Design and Limited Trial of Financial Planning Web-Based Application Development for Indigenous Communities at Village Credit Institution in Badung Regency, Bali

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Abstract—This research aims to carry out the second stage of the research "Developing Financial Web-based application for Indigenous Village Communities at Village Credit Institution or *Lembaga Perkreditan Desa* (LPD) in Badung Regency, Bali". This stage includes: design and coding as well as limited trial of the Financial Planning Web-based Application. Forty respondents from four of six districts in Badung Regency, The Province of Bali namely Abiansemal, Mengwi, Kuta Utara, and Kuta participated in this research. Their perception is gathered using a questionnaire that consist of four aspects namely Usability, Functionality, Satisfaction, and Innovativeness with 10 items. The validity of the application output is tested by six validators which are representatives of six LPD di Badung regency. The results of the research show (1) The design of the Financial Planning Web-based Application is related to design of database, input and output. The database consists of four tables while input and output are related to the output of tables as well as the interactive form and detail of financial planning products which are already available at LPDs in Badung Regency. Coding of the application was created using PHP programming language. In coding to display tables, nested looping facilities are used in the PHP programming language, (2) The results of limited trial show that six cluster test which consist of 22 items are valid. Finally, user's assessment on the feasibility of application shows all aspects namely Usability, Functionality, User Satisfaction, and Innovativeness get average scores above 2.50 and overall average scores of 3.27 out of 4.0.

Keywords—design, limited trial, application development, financial planning, village credit institution, LPD

I. Introduction

Having a good finance is one of the factors that can make someone happy and that can be achieved by doing financial planning early on. Many research concerning financial planning are carried out, such as examining behavioural factors, which lead households toward savings and financial planning [1]. An integrated model for financial planning has been developed which incorporates the time and the expected nature of financial events [2]. Research conducted by Liman and Hananto [3] aims to help Indonesian people to aware about total individual retirement fund by calculating their individual retirement fund using five variables namely expenses ratio, inflation rate, net interest rate, productive years, and retirement years. Murphy and Yetmar [4] found most respondents feel both that financial planning is important and that they are interested in developing a financial plan, very few feel that they have the necessary skills and knowledge to prepare their own plan. Research involved teachers of higher education in Warangal City, India found no significant difference in the perception of Technical and Non-Technical teachers towards the financial literacy and financial planning [5]. Huang [6] concluded that college graduate carried out financial plan such as making a budget which serves to direct wise spending, managing credits which deals with smart borrowing, saving for the future which prepares graduates for emergencies and small extra funds and lastly, it will talk about smart investing which can bring about large wealth to college graduates who start out with little money.

In Bali, people need funding for religious ceremonial costs, primary needs, education, and health costs beside retire expenses. To meet their needs in the future, they should prepare financial planning. Potential financial institutions that can provide financial planning services for indigenous peoples in Bali, especially in Badung Regency are Village Credit Institutions or *Lembaga Perkreditan Desa* (LPD) in their respective indigenous villages. Purbadharmaja et al., [7] stated, Village Credit Institution or *Lembaga Perkreditan Desa* (LPD) is a traditional micro finance institution in Bali. It's called

traditional because they operate based on local government regulation which is roots from traditional village rules (namely *awig-awig*). According to Budiasni et al., [8] Village Credit Institutions (LPD) in Bali is unique where its operations thick with elements of local wisdom such as *Tri Hita Karana*, the concept which comes from the culture of the people in Bali. Village Credit Institutions is governed by the local laws passed by the governor of Bali, with the occurrence of Bali Provincial Regulation No. 4 year 2012 regarding the Second Amendment Bali Provincial Regulation No. 8 year 2002 regarding Credit Institutions village. The important role of the LPD is felt by the community, especially to support activities such as the odalan and the Hindu holidays. LPD has specific characteristic in management where it uses customary rules, norms, social sanction, and their rural leader involvement in the selection process and agreement maintenance [9]. The purpose of establishment of a Village Credit Institutions at every indigenous village, based on the elucidation of Regional regulation No. 2/1988 and No. 8 year 2002 regarding credit institutions village (LPD) and also on the page official page agencies Village Credit, is to support rural economic development through increased savings habits of rural communities and to provide credit to small-scale enterprises, to eliminate the form - a form of exploitation in relation to credit, to create equal opportunities for the business activities at the village level, and increase the level of monetization of the rural areas [10]. LPD is a financial institution that specifically and only in society *Pakraman* with operational limits even though he does not have legislation providing status as rural banks (BPR).

LPD as financial institutions of Bali indigenous communities have an important role in the functioning of financial intermediation. Since its establishment, the LPD showed a good performance. As financial institution in a traditional (*adat*) village, LPDs collect funds through savings programs such as deposits and savings from the community which will be distributed in the form of loans. Savings programs that are widely available in LPDs, especially in Badung Regency which aim at financial planning for indigenous peoples are "planned savings". There are two types of savings plans available in the LPD, namely, first with a fixed payment every month and second with a payment at the beginning of the program. The planned savings in the LPD Legian, in Kuta District are called SIMPEL (Simpanan Pelajar) planned for education costs and the TAPURA (Tabungan Upacara) planned for the cost of traditional ceremonies are the first type and TAHTA (Tabungan Hari Tua) planned for future costs pensions is the second type.

In general, savings programs in LPDs, especially "planned savings", have been managed on a computer-based, but the information is still not accessible to the public from the internet. Managing savings that can be accessed online is very important. Therefore, this research developed a web-based financial planning application at Village Credit Institutions in Badung Regency, Bali. Using this web-based application, indigenous people in Badung Regency who are customers

more easily access information about financial planning products in the LPDs.

In developing an application, System Development Life Circle (SDLC) method can be applied which consist of six steps: (1) system engineering, (2) analysis, (3) design, (4) coding, (5) testing, and (6) maintenance. Step (1) and step (2) have been implemented in the previous research stages. This research focuses on carrying out step (3) design and (4) coding as well as the limited trial of the application [11].

Based on the background above, then issue of concerns in this paper are: (a) How do the design and coding of Financial Planning Web-based Application For Indigenous Village Communities at LPD in Badung Regency? (b) How do limited trial results of Financial Planning Web-based Application For Indigenous Village Communities at LPD in Badung Regency? The purpose of this research are: (a) To know the design and coding of Financial Planning Web-based Application For Indigenous Village Communities at LPD in Badung Regency. (b) To Know limited trial results of Financial Planning Web-based Application For Indigenous Village Communities at LPD in Badung Regency.

II. RESEARCH METHODOLOGY

This is the second stages of the research to developed Financial Planning Web-Based Application for Indigenous Village Communities at LPD in Badung Regency, The Province of Bali, Indonesia. In the first stages, this research has conducted analysis and system engineering and followed by the second stages including design and coding as well as limited trial. Forty respondents from four of six districts in Badung Regency, the Province of Bali namely Abinsemal, Mengwi, Kuta Utara, and Kuta participated in this research. Their perception is gathered using a questionnaire that consist of four aspects namely Usability, Functionality, and Satisfaction, Innovativeness with 10 items. The validity of the application output is tested by six validators which are representatives of six LPD di Badung regency.

III. RESULTS AND DISCUSSION

A. Results

1) Design: The design of Financial Planning Web-based Application For Indigenous Village Communities at Financial Credit Institution (LPD) in Badung Regency consist of design of database, input, output and process. An high quality application relies upon the support of very much well-designed system structure [12].

In this research, the MySQL database that support the application, contains some tables. The first table is lpdlpd which consist of five columns: nolpd, namalpd, kecamatan, desaadat, and telepon as can be seen in Figure 1.

#	Name	Type
1	nolpd	tinyint(3)
2	namalpd	varchar(30)
3	kecamatan	varchar(20)
4	desaadat	varchar(25)
5	telepon	varchar(12)

Fig. 1.   Structure of Table lpdlpd.

The second, the third, and the forth table can be seen in Figure 2 to Figure 4.

#	Name	Type
1	nopk	tinyint(3)
2	nojenispk	tinyint(2)
3	namapk	varchar(25)
4	nolpd	tinyint(3)
5	skbunga	decimal(2,2)

Fig. 2.   Structure of table produkpklpd.

#	Name	Type
1	nojenispk	tinyint(2)
2	namajenispk	varchar(40)

Fig. 3.   Structure of table jenispk.

#	Name	Type
1	id	int(11)
2	username	varchar(32)
3	password	varchar(32)
4	nama	varchar(32)
5	email	varchar(32)
6	nolpd	tinyint(3)
7	jenisuser	varchar(5)

Fig. 4.   Structure of table user.

The application was designed to be able to display several important outputs of financial planning products in six LPDs in Badung Regency, Bali Province, namely LPD Legian, Sibang Kaja LPD, Kerobokan LPD, Kuta LPD, Lukluk LPD and Sempidi LPD. The outputs are categorized into two namely: 1) tables and 2) interactive forms and details. There are two type of financial planning products which are available in LPD: 1) Type I is fixed deposit every month (A) and withdrawal once at the end of the program (Sn) and 2) Type II is deposit once at the beginning (P) and withdrawal once at the end of the program (Pn).

Firstly, an example of Sn table is financial planning products of Legian LPD "SIMPEL" or "Simpanan Pelajar" with 3 columns and 12 rows (n) can be seen in Figure 4 while an example of Pn table is financial planning product of Sibang Kaja LPD "TSA" or "Tabungan Sayang Anak" with 4 columns and 10 rows (n) which is described in Figure 5.

Tabel Nilai Akhir (Sn)Program Tabungan: SIMPEL(Simpanan Pelajar) LPD LEGIAN
Setoran/Bulan A
Dengan Suku Bunga/Bulan = 0.414 % atau 4.968 % per Tahun

Jangka Waktu	A=	A=	A=
(Tahun)	100,000	200,000	300,000
1	1,227,705	2,455,409	3,683,114
2	2,517,810	5,035,619	7,553,429
3	3,873,487	7,746,974	11,620,461
4	5,298,069	10,596,138	15,894,208
5	6,795,059	13,590,117	20,385,176
6	8,368,135	16,736,271	25,104,406
7	10,021,167	20,042,334	30,063,501
8	11,758,217	23,516,434	35,274,652
9	13,583,556	27,167,113	40,750,669
10	15,501,672	31,003,344	46,505,016
11	17,517,280	35,034,559	52,551,839
12	19,635,335	39,270,669	58,906,004

Fig. 5.   Table of Sn of financial planning product of Legian LPD "SIMPLE".

Tabel Nilai Akhir Program Tabungan: TSA (Tabungan Sayang Anak) LPD Sibang Kaja
Setoran di Awal P
Dengan Suku Bunga/Bulan = 0.7948 %

Jangka Waktu	P=	P=	P=	P=	P=
(Tahun)	1,000,000	2,000,000	3,000,000	4,000,000	5,000,000
1	1,100,000	2,199,000	3,299,000	4,399,000	5,498,000
2	1,209,000	2,418,000	3,628,000	4,837,000	6,046,000
3	1,330,000	2,660,000	3,989,000	5,319,000	6,649,000
4	1,462,000	2,925,000	4,387,000	5,849,000	7,311,000
5	1,608,000	3,216,000	4,824,000	6,432,000	8,040,000
6	1,768,000	3,537,000	5,305,000	7,073,000	8,841,000
7	1,944,000	3,889,000	5,833,000	7,778,000	9,722,000
8	2,138,000	4,277,000	6,415,000	8,553,000	10,691,000
9	2,351,000	4,703,000	7,054,000	9,405,000	11,757,000
10	2,586,000	5,171,000	7,757,000	10,343,000	12,928,000

Fig. 6.   Table of Pn of financial planning product of Sibang Kaja LPD "TSA".

Similar Sn table to the Legian LPD "SIMPEL" can be created by the application namely Legian LPD "TAPURA", Sibang Kaja LPD "SIMADEJA", Sibang Kaja LPD "TAMASDE", Kerobokan LPD "SUPUTRA", Kuta LPD "SIMADE", Lukluk LPD "TAPA" and Sempidi LPD "SIBERMAS". The application also was designed to be able to create similar Pn table to the Sibang Kaja "TSA" namely Legian LPD "TAHTA" and Lukluk LPD "TAPA Plus"

The tables in Figures 5 and Figure 6 are related to the input form in the Figure 7 and Figure 8 respectively.

Tabel SIMPEL (Simpanan Pelajar) LPD Legian
Tabel Perencanaan Keuangan Ini Dengan Menyetor Tiap Bulan A Selama n Tahun Lalu Bisa Menarik Sn di Akhir Program

Setoran Bulanan A Kolom 1 : [   ]
Banyak Kolom Untuk A (Maksimum 10) : [   ]
Banyak Tahun (Baris) : [   ] Tahun
[Masukkan]

Fig. 7.   Input form of Legian LPD "SIMPLE" table.

Tabel TSA (Tabungan Sayang Anak) LPD Sibang Kaja
Tabel Perencanaan Keuangan, Dengan Menyetor Sekali Di Awal P, Mengendap Selama n Tahun Bisa Menarik Pn di Akhir Program

Setoran Di Awal P, Kolom 1	:	
Banyak Kolom Untuk P (Maksimum 10)	:	
Banyak Tahun (Baris)	:	Tahun

[Masukkan]

Fig. 8. Input form of Sibang Kaja LPD "TSA" table.

Secondly, an example of Sn interactive form and detail is financial planning product of Kuta LPD "SIMADE" or "Simpanan Masa Depan" can be seen in Figure 9 and Figure 10 while an example of Pn interactive form and detail is financial planning product of Legian LPD "TAHTA" or "Tabungan Hari Tua" as described in Figure 11 dan Figure 12.

Form Interaktif dan Detail Program SIMADE (Simpanan Masa Depan) LPD Kuta
Perencanaan Keuangan Ini Dengan Menyetor Tiap Bulan A Selama n Tahun Lalu Bisa Menarik Sn di Akhir Program

Setoran Bulanan :	150000
Jangka Waktu :	12 Bulan

[Masukkan]

Fig. 9. Input form of Kuta LPD "SIMADE" table.

Nilai Setoran/Bulan = 150,000
Nilai Suku Bunga/Bulan = 0.46 %
Jangka Waktu n = 12 bulan
Nilai Total di Akhir Sn = 1,846,246

Tabel Detail Mencari Nilai Akhir (Sn)
Program Program SIMADE (Simpanan Masa Depan) LPD Kuta

NO	SETOR	BUNGA	SALDO
1	150,000	0	150,000
2	150,000	690	300,690
3	150,000	1,383	452,073
4	150,000	2,080	604,153
5	150,000	2,779	756,932
6	150,000	3,482	910,414
7	150,000	4,188	1,064,602
8	150,000	4,897	1,219,499
9	150,000	5,610	1,375,108
10	150,000	6,325	1,531,434
11	150,000	7,045	1,688,479
12	150,000	7,767	1,846,246

Fig. 10. Detail of Kuta LPD "SIMADE".

Form Interaktif dan Detail Program TAHTA (Tabungan Hari Tua) LPD Legian
Tabel Perencanaan Keuangan, Dengan Menyetor Sekali Di Awal P, Mengendap Selama n Tahun Bisa Menarik Pn di Akhir Program

Setoran Di Awal (P) :	15000000
Jangka Waktu :	12 Bulan

[Masukkan]

Fig. 11. Input form of Legian LPD "TAHTA" table.

Nilai Setoran di Awal = 15,000,000
Nilai Suku Bunga/Bulan = 0.414 %
Jangka Waktu n = 12 bulan
Nilai Total di Akhir Pn = 15,762,405

Tabel Detail Mencari Nilai Pn
Program TAHTA (Tabungan Hari Tua) LPD Legian

NO	SETOR	BUNGA	SALDO
1	15,000,000	62,100	15,062,100
2	0	62,357	15,124,457
3	0	62,615	15,187,072
4	0	62,874	15,249,947
5	0	63,135	15,313,082
6	0	63,396	15,376,478
7	0	63,659	15,440,136
8	0	63,922	15,504,059
9	0	64,187	15,568,245
10	0	64,453	15,632,698
11	0	64,719	15,697,417
12	0	64,987	15,762,405

Fig. 12. Detail of Legian LPD "TAHTA".

2) Coding: This stage is to create code of the program. Coding is a process of translating the design results into a form can be read by a computer. Application developed in this research is web-based application, where the program code is created using a programming language PHP.

3) Trial results of the application: Trial of the application uses black box testing method involving six validators. The scope of the test and the results can be seen in Figure 13 and Figure 14.

No	Test Cluster	
I	**LPD Legian Financial Planning Products**	**Results**
	1. Table of SIMPEL	Valid
	2. Interactive Form and Detail of SIMPEL	Valid
	3. Table of TAPURA	Valid
	4. Interactive Form and Detail of TAPURA	Valid
	5. Table of TAHTA	Valid
	6. Interactive Form and Detail of TAHTA	Valid
II	**LPD Sibang Kaja Financial Planning Products**	**Results**
	1. Table of SIMADEJA	Valid
	2. Interactive Form and Detail of SIMADEJA	Valid
	3. Table of TAMASDE	Valid
	4. Interactive Form and Detail of TAMASDE	Valid
	5. Table of TSA	Valid
	6. Interactive Form and Detail of TSA	Valid

Fig. 13. Trial results of the application (Legian LPD and Sibang Kaja LPD).

No	Test Cluster	
III	**LPD Lukluk Financial Planning Products**	**Results**
	1. Table of TAPA	Valid
	2. Interactive Form and Detail of TAPA	Valid
	3. Table of TAPA PLUS	Valid
	4. Interactive Form and Detail of TAPA PLUS	Valid
IV	**LPD Kuta Financial Planning Products**	**Results**
	1. Table of SIMADE	Valid
	2. Interactive Form and Detail of SIMADE	Valid
V	**LPD Kerobokan Financial Planning Products**	**Results**
	1. Table of SUPUTRA	Valid
	2. Interactive Form and Detail of SUPUTRA	Valid
VI	**LPD Sempidi Financial Planning Products**	**Results**
	1. Table of SIBERMAS	Valid
	2. Interactive Form and Detail of SIBERMAS	Valid

Fig. 14. Trial results of the application (Lukluk LPD, Kuta LPD, Kerobokan LPD and Sempidi LPD).

Further investigation found feasibility of this application in four dimension namely Usability, Functionality, User Satisfaction, and Innovativeness involving forty respondents which are come from LPDs customers, LPDs employees, students, and other indigenous Communities. The Results can be seen in Figure 15.

No	Aspect	
I	*Usability*	**Score**
	1. This web-based application is easy to do	3,50
	2. Get financial planning information from this web-based application	3,50
	3. Get knowledge about financial planning from this web-based application	3,60
	4. Will use this web-based application for the future	2,75
	Average Score	**3,34**
II	*Functionality*	**Score**
	1. This application provides a complete financial planning simulation	3,45
	2. This application provides a financial planning simulation that matches the table in the program savings brochures from the LPD	3,35
	Average Score	**3,40**

Fig. 15. Perception of the application feasibilty and aspect: usability and functionality.

No	Aspect	
III	*User satisfaction*	**Score**
	1. With this application you can get savings program information (financial planning) that exist in the LPD in Badung Regency	3,45
	2. With this application you can get a simulation of financial planning, especially savings programs that exist in the LPD in Badung Regency	3,45
	Average Score	**3,45**
IV	*Inovativeness*	**Score**
	1. This application provides examples of financial planning that are not exist in the LPDs	2,95
	2. This application provides a simulation of financial planning that does not exist in the LPDs	2,85
	Average Score	**2,90**
	Overall Average Score	**3,27**

Fig. 16. Perception of the application feasibilty and aspect: user satisfaction and inovativeness.

B. Discussion

The development of the application has been in the design, coding, and limited trial stages. This web-based application is designed to be accessible from mobile phone and personal computer at the same time as developed by Hasan et al., [13]. The database design consist of main table namely lpdlpd, produkpklpd, jenisprodukpk, and user where Table of lpdlpd (see Figure 1) contains information about LPDs in Badung Regency, Table of produkpklpd (see Figure 2) contains information of financial planning products which are available at LPD in Badung Regency, Table of jenisprodukpk (see Figure 3) contains information type of financial planning products which are available at LPDs in Badung Regency, and Table of user (see Figure 4) contains information of financial planning web-based application user. The relation of all tables can be seen in Figure 17.
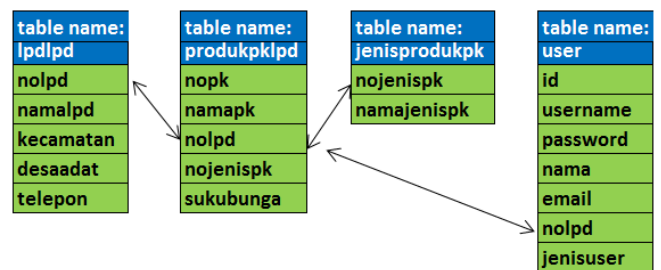

Fig. 17. Tables relation.

Based on the database with its tables, all output of the application such as tables as well as interactive form and of details of financial planning products of LPDs are developed. There are two type of Financial planning products which are available in LPDs. Type I is fixed deposit every month (A) and withdrawal once at the end of the program (Sn) such as the financial product of SIMPEL and TAPURA in Legian LPD or SIMADEJA and TAMASDE in Sibang Kaja LPD, SUPUTRA in Kerobokan LPD, SIMADE in Kuta LPD, TAPA ini Lukluk LPD and SIBERMAS in Sempidi LPD. The tables of these financial product need three variables namely: amount of deposit each month (A), number of columns in a table (an), the period of deposit in year (n), and the amount of interest rate/month (i). The first three variables can be inputted from an input form as descibed in Figure 6 and while the last variable is selected from variable sukubunga at Table produkpklpd. Basically the contents of the table Sn is applied a total ammount of annuity formula $Sn = A((1+i)^n - 1)/i$ as shown in the main part of the PHP script. Nested looping techniques are applied to display the table as can bee seen in Figure 18.

```
<?php
for ($x=1; $x<=$n; $x++) {
?>
    <tr>
        <td align="center">
            <?php
            echo  "<b>$x</b>";
            ?>
        </td>
        <?php
        for ($y=1; $y<=$an; $y++) {
        ?>
        <td align="right">
            <?php
            $ay=$a*$y;
            $xn=$x*12;
            $hp=pow((1+$i),$xn);
            $Sn=$ay*($hp-1)/$i;
            $Snn=number_format($Sn,0);
            echo  "<b>$Snn</b>"
            ?>
        </td>
        <?php
        }
        ?>
    </tr>
    <?php
    }
    ?>
```

Fig. 18. The main PHP script of table Sn.

Similarly, financial planning products type II is deposit once at the beginning (P) and withdrawal once at the end of the program (Pn) such as TAHTA in LPD Legian, TSA in LPD Sibang Kaja, and TAPA Plus in LDP Lukluk. The tables of these financial product need theree variables namely: amount of deposit at the begining (P), number of columns in a table (an), the period of deposit in year (n), and the amount of interest rate/month (i). The first three variables can be inputted from an input form in Figure 7 while the last variable/interest rate (i) is selected from field sukubunga at Table produkpklpd. The interest rate (field sukubunga) can be updated by authorized users. The applications need to be updated frequently to maintain its reliability, efficiency and usability [14]. The contents of the table Pn is applied a compound interst formula $Pn= P(1+i)n$ as shown in the main part of the php script. Nested looping techniques are also applied to display the table as can be seen in Figure 19.

```
<?php
for ($x=1; $x<=$n; $x++) {
?>
    <tr>
        <td align="center">
            <?php
            echo  $x;
            ?>
        </td>
        <?php
        for ($y=1; $y<=$an; $y++) {
        ?>
        <td align="right">
            <?php
            $ay=$a*$y;
            $xn=$x*12;
            $hp=pow((1+$i),$xn);
            $Pn=$ay*$hp;
            $Pnn=number_format($Pn,0);
            echo  "<b>$Pnn<b/>"
            ?>
        </td>
        <?php
        }
        ?>
    </tr>
    <?php
    }
    ?>
```

Fig. 19. The main PHP script of table Pn.

The application was also designed to be able to display interactive form and detail process of financial planning products type I Sn (See Figure 9) and financial planning products type II Pn (See Figure 10). Both need three variables namely: amount of deposit each month (A) or amount of deposit at the begining (P), the period of deposit in year (n), and the amount of interest rate/month (i). They display n rows and four columns (no, payment, interest, and balance). Nested looping is not applied and Figure 10 as well as Figure 21 show the main part of the PHP script.

```
<?php
for ($x=1; $x<=$n; $x++) {
?>
    <tr>
        <td align="center">
            <?php
            echo  $x;
            ?>
        </td>
        <td align="right">
            <?php
            $aa=number_format($a,0);
            echo  $aa;
            ?>
        </td>
        <td align="right">
            <?php
            $bunga=$Si*$i;
            $bungaa=number_format($bunga,1);
            echo  $bungaa;
            ?>
        </td>
        <td align="right">
            <?php
            $Si=$Si+$a+$bunga;
            $Sia=number_format($Si,1);
            echo  $Sia;
            ?>
        </td>
    </tr>
    <?php
    }
    ?>
```

Fig. 20. The main PHP script of Sn detail.

```
<?php
for ($x=1; $x<=$n; $x++) {
?>
    <tr>
        <td align="center">
            <?php
            echo  $x;
            ?>
        </td>
        <?php
        for ($y=1; $y<=$an; $y++) {
        ?>
        <td align="right">
            <?php
            $ay=$a*$y;
            $xn=$x*12;
            $hp=pow((1+$i),$xn);
            $Pn=$ay*$hp;
            $Pnn=number_format($Pn,0);
            echo  "<b>$Pnn<b/>"
            ?>
        </td>
        <?php
        }
        ?>
    </tr>
    <?php
    }
    ?>
```

Fig. 21. The main PHP script of Pn detail.

All of the input and output of the application were tested by six representatives of LPDs in Badung Regency namely Legian LPD, Sibang Kaja LPD, Kerobokan LPD, Kuta LPD, Lukluk LPD, and Sempidi LPD. There are six cluster test that consist of 22 items to be filled in. The results in Figure 5 and Figure 6 show all items are valid. The application was also tried by 40 participants (users) to assess its feasibility. As can be seen in Figure 7 and Figure 8, the overall average score is 3.27 out of 4.0 (Good). The following Figure displays average score of each aspect.
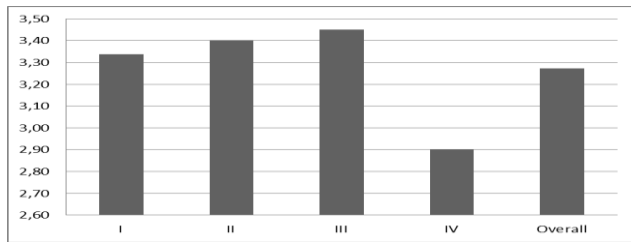
Fig. 22. Average score of every aspects and overall aspect.

As can be seen from Figure 22, all aspects (Usability, Functionality, User Satisfaction, and Innovativeness) are greater than 2.50. The greatest average score is User Satisfaction (3.60), in line with Mumpuni and Sukarno [15] and Deshpande et al., [16]. Aspect "Functionality" that was applied by Gavrivoka et al., [17], got the second greatest average score of 3.40 Figure 7 and Figure 8 show all items got score greater than 2.5. The maximum score is 3.60 and minimum score is 2.75. It means the application are quite useful, quite functional, quite satisfying, and quite innovative.

IV. CONCLUSION

Based on the results achieved previously, then the conclusion can be drawn as follows: (1) The design of the Financial Planning Web-based application is related to design of database, input and output. The database consists of four tables while input and output are related to the output of tables as well as the interactive form and detail of financial planning product which are already available at LPDs in Badung regency. Coding of the application was created using PHP programming language. In coding to display tables, nested looping facilities are used in the PHP programming language. (2) The results of limited trial show that six cluster test which consist of 22 items are valid. Finally, user's assessment on feasibility of the application shows all aspects namely Usability, Functionality, User Satisfaction, and Innovativeness got average scores above 2.50 and overall average score is 3.27 out of 4.0.

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