

## Electronic Personal Development Plan (ePDP) Assessment Report 2013

### Effects of ePDPs on Student Academic Success and Retention Rates (Draft)

#### Results Highlights

- A total of 346 Fall 2010 first-year students completed First-Year Seminars in which instructional teams assigned the ePDPs. The ePDP sections included the following: two Business, three Engineering, two Informatics, three Nursing, two Psychology, one Technology, and three University College.
- During the 2010 pilot year, faculty members were required to participate in a one week summer institute that included technology training and an overview of the pedagogy of the ePDP project. In subsequent years, faculty members in ePDP First-Year seminar sections were not required to participate in the faculty development workshops.
- Linear regression results suggested that students participating in Fall 2010 First-Year Seminar ePDP sections had significantly higher Fall GPAs (2.95) compared to nonparticipants (2.79), even after High School GPAs, SAT scores, Gender, Income Level, and Admit Date (proxy for student motivation) were entered as covariates. Students who participated in ePDP sections earned Fall GPAs .14 higher than nonparticipants. Results shown in Tables 1 and 2.
- Logistic regression results suggested that students participating in Fall 2010 First-Year Seminar ePDP sections had significantly higher one-year retention rates (80%) compared to nonparticipants (74%), even after High School GPAs, SAT scores, Gender, Income Level, and Admit Date (proxy for student motivation) were entered as covariates. Students who participated in ePDP sections had a 48% greater odds of being retained compared to students not participating in ePDP sections. Results shown in Tables 1 and 3.
- Once the numbers of First-Year Seminar instructional teams assigning the ePDP increased in subsequent fall semesters, the positive effects of ePDPs on students' levels of academic success and persistence rates were not sustained. It is possible that faculty professional development is necessary to ensure that the ePDP as an effective pedagogical tool (one that enhances students meaning making, self-awareness, reflective thinking and writing). Results displayed in Tables 4 and 5.
- Fall 2012 students participating in University College First-Year Seminars who actually completed ePDPs 5 or more sections of the ePDP process had significantly higher mean scores on student success and self-reported learning outcomes in the following areas: using reflective writing to understand their experiences, adjusting to college, deciding on a major or future career, and understanding self and motivations for attending college. Results shown in Table 6.

**Table 1. Fall 2010 Academic Success and Retention Rates for Students in e-PDP First-Year Seminar Sections Compared to Sections not Assigned an ePDP**

	N	Fall Semester GPA	First-Year Cumulative GPA	Second-Year Cumulative GPA	One-Year Retention Rate	Second-Year Retention Rate
ePDP	346	<b>2.95</b>	<b>2.76</b>	<b>2.72</b>	<b>80%</b>	<b>66%</b>
Not ePDP	1936	<b>2.79</b>	<b>2.66</b>	<b>2.61</b>	<b>74%</b>	<b>63%</b>
Overall	2281	2.81	2.67	2.62	75%	63%

*Note: Bolded items are significantly different based on independent samples t-test results or chi-square difference test results ( $p < .05$ ).*

**Table 2. Hierarchical Multiple Regression Results: Fall 2010 ePDP and Cumulative Fall GPA (N=2148)**

Variable		<i>b</i>	<i>SE b</i>	$\beta$
Step 1	HS GPA	.94	.05	.38***
	SAT Score	.00	.00	.11***
	Female	.13	.04	.06***
	Income Level	-.20	.04	-.10***
	Application date	.01	.00	.07***
Step 2	HS GPA	.94	.05	.38***
	SAT Score	.00	.00	.11***
	Female	.13	.04	.06***
	Income Level	-.20	.04	-.10***
	Application date	.01	.00	.07***
<b>e-PDP</b>		<b>.14</b>	<b>.05</b>	<b>.05**</b>

$R^2 = .242$  for Step 1;  $\Delta R^2 = .003$  for Step 2 ( $p < .001$ ). \*\*\* $p < .001$ , \*\* $p < .01$ , \* $p < .05$

**Note 1:** Income Level is defined as receiving a Pell Grant or not (dummy coded). Application date is a proxy for student motivation and is the numbers of weeks between admit date and fall census. ePDP is a dummy coded variable for participated in an ePDP 2010 section or not.

**Note 2.:** Students with an ePDP had a .14 higher fall GPA compared with students with no ePDP. The Beta Weights help us understand the relationship between academic performance (fall semester GPA) and each variable and ePDP participation (predictors). Positive values indicate that there is a positive relationship between the variable and GPA. Negative values indicate that there is a negative relationship between the variable and GPA. The Beta Weight or *b* coefficient is how much more the dependent variable increases (or decreases if *b* is negative) when the dummy variable increases one unit (shifting from 0=not present to 1=present). The *b* coefficients, as semi-partial coefficients, reflect the unique (independent) contributions of each variable (or program type) to explaining the total variance in the GPA.

**Table 3. Logistic Regression Predicting One Year Retention Fall 2010**

Variable		B	SE	Wald Statistic	p	Odds Ratio
Step 1	HS GPA	1.20	.15	62.44	.000	3.31
	SAT Score	.00	.00	5.85	.016	1.00
	Female	-.06	.11	.32	.574	.94
	Income Level	-.17	.10	2.60	.107	.84
	Application date	.01	.01	5.17	.023	1.01
Step 2	HS GPA	1.20	.15	62.71	.000	3.33
	SAT Score	.00	.00	5.50	.019	1.00
	Female	-.06	.11	.30	.583	.94
	Income Level	-.16	.10	2.28	.131	.85
	Application date	.01	.01	5.10	.024	1.01
<b>ePDP</b>		<b>.39</b>	<b>.15</b>	<b>6.39</b>	<b>.011</b>	<b>1.48</b>

**Note 1:** Income Level is defined as receiving a Pell Grant or not (dummy coded). Application date is a proxy for student motivation and is the numbers of weeks between admit date and fall census. ePDP is a dummy coded variable for participated in an ePDP 2010 section or not.

**Note 2:** ePDP participants have 48% better odds of being retained compared to non-participants (based on the odds ratio). Nagelkerke  $R^2 = .089$  for Step 1; Nagelkerke  $R^2 = .093$  for Step 2

**Table 4. Fall 2011 Academic Success and Retention Rates for Students in EPDP First-Year Seminar Sections Compared to Sections not Assigned an EPDP**

	<b>N</b>	<b>Fall Semester GPA</b>	<b>First-Year Cumulative GPA</b>	<b>Second-Year Cumulative GPA</b>	<b>One-Year Retention Rate</b>
ePDP	1001	2.82	2.64	2.60	76%
Not ePDP	1352	2.77	2.64	2.59	74%
Overall	2353	2.79	2.64	2.59	75%

*Note: Bolded items are significantly different based on independent samples t-test results or chi-square difference test results ( $p < .05$ ).*

**Table 5. Fall 2012 Academic Success and Retention Rates for Students in EPDP First-Year Seminar Sections Compared to Sections not Assigned an EPDP**

	<b>N</b>	<b>Fall Semester GPA</b>	<b>First-Year Cumulative GPA</b>	<b>Fall-Spring Retention Rate</b>
ePDP	1643	2.88	2.71	91%
Not ePDP	930	2.87	2.73	91%
Overall	2573	2.88	2.72	91%

*Note: Bolded items are significantly different based on independent samples t-test results or chi-square difference test results ( $p < .05$ ).*

**Table 6. Fall 2012 University College First-Year Seminar Students who completed ePDPs Compared to Students who did not complete ePDPs: Academic Success and Self-Reported Learning Outcomes<sup>1</sup>**

Item	Completion of ePDP					
		<b>N</b>	<b>Mean<sup>2</sup></b>	<b>Standard Deviation</b>	<b>Effect Size (r)</b>	<b>Sig (2-tailed)</b>
Use reflective writing to understand my experiences	ePDP	82	<b>3.93</b>	1.10	.20	.003
	Not ePDP	396	<b>3.46</b>	1.31		
Decide on a major or future career	ePDP	82	<b>4.15</b>	1.18	.23	.000
	Not ePDP	395	<b>3.54</b>	1.40		
Succeed academically	ePDP	79	<b>4.35</b>	.96	.28	.000
	Not ePDP	392	<b>3.68</b>	1.29		
Adjust to college life	ePDP	80	<b>4.31</b>	1.04	.21	.001
	Not ePDP	394	<b>3.82</b>	1.25		
Understand my personal goals	ePDP	81	<b>4.38</b>	.94	.26	.000
	Not ePDP	392	<b>3.79</b>	1.22		
Understand my motivations for attending college	ePDP	79	<b>4.34</b>	1.01	.22	.001
	Not ePDP	387	<b>3.81</b>	1.31		
Made a successful transition to IUPUI	ePDP	81	<b>4.22</b>	1.08	.22	.001
	Not ePDP	375	<b>3.69</b>	1.29		

<sup>1</sup> Students who completed ePDPs were defined as students who were in First-Year Seminar sections that were assigned at least 5 sections and completed all parts of each section.

<sup>2</sup> Means reported based on a 5-point Likert-Type response scale where 1=no gain, 2=little gain, 3=moderate gain, 4=good gain, 5=great gain or 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, and 5=Strongly Agree.

Note 1: Bolded items are significantly different based on independent samples t-test results ( $p < .01$ ).

Note 2: 'Effect size' quantifies the size of the difference between two groups. Interpretation: r effects: small  $\geq .10$ , medium  $\geq .30$ , large  $\geq .50$