ATLANTIS PRESS
Advances in Social Science, Education and Humanities Research, volume 647
International Conference on Applied Science and Technology on Social Science 2021 (iCAST-SS 2021)

Development of a Flexible Financial Planning Web-Based Application for Indigenous Communities at Village Credit Institution in Badung Regency, Bali

*I Made Wijana,
Accounting Department
Politeknik Negeri Bali
Badung, Indonesia
imdwjn@gmail.com

Anak Agung Putri
Accounting Department
Politeknik Negeri Bali
Badung, Indonesia
agungputrisuardani@pnb.ac.id

Suardani Suardani
Accounting Department
Politeknik Negeri Bali
Badung, Indonesia
suardaniputri@yahoo.com

I Ketut Suwintana
Accounting Department
Politeknik Negeri Bali
Badung, Indonesia
tutswint@pnb.ac.id

I Gusti Putu Fajar Pranadi Sudhana
Tourism Department
Politeknik Negeri Bali
Badung, Indonesia
fajar.pranadi@gmail.com

***Abstract*—This research aims to develop a Flexible Financial Planning Web-based application For Indigenous Village Communities at Village Credit Institution (LPD) in Badung Regency, Bali. This research is a continuation and refinement of previous research results. This stage includes: revision to be more flexible, trial of the Financial Planning Web-based Application as well as measure user experience of forty eight respondents from six districts in Badung Regency, The Province of Bali. They are mostly customer of Petang LPD, Darmasaba LPD, Perang LPD, Padang Luwih LPD, Kedonganan LPD and Kutuh LPD. Some aspects are included in a questionnaire namely Eficiency, Perspicuity, Attractiveness, Stimulation, Dependability, and Novelty. Six validators as representatives of LPDs in Badung regency tested the application output to find out its validity. The results of the research show (1) Flexible Sn tables, Flexible Pn tables, and financial planning product Type III, Type IV as well as Type V which is available in Kutuh and Kedonganan LPD where its scheme is fixed deposit every month and some withdrawals of a certain value at a certain time are included in the financial planning web based application, (2) Twenty one items of cluster test are valid as a results of the trial. Finally, based on user's experience then their perception on all aspects namely Attractiveness, Efficiency, Perspicuity, Dependability, Stimulation and Novelty got average scores above 3.50 and overall average score is 3.91 out of 5.0. It means the application are quite dependable, quite attractive, and quite efficient.**

Keywords—Financial Flexibility; Flexible financial planning; Web-based application; village credit institution

I. INTRODUCTION

Implementing a good financial planning is important for individuals and families to get a happy life. Many financial institution especially Village Credit Institution or *Lembaga Perkreditan Desa* (LPD) in Bali provide financial planning products, however no LPD provide the flexible one. Flexible finance has a positive effect on company performance [1]. In [2] is mentioned that financial flexibility has positive relationship on investment and firm performance during and after financial crisis. Some companies would make effective investments if apply financial flexibility during a crisis period [3]. There is a significant relationship between financial flexibility and investment level in companies [4]. [5] The results from regression analysis showed that financial flexibility enhances firms' investment ability. There is a relationship between the financial flexibility and dividend policy

[6] and [7]. In the asset-heavy manufacturing industry in Taiwan, financial flexibility has a positive effect on enterprise performance particularly on ROA [8]. Financial flexibility is ability to provide additional net working capital, and to fund new fixed assets (investment ability) [9]. The performance of business and organization are also significantly effected by financial planning, [10] and [11]. Financial planning are implemented in many institution including villages. The result of village financial planning is APBDesa [12]. Planning is the first step of village fund management or financial management [13] and [14]. Individuals apply financial planning for their own future while businesspeople to know about the funds required for a future period [15]. In Klang Valley, Malaysia, involvement in the multiple aspects of personal financial planning reflects the readiness of the financially literate individuals [16]. Financial security is the priority of personal financial planning which can bee attained if wise in spending, saving, and investing [17].

The importance of flexibility is not only in company financial but also in personal financial planning. A flexible personal financial planning allows us to invest more money and can earn more return which lead to a less time in achieveing financial goal. Indigenous Communities in Bali particularly in Badung Regency can carry out financial planning program which are available at Village Credit Institution or Lembaga Perkreditan Desa (LPD). They need a web-based financial planning in LPD [18]. The application of web-based financial planning in LPD has been developed. The output of the application are tables and interactive form of financial planning product at LPDs in Badung regency [19]. Indigenous peoples in Badung like companies also need flexible financial planning. They need the availibily of a flexible web-based financial planning application at LPD. Therefore, the application will be revised to be more flexible.

The problems in this research based on the above background are: (a) How is flexible Financial Planning Web-based Application For Indigenous Village Communities at LPD in Badung Regency? (b) How is the trial results of the flexible Financial Planning Web-based Application For Indigenous Village Communities at LPD in Badung Regency? The purpose of this research are: (a) To find out the flexible Financial Planning Web-based Application For Indigenous Village Communities at LPD in Badung Regency. (b) Tofind out the trial results of the flexible Financial Planning Web-based Application For Indigenous Village Communities at LPD in Badung Regency.

II. RESEARCH METHODOLOGY

This research is the last stages of the previous stages [18] and [19]. In the last stage, the application was improved to be more flexible. Forty eight respondents from six districts in Badung Regency, the Province of Bali namely Petang, Abinsemal, Mengwi, Kuta Utara, Kuta, and Kuta Selatan are participated in this research. Some aspects are included in a questionnaire namely Efficiency, Perspicuity, Attractiveness, Stimulation, Dependability, and Novelty. Six validators as representatives of LPDs in Badung regency tested the application output to find out its validity.

III. RESULTS AND DISCUSSION

3.1 Results

3.1.1 Revision

The application has been able to display several important outputs of financial planning products in six LPDs as mentioned in [19]. Some aspects will be revised such as some LPDs that located in 6 districts in Badung Regency were added in this application. They are Petang LPD from Petang District, Darmasaba LPD from Abiansemal District, Perang LPD from Mengwi District, Padang Luwih LPD from Kuta Utara District, Kutuh LPD from Kuta Selatan District, and Kedonganan LPD from Kuta District. The outputs are categorized into two namely: 1) tables and 2) interactive forms and details will be add with 3) Flexible Table. Financial planning products Type I and Type II are avilable in the the six previous LPDs [19] while Type III and Type IV [18] which are not available in LPDs as well as othe type added in the application. The type I are also availabe in Petang (SIMPEL or Simpanan Pelajar) , Darmasaba (TIKA or Tabungan Investasi Berjangka), Perang (TAMARA or Tabungan Mahasiswa dan Upacara), Padang Luwih (TABERMAS or Tabungan Berencana Masyarakat) , and Kutuh LPD (SUKLA or Simpanan Usaha Keluarga) while the type II is availabe in Padang Luwih LPD (TABERMAS or Tabungan Berencana Masyarakat).

Figure 1 shows an example of Sn table is a financial planning products of Darmasaba LPD “TIKA” or “Tabungan Investasi Berjangka”. While an example of Pn table is as a financial planning products of Padang Luwih LPD “TABERMAS” or “Tabungan Berencana Masyarakat” is described in Figure 2.

Tabel TIKA (Tabungan Investasi Berjangka) LPD Darmasaba
Tabel Perencanaan Keuangan Ini Dengan Menyetor Tiap Bulan A Selama n Tahun Lalu
Bisa Menarik Sn di Akhir Program

Setoran Bulanan A Kolom 1 : 100000
Banyak Kolom Untuk A (Maksimum 10) : 4
Banyak Tahun (Baris) : 8 Tahun
Masukkan

Tabel Nilai Akhir (Sn)Program Tabungan: TIKA (Tabungan Investasi Berjangka) LPD Darmasaba
Setoran/Bulan A
Dengan Suku Bunga/Bulan = 0.8 % atau 9.6 % per Tahun

Jangka Waktu	A=	A=	A=	A=
(Tahun)	100,000	200,000	300,000	400,000
1	1,254,234	2,508,467	3,762,701	5,016,935
2	2,634,316	5,268,631	7,902,947	10,537,262
3	4,152,873	8,305,746	12,458,619	16,611,492
4	5,823,800	11,647,601	17,471,401	23,295,202
5	7,662,387	15,324,773	22,987,160	30,649,547
6	9,685,454	19,370,908	29,056,363	38,741,817
7	11,911,514	23,823,027	35,734,541	47,646,055
8	14,360,933	28,721,866	43,082,799	57,443,732

Figure 1 Table of Darmasaba LPD "TIKA".

Tabel Tabermas (Tabungan Berencana Masyarakat) LPD Padang Luwih
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 : 1000000
Banyak Kolom Untuk P (Maksimum 10) : 4
Banyak Tahun (Baris) : 8 Tahun
Masukkan

Tabel Nilai Akhir Program Tabungan: Tabermas (Tabungan Berencana Masyarakat) LPD Padang Luwih
Setoran di Awal P
Dengan Suku Bunga/Bulan = 0.75 %

Jangka Waktu	P=	P=	P=	P=
(Tahun)	1,000,000	2,000,000	3,000,000	4,000,000
1	1,079,150	2,164,800	3,250,450	4,336,050
2	1,173,850	2,361,350	3,548,800	4,736,200
3	1,277,400	2,576,250	3,875,250	5,173,950
4	1,390,650	2,811,300	4,232,200	5,652,800
5	1,514,550	3,068,450	4,622,650	6,176,450
6	1,650,050	3,349,700	5,049,700	6,749,300
7	1,798,300	3,657,350	5,516,850	7,375,950
8	1,960,300	3,993,850	6,027,750	8,061,300

Figure 2 Table of Pn of financial planning product of Padang Luwih LPD "TABERMAS".

The display of Sn interactive form and detail of TIKA as well as Pn interactive form and detail of TABERMAS is similar to financial planning product of Kuta LPD "SIMADE" or "Simpanan Masa Depan" and financial planning product of Legian LPD "TAHTA" or "Tabungan Hari Tua" [19]

The Financial planning products Type III and Type IV which are not available in any LPDs as well as other type added and displayed in the application. Figure 3 shows input and output of Type III *Setoran Bulanan* (Monthly payment) A1=300,000, interest rate=1%, n1=4 month and n2=3 month.

Detail Mencari Nilai A2 Apabila A1, i, n1 dan n2 diketahui

Setoran Bulanan : 300000
Suku Bunga/Bulan : 1 %
Jangka Waktu Setoran : 4 Bulan
Jangka Waktu Bisa Menarik : 3 Bulan
Masukkan

Tabel Detail Mencari Nilai A2

Tabel Proses Detail Mencari Nilai Sn1

NO	SETOR	BUNGA	SALDO
1	300,000	0.0	300,000.0
2	300,000	3,000.0	603,000.0
3	300,000	6,030.0	909,030.0
4	300,000	9,090.3	1,218,120.3

Tabel Proses Detail Mencari Nilai A2 Setelah Sn1 Diketahui 1,218,120.3

NO	TARIK	BUNGA	SALDO
1	414,187.8	12,181.2	816,113.7
2	414,187.8	8,161.1	410,087.0
3	414,187.8	4,100.9	0.0

Figure 3 Detail of Financial Planning Product Type III.

Figure 4 shows input and output of Type IV, Setoran senilai P Sekali di Awal (Deposit once at the beginning) P=18,000,000, interest rate=0.8%, n1=5 month and n2=4 month.

Detail Mencari Nilai A2 Apabila P, i, n1 dan n2 diketahui

Setoran Sekali di Awal (P) : 18000000
Suku Bunga/Bulan : 0.8 %
Jangka Waktu P Mengendap (n1) : 5 Bulan
Jangka Waktu Bisa Menarik (n2) : 4 Bulan
Masukkan

Tabel Detail Mencari Nilai A2

Tabel Proses Detail Mencari Nilai Pn1

NO	SETOR	BUNGA	SALDO
1	18,000,000	144,000.0	18,144,000.0
2	0	145,152.0	18,289,152.0
3	0	146,313.2	18,435,465.2
4	0	147,483.7	18,582,948.9
5	0	148,663.6	18,731,612.5

Tabel Proses Detail Mencari Nilai A2 Setelah Pn1 Diketahui 18,731,612.5

NO	TARIK	BUNGA	SALDO
1	4,776,934.3	149,852.9	14,104,531.1
2	4,776,934.3	112,836.2	9,440,433.0
3	4,776,934.3	75,523.5	4,739,022.2
4	4,776,934.3	37,912.2	0.0

Figure 4. Detail of Financial Planning Product Type IV.

3.1.2 Flexible Financial Planning

A more flexible Sn table is created in the revised application for example "Flexible Sn Table of TAMARA (Tabungan Mahasiswa dan Upacara) Perang LPD". The value of A (Column Title) and The value of n (Row Title) is flexible depend on the inputed value from user. Figure 5 shows an example of a flexible Sn table.

Tabel FLEKSIBEL TAMARA (Tabungan Mahasiswa dan Upacara) LPD Perang
Tabel Perencanaan Keuangan Ini Dengan Menyetor Tiap Bulan A Selama n Tahun Lalu
Bisa Menarik Sn di Akhir Program

Banyak Kolom Untuk A (Maksimum 10) : 5
Banyak Tahun (Baris)(Maksimum 10) : 6 Tahun

Sekarang Masukkan Nilai Setoran A
Sampai banyak kolom yang di-input di atas

Nilai setoran A Kolom 1= : 50000 Rupiah
Nilai setoran A Kolom 2= : 100000 Rupiah
Nilai setoran A Kolom 3= : 200000 Rupiah
Nilai setoran A Kolom 4= : 500000 Rupiah
Nilai setoran A Kolom 5= : 1000000 Rupiah

Sekarang Masukkan Jangka waktu
Sampai banyak baris yang di-input di atas

Jangka waktu n baris 1= : 1 Tahun
Jangka waktu n baris 2= : 2 Tahun
Jangka waktu n baris 3= : 3 Tahun
Jangka waktu n baris 4= : 4 Tahun
Jangka waktu n baris 5= : 5 Tahun
Jangka waktu n baris 6= : 10 Tahun

Tabel FLEKSIBEL Nilai Akhir (Sn)Program Tabungan: TAMARA (Tabungan Mahasiswa dan Upacara) LPD Perang
Setoran/Bulan A
Dengan Suku Bunga/Bulan = 0.8 % atau 9.6 % per Tahun

Jangka Waktu	A=	A=	A=	A=	A=
(Tahun)	50,000	100,000	200,000	500,000	1,000,000
1	627,117	1,254,234	2,508,467	6,271,168	12,542,337
2	1,317,158	2,634,316	5,268,631	13,171,578	26,343,155
3	2,076,436	4,152,873	8,305,746	20,764,365	41,528,730
4	2,911,900	5,823,800	11,647,601	29,119,002	58,238,005
5	3,831,193	7,662,387	15,324,773	38,311,933	76,623,867
10	10,010,873	20,021,747	40,043,494	100,108,735	200,217,469

Figure 5. An Example of Flexible Sn Table of TAMARA.

Another more flexible financial planning in the application is Type V which is available in Kutuh and Kedonganan LPD. The scheme is fixed deposit every month and some withdrawals of a certain value at a certain time too. The first example is SIWAJAR (Simpanan wajib belajar) of Kutuh LPD. The goal of this financial planning is to prepare education cost. The partcipants have to save every month until their children finish at senior high school (19 years old). They can withdraw (Withdrawal I) 50% when the children is 6 years old, Withdrawal II is 25% when the children is 12 years old, Withdrawal III is 25% when the children is 15 years old, and withdrawal IV is the last balance when the children is 19 years old. As a simulation, if Kutuh LPD applies an interest rate of 0.3% for SIWAJAR so a table can be made as shown in Figure 6

Tabel SIWAJAR (Simpanan Wajib Belajar) LPD Kutuh
Tabel Perencanaan Keuangan Ini Dengan Menyetor Tiap Bulan:
Bisa Mulai Saat Si Anak Belum Sekolah
Bisa Menerima Tahap I (Anak Umur 6 Tahun) sebanyak 50%
Bisa Menerima Tahap II (Anak Umur 12 Tahun) sebanyak 25%
Bisa Menerima Tahap II (Anak Umur 15 Tahun) sebanyak 25%
Bisa Menerima Tahap III (Anak Umur 19 Tahun)dari Saldo AKhir
Seperti Pada Tabel

Pada Tabel Baris 1, Setoran Tiap Bulan A= : 100000
Pada Tabel, Banyaknya Baris ? : 5
Mulai Siwajar Saat Anak Umur? : 0
Masukkan

Tabel Tahapan Pembayaran dan Penerimaan Manfaat: SIWAJAR (Simpanan Wajib Belajar) LPD Kutuh
Mulai SIWAJAR Saat Anak Berumur 0 Tahun

No.	Setor/Bulan	Tahapan I	Tahapan II	Tahapan III	Tahapan IV
		6 Tahun	12 Tahun	15 Tahun	19 Tahun
1	100,000	4,011,685	3,246,627	3,661,131	17,836,319
2	200,000	8,023,371	6,493,253	7,322,263	35,672,638
3	300,000	12,035,056	9,739,880	10,983,394	53,508,957
4	400,000	16,046,742	12,986,507	14,644,525	71,345,276
5	500,000	20,058,427	16,233,133	18,305,657	89,181,595

Figure 6 Table of Financial Planning Product Type V (An Example of SIWAJAR Kutuh LPD).

The second example of financial planning Type V is TABEPLUS (Tabungan Beasiswa Plus) of Kedonganan LPD. The goal of this financial planning is also to prepare education cost. The TABEPLUS has many type those are type 1, type 2, and so on until type 50. The scheme for type 1 is the partcipants have to choose save daily Rp. 2,000, or monthly Rp. 65,000 or Rp. 600,000 annually

payment for 10 years. They can withdraw Rp. 500,000 at the end of year 3, Rp. 500,000 at the end of year 6, Rp. 1,000,000 at the end of year 9, Rp. 5,000,000 at the end of year 12. The scheme of type n (n=1,2,...,50) is simply n times the payment of type 1. Figure 7 shows an example of a flexible TABEPLUS table.

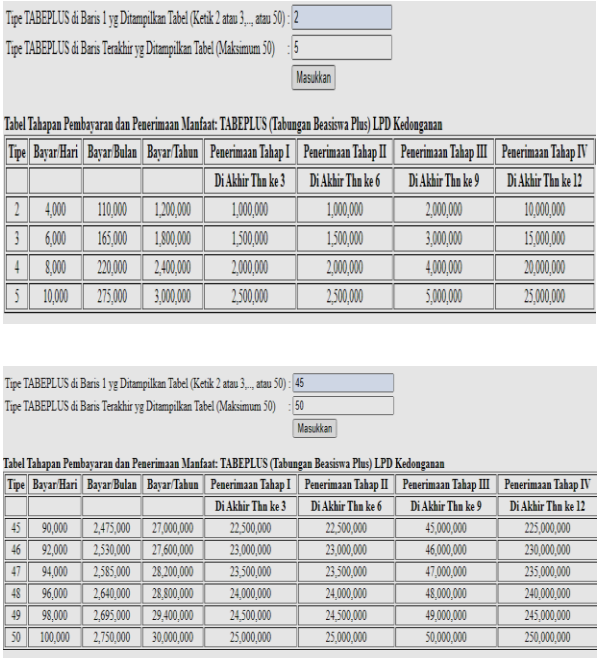

Figure 7 TABEPLUS Table

3.1.3 Trial Results

The application was tested involving six validators. Table 1 shows the test clusters and results .

Table 1. Trial Results of The Application (Darmasaba , Petang and Padang Luwih LPD)

No	Test Cluster	
I	**Darmasaba LPD Financial Planning Products**	**Results**
	1. Table of TIKA	Valid
	2. Flexible Table of TIKA	Valid
	3. Interactive Form and Detail of TIKA	Valid
II	**Petang LPD Financial Planning Products**	**Results**
	1. Table of SIMPEL	Valid
	2. Flexible Table of SIMPEL	Valid
	3. Interactive Form and Detail of SIMPEL	Valid
III	**Padang Luwih LPD Planning Products**	**Results**
	1. Table of TABERMAS (Monthly)	Valid
	2. Flexible Table of TABERMAS (Monthly)	Valid
	3. Interactive Form and Detail of TABERMAS (Monthly)	Valid
	4. Table of TABERMAS (One Payment)	Valid
	5. Flexible Table of TABERMAS (One Payment)	Valid
	6. Interactive Form and Detail of TABERMAS (One Payment)	Valid

Table 2. Trial Results of The Application (Perang, Kutuh, and Kedonganan LPD)

No	Test Cluster	
IV	**Perang LPD Financial Planning Products**	**Results**
	1. Table of TAMARA	Valid
	2. Flexible Table of TAMARA	Valid
	3. Interactive Form and Detail of TAMARA	Valid
V	**Kutuh LPD Financial Planning Products**	**Results**
	1. Table of SUKLA	Valid
	2. Flexible Table of SUKLA	Valid
	3. Interactive Form and Detail of SUKLA	Valid
	4. Table of SIWAJAR	Valid
VI	**Kedonganan LPD Financial Planning Products**	**Results**
	1. Table of TABEPLUS	Valid
	2. Flexible Table of TABEPLUS	Valid

Respondents which are mainly come from indigenous communities and students are involved and quitionare [20] was used to findout the user experience of this application. The Results can be seen in Table 3.

Table 3. Perception of User Experience.

No	Aspects	Average Score
I	Attractiveness	3,78
II	Effciency	3,94
III	Perspicuity	3,95
IV	Dependability	4,10
V	Stimulation	3,88
VI	Novelty	3,79
	Overall Average	3,91

3.2 Discussion

The development of this flexible application is improvements from the previous web based application [19] which on www.prkeulpdbadung.com. Six LPDs with 8 financial products are added in the applicaton namely Petang LPD, Darmasaba LPD, Perang LPD, Padang Luwih LPD, Kutuh LPD, and Kedonganan LPD. They have financial products type 1, type 2, and type 5. Financial products type III and type IV were added in the application as can be seen in Figure 3 and Figure 4 although they have not yet implemented at all LPDs di Badung Regency. Basically the ouput of Type III applied combination total ammount of annuity formula $Sn= A((1+i)^{n1}-1)/i$ and present value of annuity formula formula $PVn= A(1-(1+i)^{-n2})/i$, where PVn=Sn. Its PHP code is displayed in Figure 8 and Figure 9.

```
<?php
for ($x=1; $x<=$n1; $x++) {
      ?>
      <tr>
        <td align="center">
        <?php
        echo  " <br/>$x ";
        ?>
        </td>
        <td align="right">
        <?php
        $a1a=number_format($a1,0);
        echo  " $a1a ";
        ?>
        </td>
        <td align="right">
        <?php
        $bunga=$S1i*$i;
        $bungaa=number_format($bunga,1);
        echo  " $bungaa";
        ?>
        </td>
        <td align="right">
        <?php
        $S1i=$S1i+$a1+$bunga;
        $S1ia=number_format($S1i,1);
        echo  " $S1ia ";
    ?>
    </td>
</tr>
<?php
    }
?>
```

Figure 8. PHP Script of Type III, Sn Step.

```
<?php
$S2i=$S1i;
?>
<?php
for ($x=1; $x<=$n2; $x++) {
?>
        <tr>
        <td align="center">
        <?php
        echo  " <br/>$x ";
        ?>
        <td align="right">
        <?php
        $a2a=number_format($a2,1);
        echo  " $a2a ";
        ?>
        <td align="right">
        <?php
        $bunga=$S2i*$i;
        $bungaa=number_format($bunga,1);
        echo  " $bungaa";
        ?>
        <td align="right">
        <?php
        $S2i=$S2i-$a2+$bunga;
        $S2ia=number_format($S2i,1);
        echo  " $S2ia ";
        ?>
</tr>
<?php
   }
?>
```

Figure 9. PHP Script of Type III, Withdrawing Step.

Similarly, the ouput of Type IV applied combination a compound interest formula Pn= $P((1+i)^{n1}$ and present value of annuity formula formula PVn= $A(1-(1+i)^{-n2})/i$ where PVn=Pn. Its PHP code is displayed in Figure 10.

```
<?php
for ($x=2; $x<=$n1; $x++) {
?>
            <tr>
    <td align="center">
    <?php
    echo  " <br/>$x ";
    ?>
    </td>
    <td align="right">
    <?php
            $p=0;
    $pa=number_format($p,0);
    echo  " $pa ";
    ?>
    </td>
    <td align="right">
    <?php
    $bunga=$Si*$i;
    $bungaa=number_format($bunga,1);
    echo  " $bungaa";
    ?>
    </td>
    <td align="right">
    <?php
    $Si=$Si+$bunga;
    $Sia=number_format($Si,1);
    echo  " $Sia ";
?>
</td>
</tr>
    <?php
      }
    ?>
```

Figure 10. PHP Script of Type III, Pn Step.

In this application, all LPDs were added a Sn table with flexible A dan n for example SIMPEL of Petang LPD. Its PHP code use array is displayed in Figure 11.

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

Figure 11. The main Flexible PHP Script of Sn

Financial planning Type V such as SIAWAJAR of Kutuh LPD and TABEPLUS of Kedonganan LPD are to complete the variations of flexible financial planning products in this application. Basicaly, SIWAJAR applied combination a total ammount of annuity formula Sn= $A((1+i)^{n1}-1)/i$ and a compound interest formula Pn= $P((1+i)^{n}$. The PHP code of withdrawal I is

```
<?php
echo number_format(0.5*$a*$x*(pow((1+$ii),((6-$ak)*12))-1)/$ii,0);
?>
```

The PHP code of withdrawal II is

```
<?php
echo number_format(((0.5*$a*$x*(pow((1+$ii),((6-$ak)*12))-1)/$ii)*pow((1+$ii),71.04845)+$a*$x*(pow((1+$ii),72)-1)/$ii)*0.25,0);
?>
```

The PHP code of withdrawal III is

```
<?php
echo number_format(((0.5*$a*$x*(pow((1+$ii),((6-$ak)*12))-1)/$ii)*pow((1+$ii),71.04845)+$a*$x*(pow((1+$ii),72)-1)/$ii)*0.25,0);
?>
```

The PHP code of withdrawal IV is

```
<?php
echo number_format((((0.5*$a*$x*(pow((1+$ii),((6-$ak)*12))-1)/$ii)*pow((1+$ii),71.04845)+$a*$x*(pow((1+$ii),72)-1)/$ii)*0.75*pow((1+$ii),36)+$a*$x*(pow((1+$ii),36)-1)/$ii)*0.75*pow((1+$ii),48)+$a*$x*(pow((1+$ii),48)-1)/$ii,0);
?>
```

TABEPLUS can be asume to apply combination a total ammount of annuity formula Sn= $A((1+i)^{n1}-1)/i$ and a compound interest formula Pn= $P((1+i)^{n}$. For example, detail simulation of TABEPLUS type 2 using i= 0.0898011% as can be seen in Figure 12.

Month	Payment	Interest	Withdraw	Balance
1	110,000			110,000
2	110,000	99		220,099
34	110,000	3,307		3,795,951
35	110,000	3,409		3,909,360
36	110,000	3,511	1,000,000	3,022,870
37	110,000	2,715		3,135,585
71	110,000	6,207		7,028,705
72	110,000	6,312	1,000,000	6,145,017
73	110,000	5,518		6,260,535
107	110,000	9,098		10,250,494
108	110,000	9,205	2,000,000	8,369,699
109	110,000	7,516		8,487,215
119	110,000	8,576		9,668,196
120	110,000	8,682		9,786,878
121	-	8,789		9,795,667
143	-	8,964		9,991,028
144	-	8,972	10,000,000	0

Figure 12. Simulation of TABELUS

Six representatives of LPDs in Badung Regency namely Petang LPD, Darmasaba LPD, Perang LPD, Padang Luwih LPD, Kutuh LPD, and Kedonganan LPD tested all of the input and ouput of the application . The results in Table 1 and Table 2 show 21 items are valid. The user experience data were gathered as described in Table 3, the overall average score is 3.91 out of 5.0 (Good). Figure 13 shows average score of each aspects.

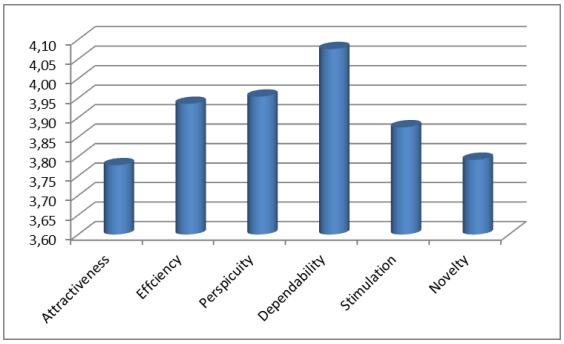

Figure 13. Average Score Of Every Aspects And Overall Aspect

Figure 13 shows, all aspects (Attractiveness, Efficiency, Perspicuity, Dependability, Stimulation and Novelty) are good. The greatest average score is Dependability (4.10) whic is in line with [21] that software reliability is an important quality attribute. Aspect "Perspicuity" that was explained in [22], got the second greatest average score of 3.95. Table 3 shows all items got score greater than 3.5. The maximum score is 4.10 and minimum score is 3.78. It means the application are quite dependable, quite attractive, and quite efficient.

IV. CONCLUSION

The following are conclusion based on the discussion results: (1) The flexible Finanncial

Planning Web-based application in Badung regency consist of flexible Sn table, Pn Table and financial planning product Type III, Type IV as well as Type V. which is available in Kutuh and Kedonganan LPD where its scheme is fixed deposit every month and some withdrawals of a certain value at a certain time. (2) All of of 21 items in six clusters are valid based on the trial results. Finally, based on user's experience then their perception on all aspects namely Attractiveness, Efficiency, Perspicuity, Dependability, Stimulation and Novelty got average score above 3.50 and overall average score is 3.91 out of 5.0. t means the application are quite dependable, quite attractive, and quite efficient.

ACKNOWLEDGMENT

The author would like to thank all those who have helped and supported this research.

REFERENCES

[1] Z. A. F. Al-Slehat, "Impact of the Financial Flexibility on the Performance: An Empirical Study on a Sample of Jordanian Services Sector Firms in Period (2010-2017", International Journal Of Business and Management. Vol. 14, 2019, pp. 1-11.

[2] M.R. Islam, "Financial Flexibility - A Synthesis of Literature Review", International Journal Of Accounting and Financila Reporting. Vol. 9, No. 1, 2019, pp. 246-256.

[3] V. Cherkasova and E. Kuzmin, "Financial Flexibility as an Investment Efficiency Factor in Asian Companie", Gadjah Mada International Journal Bussiness. Vol.20, No. 2, 2018, pp. 137-164.

[4] M. Ghadiri, "Study The Relationship Between Financial Flexibilitywith Investment And Auditor Tenure", Arabian Journal of Business and Management Review. Vol. 6, No 5, 2017, pp. 26-35

[5] R. H. Setianto and A. Kusumaputra, "Corporate Financial Flexibility, Investment Activities, and Cash Holding: Evidence from Indonesia", Capital Market Review. Vol.9, , 2017, pp. 75-85.

[6] M. S. Rapp, T. Schmid and D. Urban, "The value of financial flexibility and corporate financial policy", Journal of Corporate Finance. Vol. 29, 2014, pp.288-302.

[7] R. K. Wara, "The Relationship between Financial Flexibility and Dividend Payouts: A Case of Listed Firms in Kenya", European Journal of Business and Management. Vol.7, No. 3, 2015, pp. 51-58.

[8] X. Teng, B. Chang and K. Wu , "The Role of Financial Flexibility on Enterprise Sustainable Development during the COVID-19 Crisis—A Consideration of Tangible Assets", Sustainability. Vol.13, No. 1245, 2021, pp. 1-16.

[9] V. Bukvic, "Financial Flexibility As One Of The Key Factors That Influence Firm Investment Ability", Advances in Business-Related Scientific Research Conference 2016 in Venice. 2016, pp.1-18.

[10] K. Akhmedov , "Financial Planning and Business Performance: Evidence from Private Sector of Uzbekistan", European Journal of Business and Management . Vol.8, No. 9, 2016, pp.121-124.

[11] P.N.K. Aru and I. Tirimba, "Effect of Financial Planning Practices on the Financial Performance of Non Profit Making Health Organizations in Kiambu County, Kenya", International Journal of Scientific and Research Publications . Vol.8, No. 5, 2018, pp.599-623

[12] T.D. Fatmawati, W. Prasetyo and S.M. Wardayati "Dynamics Of Village Financial Management: Dramaturgy Perspective", International Journal of Research Sience and Management . Vol.5, No. 11, 2018, pp.25-32

[13] I. Nurhakim and I. Yudianto, "Implementation of Village Fund Management", Journal of Accounting Auditing and Business, Vol. 1, No. 2, 2018, pp 39-55

[14] K. Shaleh, H. Subing, and A.I. Yustina "Village Financial Management: Based on Local Tradition", I IJBE (Integrated Journal of Business and Economics). Vol.4, No. 1, 2020

[15] S. Murali and K..R. Subbakrishna, "Personal Financial Planning (Whealth Management)", Himalaya Publishing House, Mumbai, 2018

[16] T.H. Boon, H S. Yee and H.W. Ting "Financial Literacy and Personal Financial Planning in Klang Valley, Malaysia", International Journal of Economics and Management . Vol.5, No. 1, 2011, pp.149-168

[17] L. Huang "Personal Financial Planning for College Graduates", Technology and Investment. Vol.7, pp.123-134

[18] I.M..Wijana, A. A. P. Suardani, and I.G.P. F. P. Sudhana "Need Analysis And System Engineering Of Financial Planning Web-Based Application Development For Indigenous Communities At Village Credit Institution In Badung Regency, Bali", Advances in Social Science, Education and Humanities Research. Vol. 383 , 2019, pp 195-200

[19] I.M..Wijana, I. K. Suwintana, A. A. P. Suardani, and I.G.P. F. P. Sudhana "Design and Limited Trial of Financial Planning Web-Based Application Development for IndigenousCommunities At Village Credit Institution In Badung Regency, Bali", Advances in Social Science, Education and Humanities Research. Vol. 544 , 2020, pp 147-153

[20] M. Rauschenberger, A. Hinderks, & T. Thomaschewski, "User experience in business software: A practice report about the implementation of attractive business software", In Brau, H., Lehmann, A., Petrovic, K., & Schroeder, M. C. (Eds.), *Usability Professionals 2011* (pp. 158-163). Stuttgart, Germany: German UPA e.V

[21] O. Barack, and L. Huang "Assesment and Prediction of Software Reliability in Mobile Application", Journal of Software Engineering and Applications . Vol.13, 2020, pp.179-190

[22] A Hindersks, D Winter, M Schreepp, and J Thomaschewski "Applicability of User Experience and Usability of Quisionnaries", Journal of Universal Computer Science. Vol.25 No. 13, 2019, pp.1717-1735