

Application of Recovery Model for Benefit of Parents

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Abstract

Statistic from Ministry of Higher Education stated that the student enrollment to higher education institute are increasing every year from 262,626 enrollments in 2002 to 358,053 enrollments in 2007 by the fact that level of awareness of education has increased. However in the other aspect, in average rate of Malaysian youths literacy aging 15-24 years old is 98.5%. This means that almost 1.5% of Malaysian youths are illiterate. Also include in this illiteracy youth group is children with learning disabilities. Lack of knowledge and awareness cause them to not getting better education. This study will proposed a recovery model of family takaful towards children with learning disability for benefits of parents. As in our concern, the most influenced person towards the learning disability is the parents of the learning disabled children, so that they can have a small consolation through the takaful plan.

Keywords: Recovery Model, Takaful plan, Wakalah Model.

Introduction

The world today is like a challenging games to the people living on it. Environments of the world were subjected to a barrage of scientific and technical, economic and demographic, political and cultural changes that shook everything in sight, Philip,1970 [16]. In order to keep up with the stance upon new born generation, modern parents put high priority towards their children education by literally thinking that people with higher education has high possibility to be successful in life, Philip, 1970 [16].

However, the consequences for education systems is that it grows big and set a formidable set of pressure in community as the rate of price for higher education nowadays are far too expensive to be hold by parents, PruBSN SmartLink, 2014 [17]. Generally, the basic fees for tertiary education reaching almost RM100,000 per child including inflation for three years only, Great Eastern Takaful, 2014 [10]. Parents would do their heroic best to cope with these, but their tools of planning and management proved grossly inadequate in the new situation. Therefore, the parents must target a new kind of planning for tertiary education. The best way of this problem is start a smart move by building the children education fund, HSBC Amanah Takaful, 2014 [11].

In Malaysia, there are two types of education plan which are first; under takaful operator and second; under insurance company, Bank Negara Malaysia, 2013 [4]. However, in Islamic principle, only takaful operating system is accepted to be applies and implemented by muslims. Scholars of Islamic economics have rulings conventional insurance as illegal (haram), Dikko, 2014 [8]. The reason was due to the existence of interest (riba), uncertainty (gharar), and gambling (maysir) in the transaction, saving, and investment, Kamil M. *et. al* [13]. Following the fact, with the awareness of obligation muslims, parents of child should participate in family takaful education plan instead of participate in conventional insurance.

Existing education system and takaful education plan focuses only on normal

children. What about the learning disabled children which the number is increasing every year? This group of children also needs special attention and protection in the national education system because they also have their specialties.

Problem Statement

Learning disabilities was a neurodevelopmental disorder. It comes from neurological differences in brain structure and function and affects a person's ability to receive, store, process, retrieve or communicate information, Cortiella *et. al*, 2014 [6]. The numbers of learning disabled children are increased each year. Based on statistic by UNICEF Malaysia, 2014, from 2011, there are 134, 659 numbers of them and increased to 165, 281 number on 2012, UNICEF Malaysia, 2014 [23]. Learning disabled children that can be train to accept education up to be normal or sometimes more than just a normal student, American Psychiatric Association, 2013 [1].

In Malaysia, children with learning disabled are categorized under special school. The student under this categorized is receiving monthly allowance from government worth RM150 per month for twelve month with semi-annual payment purposed incur expenses of the child. However, parents usually did not spend the money on the special child care but use the money for home expenses of their entire family. These treatments are not right for them. By the reason, this study will be conducted in order to make a good financial education plan especially for these children and generally for their family.

Under takaful operator in Malaysia, they categorized learning disabled children as rider. One example, Takaful Ikhlas; IKHLASlink Child Secure Takaful proximate offering a rider that close with learning disabled condition which is secure the children against illness resulting from a compromised body immunization system especially during their growing up phase, Takaful Malaysia, 2014 [22]. On the other hand, Malaysian are still incompetent about learning disabled subject field. This upcoming product will create parents awareness among the participant on learning disabled and how to detect at early stage so that the society can be more fairly minded

about the subject field.

Methodology

This paper proposed a new takaful plan that include completes riders for participant based on integration model by Puspa *.et al*, 2012 [18]. It is made due to suit all level of income earner as considering the group of parents that are not able to participate in takaful education plan due to financial constrain. In takaful what make it differ than insurance is based on the concept. Define by Malaysia Takaful Act 1984; scheme on the brotherhood, solidarity, and mutual assistance to the participant in case of needy, Juliana A, 2014 [12]. For that purpose, the client's proposal in this recovery model needs to add more riders as shown in table 1.

Table 1: The client Proposal of Recovery Model

Number	Items	Values
1	Interest Rate	r per year
2	Period Term	n year
3	Monthly Contribution	RM z
4	Personal Account	RM P
5	Tabarru Account	RM Q
6	Wakalah Fee	RM W
7	Yearly Profit	RM y
8	Monthly Profit	RM m
9	Surrender Values	RM V
10	Death Coverage	RM 10x
11	Loss an effort to work/ 40 critical illness	RM 10x

12	Hospital Bills	RM 10x
13	Khairat	RM 2x
14	Pension	RM 0.3x

Client's proposal needs many riders such as death coverage, loss of ability to work or 40 critical illness, hospital bills, khairat, and death benefit, Puspa [14].

Wakalah of Recovery Model

Practically, there are three types of takaful model used in Malaysia, Mudharabah Model, Wakalah Model, and Mixed Model. However, most takaful operator use Wakalah Model because of the agent system which the operator do not pay salary to the agents, Mansor K. A, 2015 [14]. Below are the elements use in wakalah model. Wakalah of recovery model used the proposal below for constructing the premium life table.

Monthly Payment = RM 80 (1 unit)

Term = 21 years

Interest Rate = 5% per year

Wakalah Fee = 12.5% (first 10 years)
= 7.5 % (after 10 years)

Tabarru' Account = RM 10

Personal Account = RM 60 (first 10 years)
= RM 64 (after 10 years)

Following Table 2 show the general table quotation for recovery model of wakalah model. K_{15} is nil because death benefits depends on the participant in paying the monthly premium.

Table 2: General Client Quotation.

K_1	K_2	K_3	K_4	K_5	K_6	K_7	K_8	K_9	K_{10}	K_{11}	K_{12}	K_{13}	K_{14}	K_{15}
n	L_n	$12nY$	P_n	Q_n	W_n	y_n	m_n	$V_n = y_n + m_n$	10x	10x	10x	2x	3x	

Where,

K_1 is year

K_2 is age

K_3 is layout payment

K_4 is personal account

K_5 is tabarru' account

K_6 is wakalah fees

K_7 is yearly profit

K_8 is monthly profit

K_9 is surrender value

K_{10} is death coverage

K_{11} is loss an effort to work/40 critical illness

K_{12} is hospital bills

K_{13} is khairat

K_{14} is consolation

K_{15} is death benefit

Result

Recovery Model of education plan distribute the montly premium of RM 80 into three portion including wakalah fee, refer table 3. According to PruBSN SmartLink. (2014) [12] partition ratio is very important to know the correct distribution of the ratio of premiums paid by the participant.

Table 3 : Partition of Monthly Premium Payment in Wakalah Recovery Model

Overall total of monthly premium payment	n years	Personal Investment Account	Partition for Riders (Tabarru' Account)	Wakalah Fee
RM 80	First 10 years	RM 60	RM 10	RM 12
	After 10 years	RM 64	RM 10	RM 6

The important in this recovery model is the complete riders offered to the participant and child. According to partition in Takaful Ikhlas quotation (Takaful Ikhlas, 2008), Rm 0.11 per units (RM 1000 = 1 unit), Puspa, 2013 [18]. Below in table 4 shows the partition of riders in tabarru' account in recovery model.

Table 4: Partition of rider of the tabarru' account in recovery model.

Tabarru' Account	Death Coverage (10x)	Loss effort to work / 40 critical illness (10x)	Hospital Bills (5x)	Khairat (2x)	Consolation (5x)	Death Benefit (10x)
Partition Ratio of Tabarru' Account (45x)	10x = 1 person	10x = 1 person	10x = 1 person	2x = 1 person	3x = 1 person	10x = 1 person
Partition of the Contribution (RM 10)	0.222 x 10 = RM 2.22	0.222 x 10 = RM 2.22	0.222 x 10 = RM 2.22	0.222 x 2 = RM 0.44	0.222 x 3 = RM 0.66	0.222 x 10 = RM 2.22

Where;

$$\text{Partition} = \frac{RM10}{45x}$$

$$x = RM 0.222 \quad (\text{equation 1})$$

There are 45 portions which RM10 of the monthly contribution will be divide. The ratio calculate that x in each riders is represent RM 0.222 from RM 10 of the contribution money.

Premium & benefit Wakalah recovery model.

Below shows the fully table of recovery model of education plan. This plans takes places until participant aged 21 years old for its maturity with two stage of wakalah fee.

Table 5: Client Quotation Premium of Recovery Model Takaful Education Plan

K1	K2	K3	K4	K5	K6	K7	K8	K9	K10	K11	K12	K13	K14	K15
1	1	960	720	120	144	36	17	773	10000	10000	10000	2000	3000	
2	2	1920	1440	240	288	72	210	1722	10000	10000	10000	2000	3000	
3	3	2880	2160	360	432	108	447	2715	10000	10000	10000	2000	3000	
4	4	3840	2880	480	576	144	695	3719	10000	10000	10000	2000	3000	
5	5	4800	3600	600	720	180	946	4726	10000	10000	10000	2000	3000	
6	6	5760	4320	720	864	216	1198	5734	10000	10000	10000	2000	3000	
7	7	6720	5040	840	1008	252	1450	6742	10000	10000	10000	2000	3000	
8	8	7680	5760	960	1152	288	1702	7750	10000	10000	10000	2000	3000	
9	9	8640	6480	1080	1296	324	1954	8758	10000	10000	10000	2000	3000	
10	10	9600	7200	1200	1440	360	2206	9766	10000	10000	10000	2000	3000	
11	11	10560	8448	1320	792	422	2622	11492	10000	10000	10000	2000	3000	
12	12	11520	9216	1440	864	461	3082	12759	10000	10000	10000	2000	3000	
13	13	12480	9984	1560	936	499	3420	13903	10000	10000	10000	2000	3000	
14	14	13440	10752	1680	1008	538	3725	15015	10000	10000	10000	2000	3000	
15	15	14400	11520	1800	1080	576	4022	16118	10000	10000	10000	2000	3000	
16	16	15360	12288	1920	1152	614	4316	17218	10000	10000	10000	2000	3000	
17	17	16320	13056	2040	1224	653	4609	18318	10000	10000	10000	2000	3000	
18	18	17280	13824	2160	1296	691	4902	19418	10000	10000	10000	2000	3000	
19	19	18240	14592	2280	1368	730	5196	20517	10000	10000	10000	2000	3000	
20	20	19200	15360	2400	1440	768	5489	21617	10000	10000	10000	2000	3000	
21	21	20160	16128	2520	1512	806	5782	22716	10000	10000	10000	2000	3000	

By applying the model by Puspa [12]; therefore an equation for calculate V_n has been simplified as:-

$$V_n = P_n \left(\frac{5}{100} \right) + \left(\frac{P(i)}{100} \right) \left(\frac{66 + V_{n-1}}{12} \right) \quad (\text{equation 2})$$

Where P_n is personal account, and $n=1, 2, 3...$

Following are the calculation for K_7 , K_8 and K_9 based on applied formula:

Table 6: Calculation of Surrender Value (K_9)

Year	Calculation of applied formula on K_4 , K_7 and K_8 (first 10 years)	Surrender Value V_n
1	$720 + (720 \times 5 / 100) + (60 \times 5 / 100) \times (66 + 0) / 12 = 969 + 36 + 17$	773
2	$1440 + (1440 \times 5 / 100) + (60 \times 5 / 100) \times (66 + 773) / 12 = 1440 + 72 + 210$	1,722
3	$2160 + (2160 \times 5 / 100) + (60 \times 5 / 100) \times (66 + 1722) / 12 = 2160 + 108 + 447$	2,715
4	$2880 + (2880 \times 5 / 100) + (60 \times 5 / 100) \times (66 + 2715) / 12 = 2880 + 144 + 695$	3,719
n	$V_n = P_n (5 / 100) + (P_n i / 100 \times (66 + T_{n-1}) / 12)$	

Year (n)	Calculation of applied formula on K_4 , K_7 and K_8 (after 10 years)	Surrender Value V_n
11	$8448 + (8448 \times 5 / 100) + (64 \times 5 / 100) \times (66 + 0) / 12 = 8448 + 422 + 2622$	11,492
12	$9216 + (9216 \times 5 / 100) + (64 \times 5 / 100) \times (66 + 11,492) / 12 = 9216 + 461 + 3082$	12,759
13	$9984 + (9984 \times 5 / 100) + (64 \times 5 / 100) \times (66 + 12,759) / 12 = 9984 + 499 + 3420$	13,903

14	$10752 + (10752 \times 5 / 100) + (64 \times 5 / 100) \times (66 + 13903) / 12 = 10572 + 538 + 3725$	15,015
n	$V_n = P_n (5 / 100) + (P_n i / 100 \times (66 + T_{n-1}) / 12)$	

Discussion

The outcome from the research is recovery model of family takaful education plan extended from Integration Model by Puspa, 2013 [19] This study will give huge contribution to the development and lead to vigorous new aspect of takaful studies as it it made suited for all level of income earners with complete riders for participant. The montly premium of RM 80 could cover enough for the benefits of participant and takaful operator itself.

The calculation shows that there is two different partition on wakalah fee. 12.5% from premium is charged for wakalah fee in first 10 years (RM10), then after 10 years wakalah fee charged will be reduce to 7.5% of premium making partition of wakalah fee left RM 7 monthly.

In the other hand, the partition on tabarru' account for riders get a stationary amount through the years of using the plan; RM 10. It will not be influence by years using the plan unlike wakalah fee and personal account. Six riders offered in the plan, recover from Puspa, 2013 [19], pension is removed from the original integration model and replaced by parents consolation especially for education plan of learning disabled children.

Full calculation was calculated in Table 5 for expected 21 years of subscribe the education plan till it reach maturity. The formula used to calculate surrender value (V_n) as in equation 2, and the applied formula calculated shown in table 6, for both first 10 years and next.

Conclusion

The new recovery model of takaful education plan will give a better outcome to both takaful operator and takaful participant. The plan offers unusual riders in education plans which uniquely equipped an education plans for learning disabled children. Anticipate the outcome that this new wakalah model takaful education plans may help on reduce the burden of parents of learning disabled children by providing parents consolation partition on riders such as

parental awareness seminar and consolation rewards for parents of learning disabled children.

References

- [1] American Psychiatric Association, (2013), *Diagnostic and Statistical Manual of Mental Disorders Fifth Edition*, Arlington, V A, America.
- [2] Ashum Gupta, Nidhi Singhal, (2004), Positive Perceptions in Parents of Children with Disabilities, *Asia Pacific Disability Rehabilitation Journal*, Vol. 15, No.1.
- [3] Arifin J., Yazid A. S., Sulong, Z., (2013). A Conceptual Model of Literature Review For Family Takaful (Islamic Life Insurance) Demand in Malaysia, *International Business Research*, Canadian Centre Of Science and Education. Vol. 6, No. 3.
- [4] Bank Negara Malaysia, (2013). *Guidelines on Takaful Operational Framework*, Islamic Banking and Takaful Department. Kuala Lumpur; Bank Negara Malaysia.
- [5] Child Education Plan, (2007). Retrieve from http://www.insuranceinfo.com.my/choose_your_cover/secure_your_future/child_education_plan.php?intPrefLangID=1 on 25 January 2016.
- [6] Cortiella, Candace and Horowitz, S. H., (2014). The State of Learning Disability: Facts, Trends and Emerging Issues Third Edition. *National Center for Learning Disability*, New York.
- [7] Denise, V. D. *et. Al.*, (2015). Pattern of Health Insurance Coverage Around the Time of Pregnancy Among Women with Live-Born Infants; Pregnancy Risk Assessment Monitoring System 2009, *Morbidity and Mortality Weekly Report*, Centers for Disease Control and Prevention, Vol. 64, No. 4.
- [8] Dikko, M., Abdullah, O. Y., (2014). An Analysis of issues in Takaful (Islamic Insurance), *European Journal of Business and Management*, vol. 6, no. 15.
- [9] Etiqa Takaful, (2014). Brochure of *Takaful Education Plan*, Kuala Lumpur; Malayan Banking Berhad.
- [10] Great Eastern Takaful, (2014). Brochure of *Takaful Education Plan*, Kuala Lumpur; Bank Muamalat Malaysia Berhad.
- [11] HSBC Amanah Takaful, (2014). Brochure of *Takaful Education Plan*, Kuala Lumpur; HSBC Bank Malaysia Berhad.
- [12] Juliana A., Syukri, A. Y., Rasid, M. H., (2014) Demand of Family Takaful in Malaysia: Critical Determinant Factors Examined. *International Review of Management and Business Research*, vol.8 issue.2.

[13] Kamil, M. N., Nor, M. N., (2014), Factors Influence the Choice of Takaful Over Conventional Insurance: The Case of Malaysia, *Journal of Islamic Finance*, vol. 13, no. 2.

[15] Mansor K. A, Masduki R. M, Mohamad M, (2015). A Study on Factors Influencing Muslim's Consumers Preferences towards Takaful Products in Malaysia, *Romanian Statistical Review*, nr. 2.

[15] Ministry of Higher Education, (2012) Data Makro Jumlah Enrolmen Pelajar di Institut Pengajian Tinggi 2002-2007. Retrieve from:
http://www.mohe.gov.my/web_statistik/statistik_pdf_2008_05/data_makro_1-1.pdf

[16] Philip H. Coombs, (1970), What is education planning? UNESCO; International Institute for Education Planning, *United Nation Educational Scientific and Cultural Planning*, Paris.

[17] PruBSN SmartLink. (2014). Building Your Child's Education Fund Through A Takaful Plan, *ParentHots Article#7*, Prudential BSN Takaful Berhad, Malaysia.

[18] Puspa. L. G., Mohd, I., Ahmad, W. M. A. W., & Mamat, M. (2012). Comparison of premium life tables between existing model and integration model in family takaful. *Journal of applied sciences research*, 8(7), 3754-3762.

[19] Puspa. L. G., (2013). *Integration model in life premium tables of family takaful*. (Doctoral dissertation, UNIVERSITI MALAYSIA TERENGGANU).

[20] Puspa. L. G., Mohd, I., Mamat, M. & Ahmad, W. M. A. W. (2012). Integration model in premium life table of family takaful. *Journal of applied sciences research*, 8(7), 3763-3776.

[21] Puspa. L. G., Mohd, I., Mamat, M., & W Ahmad, W. M. A. (2011). Mathematical modelling in family takaful. *Journal of Applied Sciences*, 11, 3381-3388.

[22] Takaful Malaysia, (2014). Brochure of *Takaful myGraduan*, Kuala Lumpur; Syarikat Takaful Malaysia Berhad.

[23] UNICEF Malaysia. (2014). *Children with disabilities* [Brochure]. Kuala Lumpur: United Nations Children's Emergency Fund Malaysia.

[24] UNICEF Malaysia (2015) The World's Children 2015 Country Statistical, Retrieve from http://www.unicef.org/infobycountry/malaysia_statistics.html#117 on 6 January 2016.