. Res., 590: 1-4. https://doi.org/10.18805/ijar.v0iOF.7002

[7] Hernández, Z. J. S., Franco, G. F. J., Herrera, G. M., Rodero, S. E., Sierra, V. A. C., Bañuelos, C. A. y Delgado, J. V. (2002). Estudio de los recursos genéticos de México: características morfológicas y morfoestructurales de los caprinos nativos de Puebla. Universidad de Córdoba. Córdoba. España. Recuperado de http://www.redalyc.org/articulo.oa?id=49519408.

[8] Kaliber, M., Koluman, N., and Silanikove, N. (2016). Physiological and behavioral basis for the successful adaptation of goats to severe water restriction under hot environmental conditions. Animal, 10(1): 82-88.

[9] Luque, M. (2011). Caracterización y evaluación de las razas caprinas españolas deorientación cárnica. (Tesis doctoral). Universidad de Córdoba, España.

[10] Oliveira, J.D., Fonseca, J.F., Souzafabjan, J.M., Esteves, L.V., Feres, L.F. and Rodrigues, C.A. (2017). Protected fatty acid supplementation during estrus synchronization treatment on reproductive parameters of dairy goats. Anim. Sci. J., 88: 254-258. https://doi.org/10.1111/asj.12640

[11] Sttiltical, Centurion Corp. (2001). STATGRAPHICS CENTURION For Windows 5.1.

[12] Zhao Zhongquan, Tianyuan Yang, Lei Qiao, Qijie He and Zinuo Dai. (2018). Reproductive Characteristics of Dazu Black Goats, a Newly Discovered Chinese Indigenous Breed Resource with High Litter Sizes. Chongqing Engineering Research Center for Herbivores Resource Protection and Utilisation, Southwest University, Chongqing, 400716, China. 2018.

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Factors Affecting Policyholders' Satisfaction towards Life Insurance: An Empirical Study on Life Insurance Policyholders in Bangladesh.

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Abstract— *Insurance represents a very important tool to minimize risks borne by people and businesses in trendy economies. It's nothing but a mechanism of spreading the chance of one to the shoulders of the many. Insurance is one vital segments of monetary system. The insurance business is exclusive within the sense that it's rewarded for managing the chance of alternative parties. Human life is the most precious thing and life insurance is the most significant form of insurance that provides monetary protection to individuals and their families at the time of unsure risks or injury. Although life can't indemnify, life insurance provides a way of security, safety and protection to people and conjointly encourages savings among folks. This study aims to behold the factors affecting policyholders' satisfaction towards life insurance policies in Bangladesh which will help insurance companies to develop strategies to grow and sustain the life insurance business. The study is descriptive in nature, has been conducted supported both primary and secondary data. Twelve (12) variables have identified in this respect and hundred (100) policyholders are selected randomly from different locality. Collected data have tested with the help of various statistical tools like reliability and validity checking, regression analysis, ANOVA, weighted average method and hypothesis testing. The analyzed data has been presented in the form of table, graphs and charts. The study suggested that mass communication helps to form awareness and trust among the people with reference to taking associate degree contract strategy. The study concluded that low premium, service quality, efficient agent, trust, technology and communication are the most significant motivating factors compared to product feature, price, flexibility, brand value, economic growth and maturity benefits on policyholders` satisfaction. This study can become useful for the advance of insurance in Bangladesh.*

Keywords— ***Bangladesh, Life-insurance, Policyholders` satisfaction, Service quality, Trust.***

I. INTRODUCTION

Insurance could be a contract, diagrammatical by a policy, within which a private or entity receives monetary protection or compensation against losses from associate degree no depository financial institution. Insurance is a very important risk mitigation device. It provides a way of security. Insurance works on the principle of pooling of risks and distributes risks over many folks. Insurance is a useful aid to trade. Insurance is one vital segments of monetary system. The insurance business is exclusive within the sense that it's rewarded for managing the chance of alternative parties.

Insurance sector in Bangladesh emerged after independence with 2 nationalized insurance companies- 1 Life & 1 General; and 1 foreign insurance company. In mid 80s, private sector insurance companies started to enter in the industry and it got expanded. Now days, 62 companies are operating under Insurance Act 2010. Out of them- 18 are Life Insurance Companies including 1 foreign company and 1 is state-owned company, 44

General Insurance Companies including 1 state-owned company. Insurance companies in Bangladesh provide following services: Life insurance, General Insurance, Reinsurance, Micro-insurance, and Takaful or Islami insurance.

Although Bangladesh's insurance sector has witnessed some growth, as compared with alternative rising nations, there's loads of area for improvement. According to the Seventh Five Year Plan (2016–2020) of the Government of Bangladesh, a majority of the population across product segments (life and non-life) remains untapped by the insurance market. In 2019, overall insurance penetration in the country is approximately 0.57 per cent compared to Thailand's average of 5.27 per cent, Malaysia's 4.77 per cent, China's 4.22 per cent, India's 3.7 per cent, Indonesia's 1.95 per cent and Sri Lanka's 1.15 per cent. This indicates that rising Asia Pacific economies area unit investing the advantages of insurance for growth and development. There are 78 insurance companies - 32 life and 46 non-life - operating in the country at present. In 2018, Bangladesh's payment earnings rose by eleven.06 per cent to Tk 124.165 billion, in keeping with information obtainable with the Insurance Development and administrative unit (IDRA). The gross premium from life insurances stood at Tk 90.20 billion in the year, up by 10.10 per cent while premium of non-life insurance stood at Tk 33.97 billion showing 13.92 per cent rise. Life insurers disbursed a total claim payment of Tk 65.71 billion with the claim settlement ratio of 88.51 per cent.

However, with the recent increase in life expectancy, around 20 per cent of the population will be older people (65 years and beyond). From an economic perspective, a growing senior population will mean reallocating economic and other resources. Bangladesh is yet to establish a sustainable social security program for the elderly people. Except for the government service-holders and few other social safety net programs, the country does not have massive coverage of social security services. In this context, insurance is such an industry that has the capability of complementing the government programs for ensuring sustainable development.

II. OBJECTIVES OF THE STUDY

The main purpose of this research is to explore the policyholders` satisfaction level regarding life insurance which will help insurance companies to develop strategies to grow and sustain in the life insurance business. Some other objectives are-

i. to find out the impact of service quality on policyholders' satisfaction.
ii. to find out the influence of insurance agents on policyholders' satisfaction
iii. to find out the impact of communication on policyholders' satisfaction
iv. to find out the impact of brand value on policyholders' satisfaction
v. to find out the impact of maturity benefits on policyholders' satisfaction

III. RESEARCH HYPOTHESIS

H01. There is no impact of Service Quality on policyholder`s satisfaction
H02**.** There is no impact of Insurance Agents on policyholder`s satisfaction
H03**.** There is no impact of Communication on policyholder`s satisfaction
H04**.** There is no impact of Brand Value on policyholder`s satisfaction
H05**.** There is no impact of Maturity Benefits on policyholder`s satisfaction

IV. REVIEW OF LITERATURE

Customers were the main pillars of any business and customer service is the critical success factor in a company and providing outstanding customer service differentiates great customer service from indifferent customer service. Customers today are more demanding and expecting high standards of service and value satisfaction. If all the players in the life insurance industry focus on the effective delivery of services they could win the hearts of customers and anticipate their increased market share. Customer service assumes vital importance in the marketing programs of all modern organizations including service organizations. Insurance companies need to improve its service quality to meet changing demands and expectations of customers. (Yadav., 2011) Customer satisfaction determinants such as (a) operational efficiency, (b) quality service delivery, (c) technological infrastructure, and (d) customer appreciation of insurance offerings may translate into life insurance business growth in Ghana (Akotey & Adjasi, 2015; Alhassan & Fiador, 2014). Frank and Enkawa examined the impact of economic growth and economic expectation that influence the customer satisfaction and their quality. They found that policyholders are positively influenced towards economic growth and negatively influenced towards their economic expectation and also found that economic expectation and quality expectations are positively correlated. (Frank & Enkawa, 2009**).** An article titled, "Policyholders Satisfaction with the Agency-Based Sales Surpasses Satisfaction with Direct Sales in Japan", reveals that

policyholders are more satisfied with timely services, procedure and documentation followed, low premium and innovative products offered by the Prudential Life Insurance Company. (J, 2011). in their article Anshuja Tiwari and Babita Yadav reveal that prompt customer service, after-sales services, innovative products with flexibility and better communication influences the customer satisfaction towards private life insurers than public sector insurer, LIC. (Tiwari & Yadav, 2012). Deepika Upadhyaya and Manish Badlani carried out a study entitled, "Service Quality Perception and Customer Satisfaction in Life Insurance Companies in India", with a view to identify customer satisfaction in retail life insurance in India. They identify that the policyholders are more satisfied with the pricing factor followed by employee competence, product and service, technology, physical ambience of the company, trust, service delivery, advertising and service management. (Upadhyaya & Badlani, 2011). Policyholders are more satisfied with the policy features, price, maturity benefits and tax saving contents. (Negi & Kaur, 2010). Policyholders are highly satisfied with the premium amount fixed by the company and the maturity amount received after the maturity period. (Panchanatham, Jhansi, Kumar, & Mani, 2008) Paromita Goswami carried out a study to identify the dimensions of service quality that ensures maximum satisfaction for the customers in the life insurance industry. She finds that customers are more satisfied with responsiveness dimension of service quality namely, promptness and timeliness in service as well as willingness to help the customers. The insurance companies have to work and concentrate on time-based competition, quality, product range, timely advertisement, follow up, prompt and error-free services which are the key ingredients for the better service and it will boost up the sales. (Goswami, 2007). Upadhyaya (2011) finds out the factors of customer satisfaction in life insurance and study the importance technology in full fling customer satisfaction. Study highlights the role of technology to improve quality and customer satisfaction. Researcher finding the majority of policyholders who are strongly recognizable with interpersonal services may never be satisfied with technology-based service. Siddiqui and Sharma investigate service quality framework for life insurance and then relative importance of these service quality dimensions from customer's viewpoint. The paper attempt to measure as to how well services are being delivered i.e., up-to what level performances are meeting the expectations. The result tinted the main concern areas of service instrument with assurance is the best interpreter, followed by competence and personalized financial planning. The insurance companies have to work and concentrate on time-based competition, quality, product range, timely advertisement, follow up, prompt and error-free services which are the key ingredients for the better service and it will boost up the sales. (Siddiqui & Sharma, 2010). Policyholders of life insurance policies seek personalized services and constant support in financial planning e.g., flexible payment schedule, flexible product solution, provisions for convertibility of products and supplementary services etc. So, service providers should encourage the agents to assume wider roles, that of financial consultants. (Subashini & Velmurugan, 2016). In his study (sinha, 2013) stated that insurance companies are working in a highly competitive market where consumers have many companies and products to choose from. Hence it becomes necessary for insurance companies to maintain loyal customer base by increasing customer loyalty through improved service quality. His study given by factor analysis is performed where five factors are derived namely, sincere and prompt services, comparison and courteous, meticulous and customers orientation, flexibility and tangibility. The study emphasizes that the customers should be given prompt service. They should feel safe in their dealings with the company and the company should give individual attention to the customer. Manuel conducted the study to understand the Consumer Perception about life insurance policies. The survey was conducted to find out the attributes which affect decision making of consumers of life insurance policies which are return on investment, company reputation, premium outflow, service quality and product quality (Manuel, 2013). Yadav and Tiwari find out factors influencing customer investment decision, impact of various demographic factors, preferences of customers while taking the decision, and ranking of factors responsible for the selection life insurance as an investment option. The features that policyholders consider while making a purchase can be ranked as follows: company reputation, money back guarantee, risk coverage, low premium and easy access to agents as 1st, 2nd, 3rd, 4th and 5th respectively. Thus, it could be concluded that goodwill of the company is the most influencing factor while policy buying decision. It was found that majority of respondents preferred money back policy. (Tiwari & Yadav, 2012). Kaur and Negi conducted their study in Chandigarh and by using factor analysis they found customized and timely service, brand value, considerate employee, price immunity as major factors affecting the satisfaction of customers. They even found that maximum life covered under insurance are of male than female and satisfaction level among public and private sector insurance companies is same. (Negi & Kaur, 2010). M. Epctimchin (2011); conducted a survey in Nigeria to find out factors

enhancing the purchasing of life insurance and found that company loyalty is the major factor influencing purchasing decision and company client relationship as the last. These factors are beneficial to company as well as consumer. Sandhu and Bala found 7 factors composed of proficiency, media and presentations, physical and ethical excellence, service delivery process and purpose, security and dynamic operation, credibility and functionality. Along with these factors' managerial implication like performance of agents also affect customer satisfaction (H & N, 2010). A study on "Determinants of customer Satisfaction: A Model of Technology Integration in Thailand's Insurance Industry" depicts that magnitude of technology integration directly influences customer satisfaction whereas technology readiness of salespeople and customer indirectly influences the customer satisfaction towards insurance provider. (Larpsiri & Speece, 2004). In his survey entitled, "Insurers Score Low in Client Satisfaction", (Hongmei, 2016) observes that the policyholders are dissatisfied with the insurer's services with regard to customer complaint lodged and claim settlement. **T**he hostility of this study is to assay the brunt of demographic factors on the extent of satiation of investor's contra insurance policies. The study entraps the impact of demographics factors on the satisfaction of investors towards insurance policies. This paper conjointly evaluates cogent relationship between demographic factors and overall satisfaction of the shoppers towards the insurance policies. (Sharma, Sai, Vijay, P., & Sharma, 2012)

V. METHODOLOGY OF THE STUDY

Research methodology is the specific procedures or techniques used to identify, select, process, and analyze information about a topic. In a research paper, the methodology section allows the reader to critically evaluate a study's overall validity and reliability (David Wilkinson, 2020). The current research is a descriptive research. This research study has been conducted among the life insurance policy holders from different public and private insurance companies in different urban and rural areas in Bangladesh based on random sampling in which **100** policyholders (male and female) have been selected as sample. This study is based on both primary and secondary data. For Primary data collection, pertinent information have been gathered by surveying among the policyholders. Both questionnaire and interview secessions have been conducted to gather primary data. All of the items in the questionnaire have been measured on 5-point Likert scale (1= strongly disagree, 2= disagree, 3= neutral, 4= agree and 5= strongly agree). Interview secession has been conducted on 30 respondents from different private and public insurance companies in Bangladesh. For secondary research, relevant literature from books, articles, newspapers, and magazines have been collected. Descriptive statistics is used for analyzing data including Reliability, multiple Regression analysis, ANOVA and Hypothesis test in SPSS 20 version.

VI. ANALYSIS AND INTERPRETATION

6.1 Demographic Analysis

The demographic analysis of the respondent represent that the majority of the respondents are of the age between 45-54 years, most of them are male respondent and they are married, their educational level is graduation and majority of them are government job holders.

Table-1: Demographic information of the respondents

	Age of the respondent	Marital Status	Educational Qualification	Gender of the Respondent	Source of Earnings
N Valid	100	100	100	100	100
Missing	0	0	0	0	0
Mean	3.28	1.89	3.74	1.37	3.29
Std. Error of Mean	.102	.031	.114	.049	.127
Std. Deviation	1.016	.314	1.143	.485	1.274
Variance	1.032	.099	1.305	.235	1.622
Range	3	1	4	1	4

6.2 Reliability and Validity of data

Reliability refers to the consistency of set of items in measuring the study variables (Cooper & Schinder, 2001). Cronbach's alpha is commonly used method to measure the reliability or internal consistency that is, how closely related a set of items are as a group (Cooper & Schinder, 2001). The satisfactory value in Cronbach's alpha is required to be more than 0.60 to be reliable (Malhotra, 2002). In this study, Cronbach's alpha is .786 (Table-2), which indicates a satisfactory level of internal consistency for the scale.

Table-2 Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.786	.715	12

6.3 Regression Analysis

6.3.1 Model Summary

The value of R Square (0.741) and R (0.835) shows that there is strong association between the set of independent variables and the dependent variable with the standard error of 0.410 (Table-4) .In additions, the Table-3 implies that the policyholder`s satisfaction towards life insurance policies in Bangladesh is 74% dependent on service quality, product features, pricing factors, flexibility, trust, agents, communication, uses of technology, premium, brand value, economic growth and maturity benefits. The rest 26% is dependent on some others factors that are not considered by the researcher in this study.

Table-3 Regression Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.835[a]	.741	.778	.410

Source: SPSS output.

6.4 ANOVA test

The F value of the test for the data is 38.542. The p-value associated with this F value which is .000 which is lower than the alpha value 0.05 (Table-4). In additions, The Table-4 implies that there is significant influence of these independent variables on the dependent variable and the model applied is significantly good to predict the dependent variable.

Table-4 ANOVA[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	84.872	12	7.073	38.542	.000[a]
	Residual	72.038	88	.328		
	Total	156.910	100			

a. Predictors: (Constant), Service Quality(V1), Product Feature(V2), Pricing Factor(V3), Flexibility(V4), Trust(V5), Agent(V6), Communication(V7), Technology(V8), Low Premium(V9), Brand Value(V10), Economic Growth(V11), Maturity Benefit(V12)

b. Dependent Variable: Policyholder`s Satisfaction

6.5 Regression Coefficients

In **Table 5,** Since the beta values are the standardized versions of the b-values and are directly comparable, these values may be used to infer regarding the relative importance of each predictor or independent variables to the model. In other words, the beta coefficients could be used to explain the relative importance of the 8 dimensions or factors (V1 to V12 i.e., independent variables) in contributing to the variance in the factors affecting policyholder`s satisfaction towards life insurance policies in Bangladesh.

The application of the beta-values in the multiple regression model equation (YCCT = β0 + β1v1 + β2v2 + β3v3 + β4v4 + β4v5 + β4v6 + β4v7 + β4v8 + β4v9 + β4v10 + β4v11 + β4v12 Or, = .299 + .837 + .502 + .437 + .464 + .738 + .780 + .634 + .715+ .888 + .445 + .344 + .362) interprets this model to mean that for every increase of one unit in v1, assuming the effects of v2 to v12 be held constant, factors affecting policyholder`s satisfaction towards life insurance policies in Bangladesh would increase by 0.540. Likewise, should the effects of other components be held constant, a single unit increase in v2 would result in a 0.410 increase in factors affecting policyholder`s satisfaction towards life insurance policies in Bangladesh. Similarly, being other components held constant a single unit increase in v3 to v12 would lead to a .346, .476, .525, .554, .476, .562, .576, .226, .218 and .260 increase respectively in the factors affecting policyholder`s satisfaction towards life insurance policies in Bangladesh.

Table-5 Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.299	.198		.819	.415
	Service quality (V1)	**.837**	.085	.540	8.433	.006
	Product feature (V2)	.502	.102	.410	2.008	.016
	Pricing factor (V3)	.437	.147	.346	2.982	.004
	Flexibility (V4)	.464	.138	.476	3.374	.001
	Trust (V5)	**.738**	.140	.525	2.270	.028
	Agent (V6)	**.780**	.153	.554	3.521	.003
	Communication (V7)	.634	.157	.476	4.030	.000
	Technology (V8)	**.715**	.169	.562	4.234	.000
	Low Premium (V9)	**.888**	.157	.576	10.562	.026
	Brand value (V10)	.445	.231	.226	2.926	.047
	Economic growth (V11)	.344	.181	.218	2.904	.030
	Maturity benefit (V12)	.362	.129	.260	2.477	.034

a. Dependent Variable: DV

Since there are more than one predictors (independent variables), the magnitude of the t-value in conjunction with the significance has been considered to assess the overall contribution to the model. Based on the decision rule "the greater the t-value, the greater the contribution of the predictor", it is seen that v9: (t=10.562) followed by v1: (t=8.433), v8: (t=4.234), v7: (t=4.030), v6: (t=3.521), v4: (t=3.374), v3: (t=2.982), v10: (t=2.926), v11: (t=2.904), v12: (t=2.477), v5: (t=2.270), and v2: (t=2.008), are all significant predictors or independent variables of the factors affecting policyholder`s satisfaction towards life insurance policies in Bangladesh.

In this regard, from the t-values it can be also concluded that v9 has a greater impact on the outcome than v1, v8, v7, v6, v4, v3, v10, v11, v12, v5, and v2.

In summary, it can be stated that all underlying dimensions are positive and therefore are significant. Thus, the result of multiple regression analysis rejects all of the null hypothesis (H01-H05) and proves or accepts the alternative hypothesis (Ha1-Ha5). So, there is a relationship as expected**.**

So, the regression model achieved a satisfactory level of goodness-of-fit in predicting the variance of policyholder`s satisfaction in relation to the 12 predictors or independent variables, as measured by the above-mentioned R, R2, Adjusted R2, F ratio, beta and t values. In other words, at least one of the 12 predictors or independent variables of the model is important in affecting the policyholder`s satisfaction towards life insurance policies in Bangladesh.

VII. FINDINGS AND RECOMMENDATIONS

The findings of the study reviles that some independent variables have greater impact on policyholder's satisfaction compared to other variables. When prospective policyholders decide to choose a particular policy from a particular insurance company, they appreciate low premium, services quality of the company, insurance agents, trust on the company and use of technology in service delivery system. There are some other factors like communication between company and client before and after the policy purchase, product features, flexibility in payment and documentation system, brand value of the company in the market, product pricing, and maturity benefit received after the policy maturity and economic growth form the policy. From the demographic analysis it is clear that most of the policyholders are male and they are from the age group of 45-54 years. Although now-a-days female have a greater participation in economic activities but there is a smaller number of female policyholders compared to male policyholder. From the above findings it can be recommended that amount and number of premium need to be carefully set, service quality need to be maintained, companies should recruit qualified and efficient agents so that they can rise trust among the people. Technology is a useful tool to communicate with the prospective and existing customers as companies can easily inform about the updates regarding product, price and it can also be used as a promotional tool. Companies should focus on their brand values as a strong brand value increases trust among customers. Overall, insurance companies need to be developed proper and competitive strategies to attract more and more customers and to sustain in the competitive market.

VIII. CONCLUSION

This is the law of nature that human have to be compelled to live and play with hazards and to some extent insurance will free from those frustrations. Insurance firms play a very important role within the welfare of. human well-being by providing protection to uncountable folks against life risks like unsure death or accident Customers have specific opinions on their purchase or consumption expertise from a product or service. A growing life insurance industry that complements a country's sustainable economic development strategy creates the financial support to manage the risk of dying early or living too long (Blake, Cairns, Coughlan, Dowd, & MacMinn, 2013; Smith, 2014). Life insurance practitioners need to identify strategies to enhance the life insurance pool and support the sustainability of the business (Kramaric & Galetic, 2013). These strategies might aid insurance practitioners to develop appropriate insurance products and services accessible to the uninsured population in Bangladesh.

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REFERENCES

[1] B. Yadav., "Customer satisfaction on life insurance services: An empirical study on LIC.," *International Journal of Marketing and Management Research,* vol. 2, no. 2, pp. 150-156, 2011.

[2] B. Frank and T. Enkawa, "Economic Influences on Perceived Value, Quality Expectations, and Customer Satisfaction," *International Journal of Consumer Studies,* vol. 331, pp. 72-82, 2009.

[3] P. J, "Policyholders Satisfaction with the Agency-Based Sales Surpasses Satisfaction with Direct Sales in Japan.," *Insurance Regulatory and Developement Authority Journal,* vol. 8, pp. 8-12, 2011.

[4] A. Tiwari and B. Yadav, "A Customer Survey & Perception towards Bancassurance (With Reference to Life Insurance Industry).," *South Asian Journal of Marketing & Management Research,* vol. 2, no. 2, p. 142–164, 2012.

[5] D. Upadhyaya and M. Badlani, "Service Quality Perception and Customer Satisfaction in Life Insurance Companies in

India," *IRDA Journal*, vol. 2, pp. 23-31, 2011.

[6] M. Negi and D. P. Kaur, "A study of customer satisfaction with life insurance in Chandigarh tricity. Paradigm," *SAGE Journals*, vol. 14, no. 2, pp. 29-44, 1 July 2010.

[7] N. Panchanatham, S. Jhansi, S. Kumar and A. Mani, "A Study on Policy Holder's Expectation and Preference towards Selected Private Life Insurance Companies in Karur District,," *Indian Journal of Marketing*,, vol. 38, no. 8, August 2008.

[8] P. Goswami, "Customer Satisfaction with Service Quality in the Life Insurance Industry in India," *The IUP Journal of Sevices Marketing*, vol. V, no. I, 2007.

[9] M. Siddiqui and T. G. Sharma, "Analyzing customer satisfaction with service quality in life insurance services," *Journal of Targeting Measurement and Analysis for Marketing*, vol. 18, no. 3, 2010.

[10] S. Subashini and D. R. Velmurugan, "Policyholders Satisfaction of Life Insurance Products with Reference to Coimbatore District," *International Journal of Business and Management Invention*, vol. V, no. 4, pp. 28-38, April 2016.

[11] K. sinha, "Measurement of Service Quality: A Life Insurance Industry Perspective," *Journal of Marketing Vistas*, vol. III, no. 1, pp. 54-66, 2013.

[12] J. Manuel, "The long road to recovery: environmental health impacts of Hurricane Sandy. Environ Health Perspect," *National Center for Biotechnology Information*, 2013.

[13] S. H and B. N, "Customers' Perception towards Service Quality of Life Insurance Corporation of India: A Factor Analytic Approach," *International Journal of Business and Social Science*, vol. II, no. 18, pp. 219- 231, 2010.

[14] R. Larpsiri and M. Speece, "Determinants of customer Satisfaction: A Model of Technology Integration in Thailand's Insurance Industry," *IRDA Journal*, vol. 7, pp. 18-21, 2004.

[15] S. Hongmei, "Insurers Score Low in Client Satisfaction," *IRDA Journal*, no. 10, pp. 22-26, 2016.

[16] M. Sharma, T. Sai, Vijay, P. L. P. and S. Sharma, "Impact of Demographic Factors on the Satisfaction of Investors towards Insurance Policies: An Empirical Study," *IJRFM (International Journal of Research in Finance & Marketing)*, vol. 2, no. 1, pp. 54-67, 2012.

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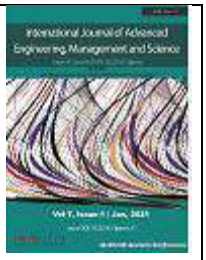

Development of integrated learning module on the development of Learning Devices

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Abstract— *The problems in this research are 1) How is the preparation of integrated learning tools for PGSD UNG students? 2) What is the quality of the integrated learning module developed in PGSD UNG students? This study aims to 1) describe the preparation of integrated learning tools for students majoring in PGSD UNG; and 2) Producing a quality integrated learning development module for students majoring in PGSD UNG.*

The results showed that the objective conditions of integrated learning regarding the preparation of integrated learning devices in the PGSD department of UNG include, among others, lecturers who teach integrated learning courses do not discuss with each other as team teaching so that the learning outcomes of the subjects are not achieved, there are no good teaching materials so that students doing assignments correctly and copying and pasting assignments or downloading them from the internet, learning so far without submitting adequate explanations so that students without clear direction guidance, students are only asked to arrange learning devices and not discuss together the mistakes they make and lectures are not well structured. After doing research and development, the fourth semester students of PGSD Department are getting better with a positive response from students. The quality of the integrated learning module has met the predetermined aspects. The quality of integrated learning modules after being measured based on the characteristics of a quality module, there are 5 aspects. The quality of integrated learning modules is also developed based on input from validators who are media experts, material experts and linguists so that the quality of the integrated learning module is better.

Keywords— ***Learning Module, 4 D Development, Integrated Learning Tools.***

PRELIMINARY

Republic of Indonesia Law No. 20 of 2003 concerning the National Education System (Sisdiknas) article 3 states that the objectives of national education as follows are aimed at developing the potential of students to become human beings who believe and fear God Almighty, have noble character, are healthy, knowledgeable, competent, creative, independent, and become a democratic and responsible citizen. To achieve this national education goal, every educational institution from the level of Early Childhood Education, Elementary School, Middle School, and Higher Education must design a curriculum.

The definition of the curriculum is in accordance with Permendikbud No. 3 of 2020 concerning National Higher Education Standards is a set of plans and arrangements regarding the objectives, content, and learning materials as well as methods used as new implementation of learning activities to achieve certain educational goals. Meanwhile, curriculum development is carried out by referring to national education standards to realize the goals of national education. The curriculum at all levels and types of education is developed with the principle of diversification according to the education unit, regional potential, and students. The curriculum is prepared according to the level

of education within the framework of the Unitary State of the Republic of Indonesia with increased Faith and Piety; increase the potential, intelligence, and interest of students; diversity of regional and environmental potentials; regional and national development; to the world of work; development of science, technology, and arts; religion, the dynamics of global development; and national unity and national values.

The basic framework and curriculum structure for primary and secondary education are established by the Government. Primary and secondary education curricula are developed according to their relevance by each group or educational unit and school or madrasah committee under the coordination and supervision of the education office or district / city religious department for basic education and the province for secondary education. The higher education curriculum is developed by the higher education institution concerned with reference to the national education standards for each study program based on Law Number 12 of 2012 in article 35 paragraph 1 (Directorate General of Learning and Student Affairs, 2018: 9). The basic framework and structure of the higher education curriculum are developed by the universities concerned with reference to the national education standards for each study program.

Presidential Regulation Number 8 of 2012 concerning the Indonesian National Qualifications Framework (KKNI), and Law Number 12 of 2012 concerning higher education, encourage all tertiary institutions to conform to these provisions. The IQF is a statement of the quality of Indonesian human resources whose qualifications are based on the level of ability stated in the formulation of learning outcomes. Higher education as a producer of educated human resources needs to measure its graduates regarding the abilities possessed by their graduates (learning outcomes) which have been formulated in the IQF qualification level. The KKNI curriculum contains a set of plans and arrangements regarding graduate learning outcomes, study materials, processes, and assessments that are used as guidelines for the implementation of study programs. Planning and arranging the curriculum as a curriculum cycle has several stages, namely needs analysis, design, development, implementation, evaluation, and follow-up improvements made by the Study Program (Ornstein & Hunkins, 2014).

Elementary School Teacher Education as a study program in higher education needs to develop the KKNI curriculum. The stages of preparing the higher education curriculum begin with the determination of the graduate profile and the formulation of Graduate Learning Outcomes (CPL), the determination of study materials and the formation of courses; as well as the preparation of the course organization matrix. The curriculum for primary school teacher education study programs refers to the Indonesian National Qualifications Framework (KKNI) and the National Higher Education Standards (SNPT). The formulation of the learning outcomes of the primary school teacher education study program is the result of workshops, symposiums, and finalization workshops that have been conducted by the PGSD Lecturer Association throughout Indonesia which started in 2012 until now.

In the learning outcomes of the Undergraduate Elementary School Teacher Education undergraduate program, the profile of the graduates is directed to produce undergraduate (S1) Elementary Education graduates who have the following expertise: 1) Educators at the primary school level who are able to plan, implement, evaluate and develop scientific based learning, character, and innovation to improve the quality of education; 2) Researchers who are able to solve learning problems and are able to produce proven learning innovations to improve the quality of education in elementary schools; and 3) Educational Practitioners and Consultants at the basic education unit level in the field of education management, extra-curricular coaches, evaluators of learning implementation, and media and learning resource developers. This profile gave birth to several course structures that could support learning in elementary schools based on the national curriculum.

Among the several courses in the primary school teacher education department are integrated learning courses. Integrated learning courses are taught with the aim of providing provision for students who are prospective teachers of integrated learning classes in elementary schools to have the knowledge, experience, and skills to plan and implement effective integrated learning. Integrated learning material includes the nature of integrated learning, curriculum analysis, and making Learning Implementation Plans along with integrated Learning Devices in elementary schools. Integrated learning is part of a group of study program courses that must be taught to students because integrated learning courses teach students to prepare Learning Implementation Plans and learning tools and are able to teach them according to the national curriculum.

Since 2010 researchers have taught integrated learning courses. However, since then lecturers who have taught integrated learning have not been maximal in carrying out lectures. This occurs for many reasons, including: 1) Lectures on the material of arranging thematic learning tools in integrated learning courses usually do not teach the practice of compiling learning systematics from the start, namely students describe the nature of integrated learning, analyze core competencies and basic competencies, map competencies, compile syllabus, compile a lesson plan

implementation, create media, make teaching materials and assessments. However, only directly ask students to make lesson plans and teach them in front of the class without clear guidance, so that it causes students to be less skilled in compiling relevant integrated learning tools; 2) Lecturers do not have teaching materials as a guide for Integrated Learning courses, so students do not do assignments correctly and copy and paste assignments or just download from the internet.

From the above problems, the researchers developed teaching materials in the form of integrated learning modules that can answer all the problems that exist in the integrated learning course about Compiling Learning devices in the Elementary School Teacher Education Department, Gorontalo State University.

I. MODULE DEVELOPMENT

The module is formulated as one complete stand-alone unit, consisting of a series of learning activities designed to help learners achieve specific and operational learning objectives. Module is a form of teaching material that is packaged in a comprehensive and systematic manner, which contains a set of planned learning experiences designed to help students master specific learning goals. The minimum module contains learning objectives, learning material / substance, and evaluation. The module serves as a learning tool that is independent, so that students can learn at their own pace. According to the Ministry of National Education (2008: 20), a module is a set of teaching materials that are presented systematically so that its use can be studied with or without a teacher or facilitator.

The module optimizes learning resources while still paying attention to learners to be able to control their learning activities. The role of educators shifts from providing information to learning facilitators by providing various learning resources needed, stimulating enthusiasm for learning, providing opportunities to practice learning outcomes, providing feedback on learning progress and helping that what they learn is in accordance with the goals to be achieved.

The benefits of learning using modules according to Nasution (2010: 206) are 1). Increase the effectiveness of learning because learners can learn anywhere in groups or individually, 2). Determine and determine the learning time that is more in accordance with the needs and development of students, 3). Firmly knowing the achievement of students' competencies in stages through the criteria set out in the module, 4). Knowing the weaknesses or competencies that have not been achieved by students based on the criteria set out in the module so that they can decide and help participants to improve their learning and make remedials. Meanwhile, the purpose of learning using modules is to reduce the diversity of students' learning capture through independent learning activities.

Module quality can refer to quality according to Nasution (2010: 217) which states that the quality of educational products is the point of view of developing learning materials, but besides that consideration of three aspects of quality namely validity, practicality and effectiveness can be used in a wider range of products.

According to Nasution, (2010: 231), validity refers to the level of intervention design based on knowledge of content validity and construct validity. Validity is a measure that shows the level of validity of an instrument or data. The principle of validity is a measurement or observation in collecting data.

II. MODULE COMPILATION PROCEDURE

The module development process consists of three main stages. First, determine the appropriate learning strategy and learning media. At this stage, it is necessary to pay attention to the various characteristics of the competencies to be studied, the characteristics of students, and the characteristics of the context and situation in which the module will be used. Second, producing or realizing the physical module. The components of the module content include: learning objectives, learner prerequisites, learning substances or materials, forms of learning activities and their supporting components. Third, develop assessment tools. In this case, it is necessary to make it clear that all aspects of competence (related knowledge, skills and attitudes) can be assessed based on certain predetermined criteria.

In development research, indicators to state that the implementation of the module is said to be effective can be seen in the accompanying components. Such as student learning outcomes and student activity processes. In this development research, researchers measured the effectiveness of the module from the final learning outcomes of students and the activity process of students using modules.

Module development must pay attention to the characteristics required for an effective module. According to Chomsin S.W. and Jasmadi (2008: 50), the characteristics of a good module, namely: a) Self-Instruction, b) Self-Contained, c) Stand Alone, d) Adaptive, and e) User Friendly.

The module has advantages as stated by Vembriarto (1981: 25). The advantages of using modules in the teaching and learning process include:

1) Overcoming the limitations of time, space and sensory power, both students and teachers.

2) Can be used appropriately and varied, such as to increase motivation or enthusiasm to learn, develop abilities to interact directly with the learning environment.

3) Allows students to measure or evaluate their own learning outcomes.

4) Students are more active in learning.

5) The teacher can act as a guide, not merely as a teacher.

6) Familiarize students to believe in themselves.

7) There is healthy competition between students.

8) Can ease the burden on teachers.

9) Learning is more effective, and evaluation of significant improvements.

10) This system can absorb children's attention so that lessons show more success when compared to lectures.

Learning to use modules has many benefits, students can be responsible for their own learning activities, learning with modules really appreciates individual differences, so that students can learn according to their level of ability, so learning will be more effective and efficient.

The module has weaknesses as pointed out by Vembriarto (1981: 25). The weaknesses of using modules in the learning process as pointed out by Vembriarto include:

1) Difficulties in students cannot be overcome immediately.

2) Not all students can learn on their own, but need the help of the teacher.

3) Not all materials can be reflected and not all teachers know how to implement learning using modules.

4) It is difficult to prepare materials and requires a lot of money in making modules.

5) There is a tendency for students not to study the module well.

Learning by using modules is also often referred to as independent learning. According to Suparman (1993: 197), states that this form of independent learning has the following deficiencies:

1) Material development costs are high, and the required time is long.

2) Determine the high learning discipline that students in general and immature students in particular may lack.

3) It requires more persistence from the facilitator to continuously monitor the student learning process, provide motivation and individual consultations whenever students need it.

Tjipto (1992: 72), also reveals several things that are burdensome for learning using modules, namely:

1) Learning activities require good organization

2) During the learning process it is necessary to hold several tests / exams, which need to be assessed as soon as possible

Based on some of the opinions above, it can be concluded that learning using modules also has several fundamental weaknesses, namely that it requires a large amount of money and requires a long time to procure or develop the module itself and requires high diligence from the teacher as a facilitator to continue monitoring. student learning process.

III. THE NATURE OF INTEGRATED LEARNING

Integrated learning is a teaching and learning approach that pays attention to and adapts to the level of development of students (Developmentally Appropriate Practical). In accordance with the stages of student development, student learning, the concept of learning and meaningful learning, learning activities should be carried out using an integrated learning approach. Integrated learning is a learning approach that uses a focus or theme to link several subjects so that it can provide meaningful experiences to students. Bredekamp in (Developing Appropriate Practice 1987), explains that integrated learning is a learning approach that uses a center of interest in the form of a focus or theme or concept, which functions as an integrated binder to form a new concept that is meaningful to the child's life and is relevant to the defined concept. The center of interest as the core of study should be raised from essential concepts or problems in students' daily lives. This will be very meaningful for student life. Through direct experience and connecting it with other concepts that they already have, students will be able to build their understanding of new concepts more deeply.

Based on the description above, it can be concluded that the notion of integrated learning is 1) Learning that begins with a center of interest which is used to understand symptoms and other concepts, both from the field of science itself and from the field of interest. other; 2) A way to simultaneously develop students' knowledge and skills; and 3) A learning approach.

Integrated Learning or commonly referred to as thematic learning is an approach to learning that deliberately links several aspects both within subjects and between subjects. With this integration, students will gain complete knowledge and skills so that learning becomes meaningful for students. Meaning here means that in thematic learning students will be able to understand the concepts they learn

through direct and real experience that connects concepts in intra-subjects and between subjects.

Integrated learning is based on an approach that involves students from planning, exploring, and brainstorming and concluding. With an integrated approach, students are motivated to study and work in groups and learn from their own experiences. Furthermore, in its implementation, children can be invited to actively participate in exploring and elaborating on themes, topics or events, students learn the process and content (material) of more than one field of study at the same time. This activity of developing themes or topics or events is important in developing students' thinking skills systematically and systematically.

IV. COMPILATION OF INTEGRATED LEARNING TOOLS

In the preparation of integrated learning tools, integrated learning displays the integration of skills, themes, concepts, and topics across the curriculum when several similarities are considered. These linkages are all used to improve overall learning and try to make connections from ideas / concepts in one subject to ideas / concepts in other subjects. In short, integration between topics / concepts both within a subject and across subjects needs to be done to achieve the goals and objectives of learning as a whole.

The preparation of the Learning Tool is carried out based on several stages, namely:

A. Learning Planning

Basically, for students integrated understanding always takes place either vertically or horizontally. Integration that is vertical takes place from grade 1 to grade 6 subject matter, even if integrated understanding takes place from Kindergarten to higher levels of education, such as secondary school. Understanding grade 1 topics / concepts is expected to be the basis for understanding class 2 topics / concepts, and so on. Thus, conceptual understanding always synergizes through integrated understanding.

In Majid, in general, the North Carolina Department of Public Instruction from Sigurdson (1981) in Sumantri (1999) suggests a number of components that should be revealed in an integrated learning format, namely: 1) Descriptive title; 2) The main / core theme or topic; 3) The reason why teachers want the benefits of using units in learning for their students; 4) Time that indicates the existence of a period; 5) The scope of discussion or material covered in the theme is at the same time related to the curriculum established both locally and nationally; 6) Objectives that refer to the established curriculum; 7) Activities; the order, variety and how it is done; 8) Learning resources; and 9) Evaluation.

The success of integrated learning is very much determined by how far integrated learning is planned and designed according to the conditions of students, interests, talents, needs, and abilities. Because the topics and concepts in the syllabus have been arranged based on these considerations, it is sufficient for the teacher to study the topic / concept in one unifying theme, then choose the actual theme and in the area of student experience.

In the implementation of integrated learning, it is necessary to do several things which include planning stages which include mapping activities for basic competencies, developing theme networks, developing syllabus, and preparing lesson plans (RPP).

B. Competency Mapping

This mapping activity is carried out to obtain a comprehensive and complete picture of all competency standards, basic competencies, and indicators of various subjects that are integrated into the chosen theme.

In conducting competency mapping according to Abdul Majid (2014) it can be done in two ways, namely:

1. Studying the core competencies and basic competencies contained in each subject, followed by identifying the basic competencies of several subjects that can be integrated. After that, make a unifying theme.

An example of the first mapping format is to describe Core Competencies and Basic Competencies into Indicators, describing the core competencies and basic competencies of each subject into indicators. In developing indicators, it is necessary to pay attention to the following matters: a. Indicators are developed according to the characteristics of students; b. Indicators are developed according to the characteristics of the subjects; and c. Formulated in operational verbs that are measurable and / or observable.

2. First determine the binding themes of cohesiveness, followed by identifying the basic competencies of several subjects that match the existing themes.

Of the two methods of mapping that are carried out, there are activities that must be carried out, namely determining the theme as a unifying tool or vehicle for the basic competencies of each integrated subject.

C. Themes

Thematic learning is a learning model whose development begins with determining a certain topic as a theme or central topic. After the theme is determined, then the theme is used as the basis for determining the basis of sub-themes from other related fields of study (Fogarty, 1991: in Abdul Majid, 2014).

Themes are the main thoughts or main ideas that are the subject of discussion (Depdiknas, 2007: in Abdul Majid,

2014). Furthermore, according to Kunandar 2007 in Abdul Majid, the theme is a tool or a forum for putting forward various concepts to students as a whole.

D. Establishing a Network of Themes, Basic Competencies (KD), Competency Achievement Indicators (GPA), and Learning Objectives

After mapping, a network of themes can be created, namely linking basic competencies with unifying themes, and developing indicators of achievement for each selected basic competency. With this network of themes, it will be seen the links between themes, basic competencies, and indicators of each subject. In planning integrated learning there are several things that need to be considered, including the profile of the expected students, curriculum policies, framework and syllabus.

E. Prepare a syllabus

A syllabus is a learning plan for a particular subject / theme and includes competency standards, basic competencies, subject matter / learning, indicators, assessment, time allocation, and learning resources / materials / tools. The planning of the learning process includes a syllabus and a learning implementation plan that contains at least learning objectives, teaching materials, teaching methods, learning resources, and assessment of learning outcomes (PP Number 19 Article 20).

The syllabus is prepared based on Content Standards, which contains Subject Identity, Core Competencies (KI), Basic Competencies (KD), Main / Learning Materials, Learning Activities, Indicators, Assessment, Time Allocation, and Learning Resources. according to Abdul Majid, 1) Fill in Syllabus Identity, 2) Write down Core Competencies, 3) Write down Basic Competencies, 4) Identify Main / Learning Materials, 5) Develop Learning Activities, 6) Formulate Indicators, 7) Assessment, 8) Determine Time Allocation, 9) Determining Learning Resources.

F. Preparing RPP

The lesson plan (RPP) is a plan that describes the procedure and organization of learning to achieve a basic competency set out in content standards and has been described in the syllabus. The broadest scope of the RPP includes one basic competency which consists of one or several indicators for one or more meetings.

Especially for Integrated RPP, the definition of one basic competency for each subject. That is, in preparing an Integrated RPP, the teacher must develop a theme based on one basic competency contained in each subject that is considered relevant. RPP components are 1) Include Identity, which includes: School, Class / Semester, Core Competencies (KI), Basic Competencies (KD), Indicators, and Time Allocation; 2) Include Learning Objectives; 3) Include Learning Materials; 4) Include Learning Models / Methods; 5) Include Learning Activity Steps; 6) Include Scientific Approach Activities; 7) Include the Media / Tools / Materials / Learning Resources; and 8) Include Assessment.

G. Compiling Teaching Materials

According to Ratumanan and Rosmiati (2019-290), the use of teaching materials in learning activities will provide great benefits for the quality of the process and learning outcomes as follows:

1. The availability of alternative learning sources that are not only relevant to the curriculum, but also relevant to the characteristics and needs of students, and can accommodate or be enriched with aspects of the context and local wisdom.

2. It is possible that learning will take place more interestingly, because presenting the context around students will generate motivation for students.

3. Teaching materials become richer because they are developed using various references.

4. Adding knowledge and experience of educators in writing teaching materials. The availability of media through teaching materials can build effective learning communication between educators and students because students have more trust in educators.

The development of teaching materials is an effort of educational units and educators to provide broader services to students in order to develop optimally. The availability of teaching materials allows students to learn learning independently, increase their knowledge, and can even encourage them to construct knowledge independently.

H. Compilation of Integrated Learning Media

The use of media in learning can generate new desires and interests, increase motivation and stimulation of learning activities, and even have a psychological effect on students (Hamalik, 1986: 88). Sudjana and Rivai (1992: 45) suggest some of the benefits of media in the student learning process, namely: (i) it can foster student learning motivation because teaching will attract their attention more; (ii) the meaning of the teaching material will become clearer so that it can be understood by students and allows for mastery and achievement of teaching objectives; (iii) teaching methods will be more varied, not based solely on verbal communication through words; and (iv) students do more activities during learning activities, not only listening but also observing, demonstrating, directing, and acting.

I. Compilation of Integrated Learning Evaluation

According to Mahrens and Lehmann in Ratumanan and Rosmiati (2019; 194), they state that evaluation is a systematic assessment of the benefits or uses of an object.

In this sense, the term evaluation is seen as a specific assessment, namely a systematic assessment. Assessment (assessment) relates to all methods and processes of gathering evidence that shows the learning achievement of students. According to Depdinas (2008), assessment is a general term that includes all methods commonly used to assess the performance of individuals or groups of students. The assessment process includes collecting evidence that shows the learning achievements of students. In Permendikbud Number 23 of 2016, it is described that assessment is the process of collecting and processing information to measure the learning achievement of students.

V. RESEARCH RESULTS AND DISCUSSION

A. Preparation of Integrated Learning Tools in the PGSD Department of Gorontalo State University

The pre-research activity begins theoretically with student needs, namely by analyzing whether there is a mismatch between the student's current condition and the student's needs, and determining learning objectives. The step taken is to hold discussions with the teaching team for integrated learning courses to discuss problems that exist in integrated learning courses. From this team-teaching discussion, the authors are interested in developing a learning module, namely an integrated learning module for students majoring in PGSD UNG. The author has developed an integrated learning module which aims to be used in integrated learning courses and also aims so that students can learn independently and can also learn face-to-face with their lecturers.

The basic principles in developing this learning module are 1) Helping students focus on their learning resources, 2) Helping students prepare for independent study, 3) Have a learning plan that can be responded to optimally, 4) Contains complete learning content and is able to provide learning opportunities for students, 5) Can monitor student learning activities, and 6) Can provide suggestions and instructions as well as information on the level of student learning progress.

After conducting research on the principles of developing an integrated learning module, the researcher concluded that it was easier for students to compile a good integrated learning tool.

B. Quality of Integrated Learning Module in PGSD UNG Department.

The quality of the integrated learning module is analyzed using Semester Learning Plans (RPS), Student Activity Sheets (LKM), and Integrated Learning Modules.

For data analysis using descriptive qualitative data analysis and quantitative descriptive. Qualitative data analysis is used to describe the results of preliminary observations before designing the learning module and the results of the preparation of the learning module and to describe the suggestions that have been given by the validators, expert lecturers to perfect the learning modules that have been made. Meanwhile, quantitative data analysis is used in research on the ideal and feasibility level of the learning module which is assessed by expert lecturer validators. The results of the small group test and field trial using tabulation of the results of the respondents in the form of a percentage.

The quality of the integrated learning module is developed based on the assessment of material experts, media experts and linguists and based on the theory of the characteristics of a good learning module according to Chomsin SW and Jasmadi, namely based on self-instruction characteristics, self-contained characteristics, stand-alone characteristics, adaptive characteristics, and user-friendly characteristics.

The results showed that, the learning module that has been designed by researchers and validated by experts obtained the results in the form of a valid and reliable learning module with a conclusion that is very suitable for use. The results of the validation that have been carried out by these experts are in the form of suggestions or input accompanied by an assessment of each module. Suggestions or input from experts or panelists are processed statistically to be used as a basis for decision making whether the module is valid and reliable.

VI. DISCUSSION

The development of Integrated Learning modules for the preparation of Learning devices for PGSD students at Gorontalo State University uses the 4 D model. The 4-D (Define, Design, Develop, and Disseminate) development research conducted by researchers has clear, systematic and directed steps making it easier for researchers to develop integrated learning modules for the preparation of learning devices. The 4-D development model consists of define, design, develop while the researchers disseminate stages are limited to the UNG campus environment due to time and cost considerations.

The Integrated learning module on development of learning devices research involves media experts, language experts for module development, while for the preparation of integrated learning tools it involves curriculum experts. After going through the validation stage, experts state that the development of an integrated learning module for the preparation of learning devices is valid. The preparation of learning tools involved fourth level students of the State University of Gorontalo PGSD.

After being validated, the integrated learning module for the preparation of learning devices is needed by many people other than PGSD students. This module is also needed by curriculum lecturers, teachers both primary school teachers, junior high school teachers and senior high school teachers.

VII. CONCLUSION

The objective conditions of integrated learning regarding the preparation of integrated learning devices in the PGSD department of UNG was not good. After doing research and development, the fourth semester students of PGSD Department are getting better with a positive response from students.

The quality of the integrated learning module has met the predetermined aspects. The quality of integrated learning modules after being measured based on the characteristics of a quality module, there are 5 aspects. The quality of integrated learning modules is also developed based on input from validators who are media experts, material experts and linguists so that the quality of the integrated learning module is better.

REFERENCES

[1] Balsamo Kathy. 1994. Thematic Activities for Student Portfolios. Beavercreek: Pieces of learning.

[2] Bredekamp. 1987. Development Appropiate Practice. New York :National Association for the Education of Young Children (NAEYC)

[3] Collins Gillian, Dixen Hazel, 2001. Integrated Learning: Planning Curriculum Unit. Bookshelf Stage 3.Australia : Bookshelf Publishing

[4] Clearly Pauline, Luca, Di. 1986. Learning Through an Approaches and Guildelines Integrated Curriculum. Victoria: Ministery of Education.

[5] Chomsin S. Widodo, Jasmadi, 2008. Panduan Menyusun Bahan Ajar Berbasis Kompetensi. Jakarta: PT Elek Media Komputindo.

[6] Dale, Edgar, 1969. Audio Visual Methods in Teaching, New Yorg: Holt, Rinehart and Winston Inc. The Dryden Press.

[7] Hamalik, O, 1994. Media Pendidikan, cetakan ke-7. Bandung: Penerbit PT. Citra Aditya Bakti.

[8] Hamid, Hamdani. 2013. Pengembangan Sistem Pendidikan di Indonesia. Bandung: Pustaka Setia.

[9] Heinich, Robert dkk. 1982. Instructional Media and The Technologies of Instruction. New York: John Wiley & Sons

[10] Indrawati. 2009. *Modul Pembelajaran Terpadu Di Sekolah Dasar*. Jakarta: Pusat Pengembangan dan Pemberdayaan Pendidik dan Tenaga Kependidikan Ilmu Pengetahuan Alam (PPPPTK IPA).

[11] Kemdikbud, 2017. Panduan Penilaian oleh Pendidik dan Satuan Pendidikan SMP. Jakarta: Pusat Pengembangan Tenaga Kependidikan BPSDMPPMP.

[12] Majid, Abdul. 2014. Pembelajaran Tematik Terpadu. Bandung: PT. Remaja Rosdakarya.

[13] Marzano, Robert J. 1992. Dimensions of Thinking: A Framework for Curricullum and Instruction.ASCD. Alexandria:125 New Street.

[14] Mathews, Louis De Vriesdan Jean Crawford. 1989. Learning through an Integrated Curruculum: Approach abd Guidelines. Victoria: Ministry of Education.

[15] Nasution, S. 2010. Berbagai Pendekatan dalam Proses Belajar Mengajar. Cetakan kelima. Jakarta: Bumi Aksara.

[16] Ornstein, Ac dan Hunkins, F. P. 2014. Curriculum: Foundation, Principles, and Issues (Ged). New York: Person.

[17] Pulukadang, Wiwy, dkk. 2020. Integrated Learning Module Development on Department of PGSD Students. Gorontalo state University, Indonesia. IJAEMS.

[18] Pusat Kurikulum. 2002. Penjelasan Umum Kurikulum Berbasis Kompetensi. Jakarta: DEPDIKNAS.

[19] Ratumanan, T.G dan Rosmiati Imas. 2019. Perencanaan Pembelajaran. Jakarta: PT. Raja Grafindo Persada.

[20] Sukmadinata, N.S. 2000. Pengembangan Kurikulum – Teori dan Praktik. Bandung: Rosda Karya

[21] Wilson Lorraine, Malmgren David, RamageShirl. 1991. **An Integrated Approach Learning**, Melbourne: Thomas Nelson Australia

[22] Depdiknas. 2008. Panduan Pengembangan Bahan Ajar. diunduh pada tanggal 25 Februari 2019 Pukul 15.00 WIBTA.http://dc218.4shared.com/download/vj4M9K10/5_PENGEMBANGAN_BAHAN_AJAR .rar?tsid=201200227-061731-a8f2e27

[23] Fajar, Setia. 2012. Pemetaan Pembelajaran Tematik. Diakses Oktober 19, 2012, dari http://fajarsetia2020.blogspot.com/2012/10/perancangan-pembelajaran-terpadu.html

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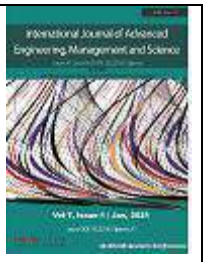

An Analysis on the implementation of Multiple Intelligence-Based Character Education Management Model in Junior High Schools in Gorontalo Province

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Abstract— *The research aims to: a) analyze the design of multiple intelligence-based character education management planning, b) analyze the procedure performed by the school in implementing the multiple intelligence-based character education, c) analyze the implementation of integration of multiple intelligence-based character value in learning, d) analyze the implementation of multiple intelligence-based inbound and outbound activities, e) analyze the availability of supporting resources in the implementation of multiple intelligence-based character education, f) analyze the development of students' character quality, g) analyze the quality assurance of multiple intelligence-based character education management, and h) analyze the regional government support in the multiple intelligence-based character education management. This research employs an explanatory method where the data are collected by using questionnaire, interview, observation, and documentation. Meanwhile, the data analysis applies explanatory analysis. The findings reveal that the implementation of multiple intelligence-based character education management model in Junior High Schools in Gorontalo Province achieves a good category. The result of analysis in every indicator indicates that: a) the school has designed the multiple intelligence-based character education management planning and included in the School Work Plan, b) the procedure of multiple intelligence-based character education management is performed by referring to the predetermined standard operating procedure, c) the integration of character value in the learning is done by applying active, creative, effective, and fun learning approach to find students' experience as a base of positive character value habitation, d) the inbound and outbound activities are organized consistently by following a determined schedule and emphasize on intellectual, emotional, and spiritual character strengthening of the students, e) the supporting resources for character education management has been well-provided, f) the students' character quality has developed optimally particularly the emotional and spiritual characters, g) the quality assurance has been able to ensure that the multiple intelligence-based character education management has run well, and h) the regional government has supported the implementation of character education well, however improvement is required in aspects of raising fund and giving reward for school that manages to develop the multiple intelligence-based character education.*

Keywords— ***Analysis, Model, Character Education, Multiple Intelligence.***

I. INTRODUCTION

Indonesia's demographic bonus contains high potential to improve the quality of character amid the current moral crisis in the nation. The common instances of moral crisis encountered by Indonesia are students' brawl behavior, lack of discipline, drug use, and consumption of alcoholic drinks among students. The behaviors have indicated the worsening of moral degeneration and weakness of students' character, which have a broad impact on education. Therefore, the problems

are identified as a threat to Indonesia's demographic bonus from 2030 to 2045.

The previous reality shows that there is a need for improvement in character education management among the students. Accordingly, such a phenomenon has motivated many researchers to develop a model for managing character education, and one of them is Masaong et al., who conducts research in 2017. Masaong's research topic was the development of a multiple intelligence-based character education management model that was conducted as an effort to overcome the moral crisis in the country. Also, it aimed to save Indonesia from failing to take advantage of the demographic bonus if it was unable to solve the students' character problems from an early age.

Masaong (2017: 2) suggests that the multiple intelligence-based management model for character education is developed through three main activities, which are; a) integration in subjects, b) inbound and outbound activities, and c) habituation activity. The multiple intelligence-based education management model for the last 3 years has been trained and disseminated randomly in junior high schools throughout Gorontalo Province. The training and dissemination aim to generate intelligent and creative students who uphold values of truth, honesty, discipline, and an introspective attitude.

The results of observation signify that schools trained with the multiple intelligence-based character education management have partly carried out character education activities in accordance with the trained concepts. However, some schools still need assistance in its implementation. Muzamil (2019: 35-36) emphasizes that teacher assistance in implementing character education is needed to generate maximum results in fostering positive habit and character for students.

Also, another observation indicates that the involvement of stakeholders, particularly school committees, in managing character education is not optimal. The school committee has not been able to take an optimal role in planning and raising fund to support multiple intelligence-based character education. Research conducted by Lickona, Schapss & Lewis (Lies, Bronk, & Mariano, 2018: 521) states that committees and schools need to partner in developing the students' character. Then, parents through the school committee can take part and build communication with the school in developing the students' character as well as can provide financial support in the implementation of character education in schools.

In conformity with the earlier description, it is necessary to have an in-depth analysis on the implementation of multiple intelligence-based character education to find solution in regards to implementing character education in schools. Additionally, it is done to obtain a real depiction and analysis of the schools' level of success in managing multiple intelligence-based character education and its impact on the improvement of students' character quality.

II. THEORETICAL FRAMEWORK

Character Education

A character can be considered as values of human behavior related to the Almighty God, oneself, fellow human being, environment, and nationality, which are manifest in thoughts, attitudes, feelings, words, and actions based on religious norms, laws, and manners, culture, customs, and aesthetics. Samani and Hariyanto (2018: 41) suggest that character is interpreted as a way of thinking and behaving that is unique to each individual to live and work together, both within the sphere of family, society, nation, and state.

In relation to the concept of character education, Ryan & Bohlin (2004: 3) interpret character education as everything that teachers do, which is able to influence the students character. Teachers help shape the students' character, including modeling how teachers behave, how teachers speak or deliver material, how teachers tolerate, and various other related things. The Ministry of Education and Culture (2010: 4) argues that the actualization of character education can be grouped into: spiritual and emotional development, intellectual development, sports and kinesthetic development, and affective and creativity development.

Based on the previous elaboration, character education is a type of education applied by integrating character values in learning and doing positive habituation to students so that each student understands the noble values in school, home, and society and is able to actualize these positive character habits in social life context.

Multiple intelligence

The term Intelligence is not new. However, in line with the development of science, intelligence develops too. Masaong (2011: 18-19), after conducting an in-depth study of intelligence, concludes that in general, intelligence can be grouped into three types, intellectual intelligence (IQ), emotional intelligence (EQ), and spiritual intelligence (SQ). These three intelligences can include other intelligences such as social intelligence by Goleman (2003), adversity intelligence (Ronnie, 2016), language intelligence, kinesthetic intelligence, interpersonal intelligence, and intrapersonal intelligence by Gardner (2018). Another consideration is referring to the neuroscience study, which concludes that in the human

brain, there are three nerve components related to human intelligence: (a) neocortex, (b) limbic system, and (c) temporal lobe. The neocortex functions to regulate intellectual intelligence (IQ), the limbic system functions to regulate emotional intelligence (EQ), and the temporal lobe functions to regulate spiritual intelligence (SQ).

Masaong (2017: 19) argues that referring to the concept of intelligence proposed by Neuroscientists, and it can be emphasized that the main key to the success of managing multiple intelligence-based character education for students in schools is highly dependent on the ability of teachers to develop and synergize potential for intellectual intelligence (IQ), emotional intelligence (EQ) and spiritual intelligence (SQ). Character education that is developed in totality by synergizing intelligence (IQ, EQ, and SQ) can generate "*mutmainnah*" human being.

The Implementation of multiple intelligence-based character education management model

The implementation of multiple intelligence-based character education management model is an urgent need that needs to be done in order to change the paradigm of thinking of education stakeholders, especially teachers, school principals, and supervisors, who for decades, have been told about the paradigm of intellectual intelligence solely to measure the success of students. Masaong (2017: 3) suggests that the implementation of multiple intelligence-based character education management model is carried out on eight main components which include: a) analysis of multiple intelligence-based character education management planning, b) analysis of procedures applied by schools in managing multiple intelligence-based character education , c) analysis of the implementation of character value integration activities based on multiple intelligence in learning, d) analysis of the implementation of inbound and outbound activities in the multiple intelligence-based character education management, e) analysis of the availability of supporting resources in the implementation of multiple intelligence-based character education, f) analysis of the development of students' character quality after being accustomed to multiple intelligence-based values , g) analysis of quality assurance of multiple intelligence-based character education management, and h) analysis of regional government support for the implementation of multiple intelligence-based character education.

Based on the overall description, it can be synthesized that the analysis on the implementation of the management model for multiple intelligence-based character education is an in-depth assessment process of the management of character education which is carried out systemically through planned activities and is focused on testing the success of model developed based on certain norm references so as to provide a comprehensive and specific overview about the implementation of multiple intelligence-based character education management model.

III. RESEARCH METHODOLOGY

The research was conducted in junior high schools in Gorontalo Province, particularly those schools in Gorontalo City, Gorontalo District, and Boalemo District. The locations are selected due to the Districts/ City are test sites for the implementation of the multiple intelligence-based character education model in Gorontalo Province. This research is an explanatory study using quantitative analysis with a qualitative explanation. Explanatory research is research that is fundamental in nature and aims to obtain information, information data, and other things that are still unidentified because of its fundamental nature. Therefore, this research is also called exploration research. The main data sources in this study are junior high school teachers in Gorontalo Province, particularly those registered as teachers in Gorontalo City, Gorontalo District, and Boalemo District, which are selected purposively. The data collection techniques used in this study are: a) questionnaire, b) observation, c) documentation, and d) interview. Then, steps of quantitative and qualitative data analyses are employed to help analyze the research.

IV. RESEARCH FINDING AND DISCUSSION

Research Finding

The research finding shows that of the eight indicators analyzed, four of them achieve an excellent category, and the rest four indicators achieve a good category. The results of the analysis on the implementation of the multiple intelligence-based character education management model in junior high schools in Gorontalo Province are shown in the following diagram:

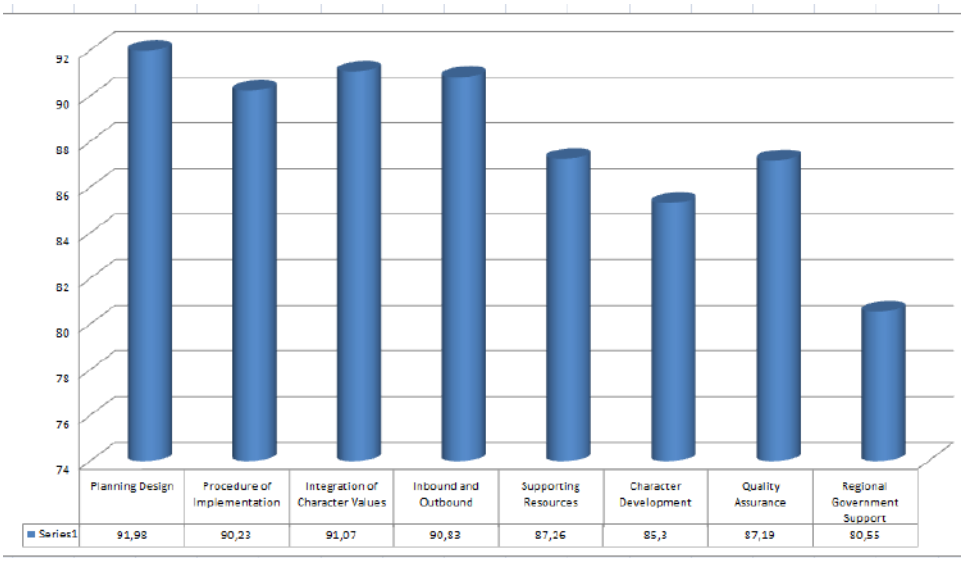

Fig.1: Diagram of the analysis of implementation of multiple intelligence-based character education management model

This diagram shows that the implementation of multiple intelligence-based character education management model in junior high schools in Gorontalo Province signifies a good result. The planning design for managing multiple intelligence-based character education, school procedures for managing multiple intelligence-based character education, implementing multiple intelligence-based character value integration activities in learning and implementing inbound and outbound activities, the management of multiple intelligence-based character education achieves an excellent category. This fact shows that schools have careful planning in managing multiple intelligence-based character education. The implementation mechanism for character education also follows appropriate standard operating procedure so as to optimize the character education management process. Also, the process of integrating character values in learning and inbound and outbound activities is carried out very well. Therefore, this strengthens the inculcation of multiple intelligence character values in students.

The diagram also reveals the achievement of indicators for the availability of supporting resources in the implementation of multiple intelligence-based character education, the development of the students' character quality, quality assurance of multiple intelligence-based character education management, and support from the regional government for the implementation of multiple intelligence-based character education achieve a good category. However, there are several descriptors require improvement, including stakeholder engagement in supporting habituation activities, evaluation, and feedback which are carried out regularly, as well as institutional support for school committees in helping schools to raise fund for improving the students' character quality. The aspect in the student's character that needs to be improved is an intellectual character with a focus on literacy and numeracy abilities. Community engagement in assisting habituation activities also needs to be optimized so that it supports habituation activities carried out at the school and home. In Addition, the support from regional governments in character education management, particularly those related to funding and giving rewards, needs to be increased so as to provide motivation for stakeholders in performing the job well.

Discussion

The analysis on multiple intelligence-based character management is designed in the form of a character house that shows the actualization of character education management in schools and its improvement strategies. The results of the analysis show eight components that are the pillars of character education analysis based on multiple intelligence. Each pillar contains two components of analysis with strategies to improve or enhance it so as to optimize the management of character education in schools. The analysis pillar of the management of multiple intelligence-based character education is supported by the school culture and the process of habituating character values. School culture is a foundation in character education. Characters that have been embedded in school environment will be remembered well by every school personnel to make all activities related to positive characters become habits so that they become a culture in school. Additionally, the school-related character will be more effective if it is consistently implemented at home, school, and the community.

Strategies carried out to overcome problems related to character education are expected to make a

significant contribution to the formation of intellectual virtues so that they become moral morals. Morals are believed to be able to make students become good citizens so as to form ideal character performance. Systemic efforts are made to improve the quality of management of multiple intelligence-based character education so that students are equipped with the ability to compete in the Fourth Industrial Revolution and able to deal with the challenges of the 21st century.

V. CONCLUSION

As crystallization of the research finding and discussion, it is concluded that the implementation of multiple intelligence-based character education management models in junior high schools in Gorontalo Province achieves a good category. The results are the summary of the analysis of the following indicators:

1. The design of multiple intelligence-based character education management planning achieves an excellent category.
2. The procedure applied by the school in managing the multiple intelligence-based character education achieves an excellent category.
3. The analysis on the implementation of integration of multiple intelligence-based character values in the learning achieves an excellent category.
4. The implementation of inbound and outbound activities related to the multiple intelligence-based character education achieves an excellent category.
5. The availability of supporting resources within the implementation of multiple intelligence-based character education achieves a good category.
6. The development of students' character quality achieves a good category.
7. The quality assurance of multiple intelligence-based character education management achieves a good category.
8. The regional government support on the implementation of multiple intelligence-based character education achieves a good category.

RECOMMENDATION

1. Excellent achievement in quality of character education planning achieved by the school has to be maintained by following certain procedure or predetermined phases, from the initial mapping of students' character, integration design, inbound and outbound to habituation activity by involving engagement of educational stakeholder at the school.
2. The procedure in implementing the multiple-intelligence based character education has to be conducted consistently by paying attention to the continuity of implementation of evaluation and feedback to adhere to the predetermined Standard Operating Procedure.
3. The integration of multiple intelligence character values in the learning should refer to the students' experience at home or in a community so that it is more contextual and meaningful.

REFERENCES

[1] Gardner, H. 2018. *Frame of Mind: The Theory of Multiple-Intelligence.* NewYork. Basic Book

[2] Goleman, D. *Kecerdasan Emosional*.2003. Terjemahan oleh T. Hermaya, 2003. Jakarta: Gramedia Pustaka Utama

[3] Kemendikbud. 2015. *Hasil Analisis PISA dan Persfektif Pendidikan Indonesia*. Jakarta: Kemendikbud

[4] Lies, J., Bronk, K., C & Mariano, J.M. 2018. The Community Contribution to Moral Development and character. Dalam Nucci, L.P & Narvaes, D. (Eds.). Handbook of Moral and Character Education. New York: Routledge. (520-536)

[5] Masaong, A.K. 2011. *Kepemimpinan Berbasis Multiple Intelligence; Memperteguh Sinergy Kecerdasan Intelektual, Emosional, dan Spiritual untuk Meraih Prestasi Gemilang*. Bandung: Alfabetha.

[6] Masaong dkk. 2017. *Developing Character Education Management Model For The Empowerment Of Ethos Transformation Based Multiple-Intelligence Of Junior High School Students*. Bandung: ICEMAL

[7] Masaong dkk. 2017. *Pengelolaan Pendidikan Berbasis Multiple Intelligence pada Sekolah Menengah Pertama. Buku 1 Konsep Dasar*. Gorontalo. Ideas Publishing

[8] Masaong dkk. 2017. *Pengelolaan Pendidikan Berbasis Multiple Intelligence pada Sekolah Menengah Pertama. Buku 2 Panduan Penyusunan dan Pelaksanaan Program*. Gorontalo. Ideas Publishing

[9] Muzamil. 2019. *Pelaksanaan Pendidikan Karakter Bangsa di Sekolah Binaan*. Journal of Civic Education (ISSN:2622-237X) Volume 2 Nomor 2 2019

[10] Ronnie, M. Dani. 2016. *The Power of Emotional and Adversity Quotient for Teachers*. Jakarta: Hikmah (PT. Mizan Publika).

[11] Ryan & Bohlin. 2004. *Building Character in School : A Resource Guide* California: Jossey-Bass

[12] Samani dan Hariyanto. 2018. *Konsep dan Model Pendidikan Karakter*. Jakarta: Remaja Rosda Karya