

**e-Learning for Educators Initiative
Missouri State Report
June 2008**

The e-Learning for Educators (eFE) initiative is a federally-funded eight-state collaboration that aims to establish an effective and sustainable model of online professional development for teachers. As part of this program, Boston College is conducting an extensive evaluation to provide information that could guide overall program improvement, as well as improvement within each of the participating states. This report presents **Years One and Two** evaluation results for the state of **Missouri**. Data reported here reflect the period June 2006 to December 2007.

Description of Missouri eFE Participants

A total of 428 participants were enrolled in Missouri (MO) online professional development workshops. Ninety-one percent (391) of the participants completed the eFE Teacher pre-survey, 284 (66%) participants completed the post-survey, and 259 (61%) participants completed both the pre and post surveys. The sample of participants who completed the pre-survey included significantly more females (88%) than males (10%), and there were more participants in the age categories 36-45 (29%), and 46-55 (29%) than any other age group. Pertaining to race/ethnicity, the sample of participants was predominantly White (86%), and 11 (3%) participants reported that they identified as Latino or Hispanic. English was the first language of almost all of the participants (97%). Table 1 provides a profile of MO eFE participants based on gender, age, race/ethnicity, and language.

Table 1

MO Participants by Gender, Age, Race/Ethnicity, and Language		
	#	%
<u>Gender</u>		
Male	41	10
Female	345	88
<u>Age Range</u>		
Under 25	17	4
26-35	97	25
36-45	112	29
46-55	112	29
Over 55	52	13
<u>Race/Ethnicity</u>		
White	337	86
Black/African American	35	9
Other	19	5
Latino/Hispanic	11	3
<u>Language</u>		
English	378	97
Other	13	3

Note. Total = 391

The participants who completed the pre-survey were primarily elementary (26%), pre-kindergarten (22%), and high school (19%) teachers. Most of the participants were certified for their current positions (98%), and the most common primary teaching area identified was Generalist (40%). It is noteworthy that more than half (56%) of the participants who completed the pre-survey indicated that they had previously taken an online professional development (OPD) workshop. Table 2 presents a profile of the sample of participants in terms of work title, certification, primary teaching area, and previous experience with OPD.

Table 2

MO Participants by Work title, Certification, Primary teaching area, and Previous experience with OPD		
	#	%
<u>Work Title</u>		
Administrator	52	13
College Instructor	1	0
High School Teacher	74	19
Middle School Teacher	64	16
Elementary Teacher	103	26
Pre-K Teacher	86	22
<u>Certification</u>		
Yes	385	98
No	5	1
<u>Primary Teaching Area</u>		
Generalist	158	40
ELA	50	13
Math	19	5
Science	30	8
Social Studies	8	2
Foreign language	21	5
Special education	52	13
ELL	2	1
Resource Personnel	34	9
<u>Previous Experience with OPD</u>		
Yes	219	56
No	172	44

Note. Total = 391

Pertaining to teaching experience, most of the participants (70%) reported that they had more than 5 years teaching experience overall, and 54% (212) reported that they were teaching for more than 5 years in their current school district. More than half of the participants (53%) reported a Master's degree as their highest level of education and an additional 29% (114) indicated that theirs was a Bachelor's degree. Participants were asked to estimate the percentage of their students who receive free or reduced lunch. Thirty-one percent (121) of the participants reported that approximately 26-50% of their students receive free or reduced lunch. Table 3 presents a profile of the sample of participants in terms of teaching experience, highest level of education, and approximate number of students receiving free/reduced lunch.

Table 3

MO Participants by Teaching experience, Highest level of education, and Previous experience with OPD		
	#	%
<u>Overall Teaching Experience</u>		
More than 5 years	272	70
Less than 5 years	112	29
<u>Teaching Experience in Current District</u>		
More than 5 years	212	54
Less than 5 years	176	45
<u>Highest Level of Education</u>		
Associates	2	1
Bachelors	114	29
CAGS	22	6
Masters	209	53
Ph.D./Ed.D.	7	2
Other	37	9
<u>Students Receiving Free/Reduced Lunch</u>		
0 – 25%	75	19
26 – 50%	121	31
51 – 75%	96	25
76 – 100%	77	20

Note. Total = 391

Implementation of the eFE program

State enrollment data show that MO delivered 22 workshops and enrolled 210 teachers in Year One, and delivered 15 workshops, and enrolled 218 teachers in Year Two. However, due to an attrition rate ranging from 6% to 10%, 190 teachers and 204 teachers completed workshops in Years One and Two respectively. Table 4 shows enrollment and completion data for Years One and Two.

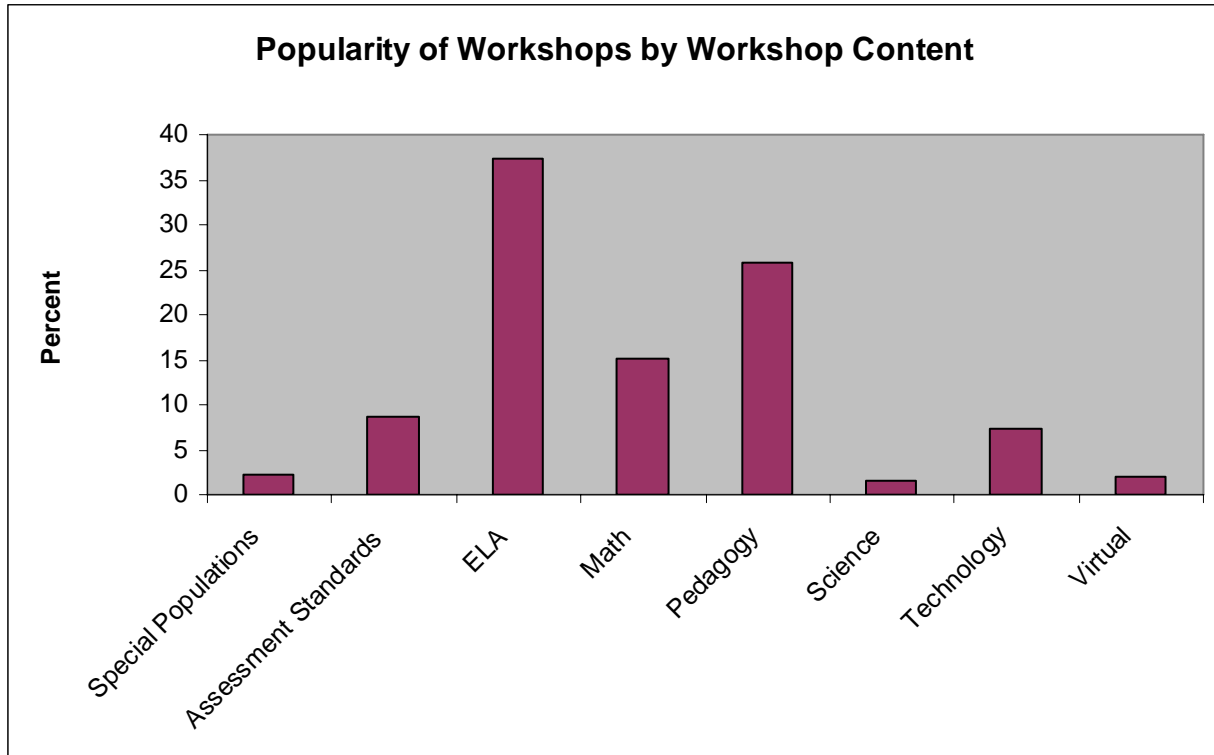
Table 4

MO Enrollment and Completion Data for Years One and Two				
Year	Workshops	Enrollees	Completers	Completion Rate
1	22	210	190	90
2	15	218	204	94
Total	37	428	394	92

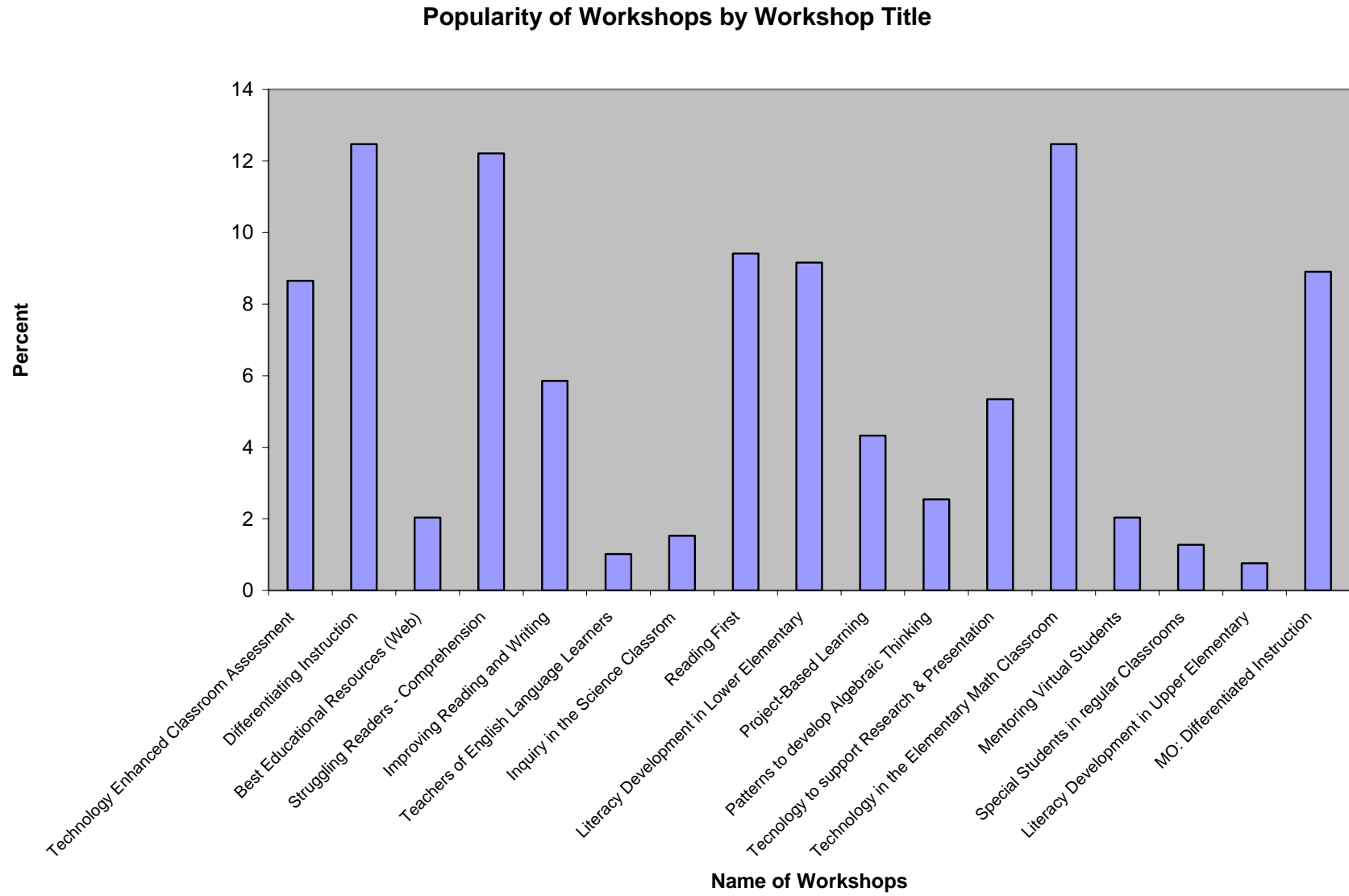
Workshops Being Taken by MO Participants

Overall, the category of workshops related to English Language Arts (ELA) has shown to be the most popular among MO participants. However on an individual basis, the workshops “Differentiating Instruction to Accommodate Learning Styles,” “Struggling Readers – Comprehension” and “Technology in the Elementary Math classroom” have been the most popular workshops. Graphs 1 and 2 depict the percentage of participants enrolled in OPD workshops by workshop content and workshop name respectively.

Graph 1



Graph 2



Participants' Perceptions of OPD Workshops

Ratings of the overall quality of the OPD workshops indicate that more than half of the participants found the workshops to be excellent (54%) and an additional 36% (92) reported that the workshops were very good. Moreover, the majority of participants (80%) reported that they are very likely to take another OPD workshop. Table 5 and Graph 3 show participants' perceptions of the overall quality of OPD workshops.

Table 5

Participants' Perceptions of the Overall Quality of the Workshops		
	#	%
Excellent	140	54
Very good	92	36
Good	24	9
Fair	3	1
Total	259	100

Graph 3

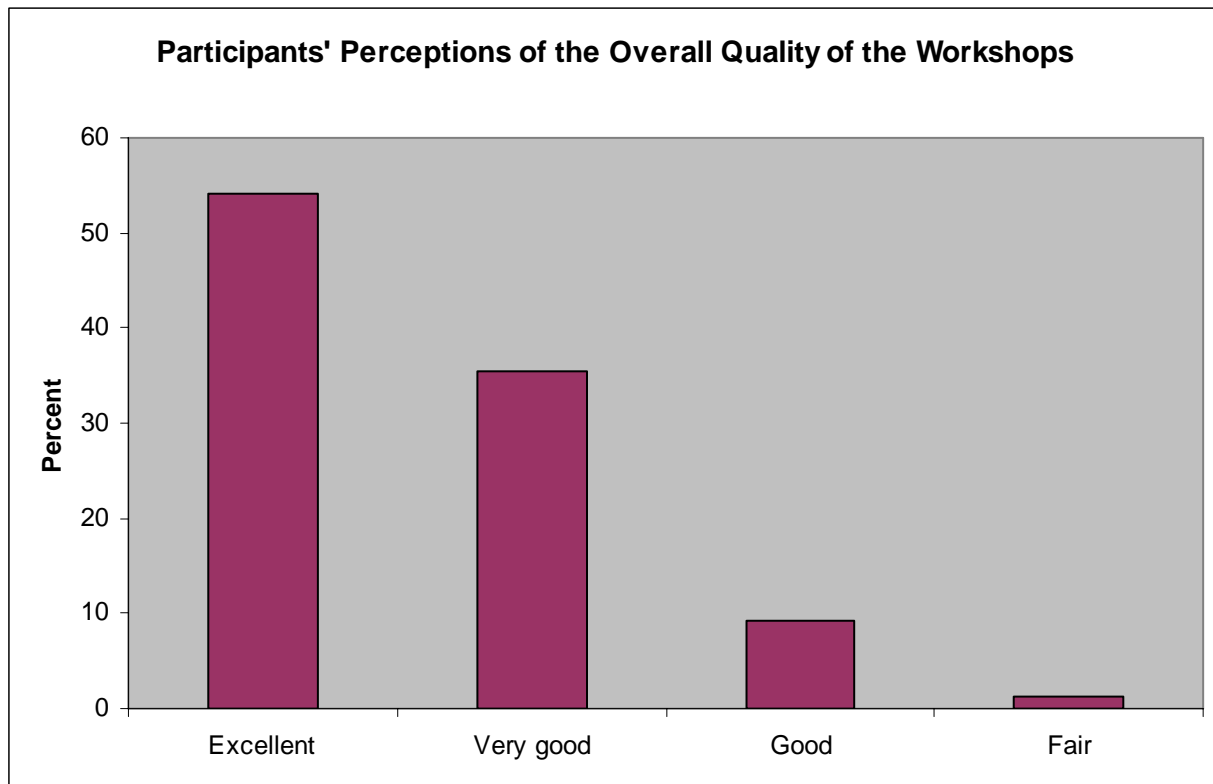
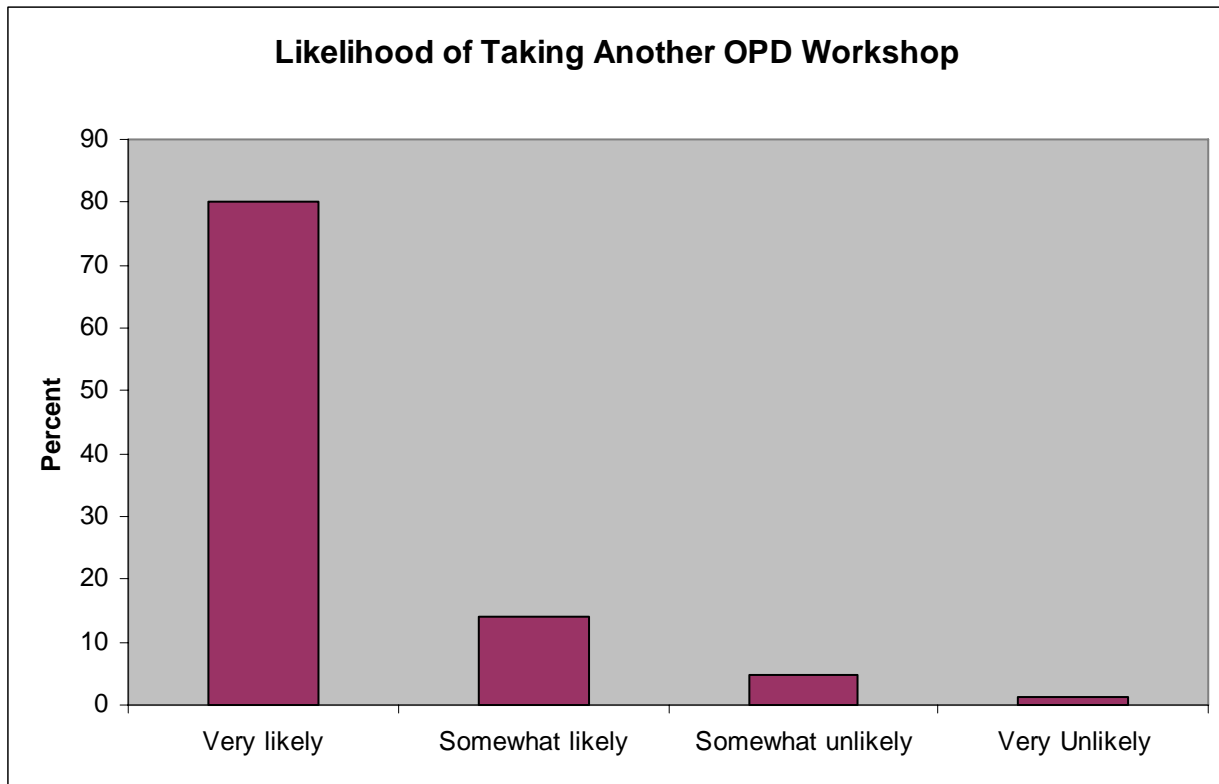


Table 6 and Graph 4 show participants' reports of the likelihood that they will take another OPD workshop.

Table 6

Likelihood of Taking Another OPD Workshop		
	#	%
Very likely	206	80
Somewhat likely	36	14
Somewhat unlikely	12	5
Very Unlikely	3	1
Total	257	100

Graph 4



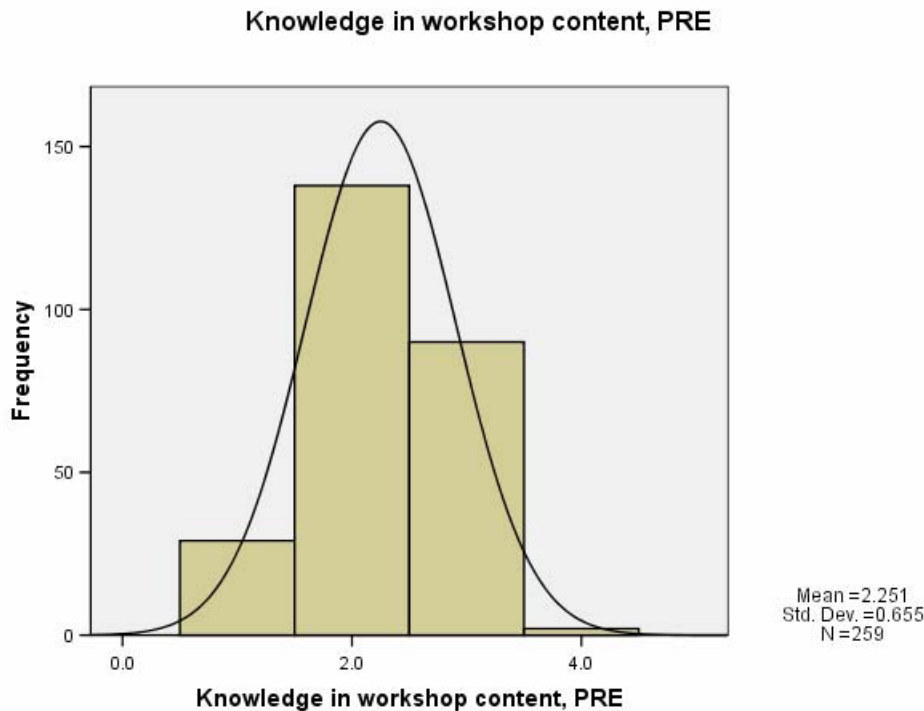
Accessibility of OPD Workshops to Individuals with Disabilities

Less than 1% (2) of the participants indicated that they are visually impaired or have another type of physical disability. Both participants reported that the OPD workshops were very accessible (1) or accessible (1).

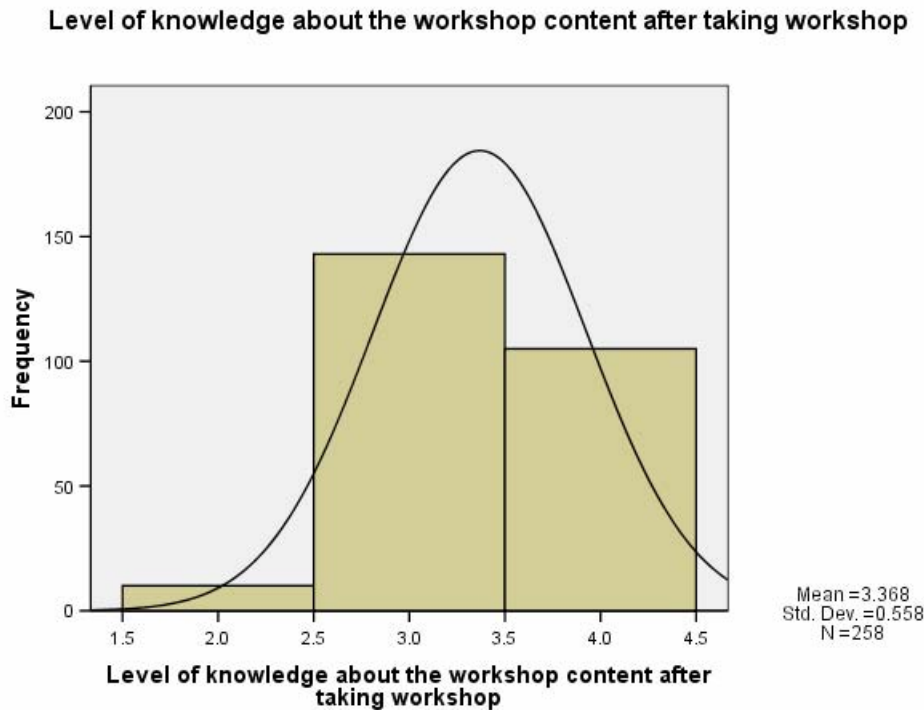
Perceived Effectiveness of OPD Workshops

Participants were asked to rate their knowledge of the workshop content before and after taking the OPD workshops. Graph 5 and graph 6 show the distribution of responses for participants' ratings of their content knowledge on the pre-survey and post-survey respectively. An examination of the graphs revealed no serious departures from normality.

Graph 5



Graph 6

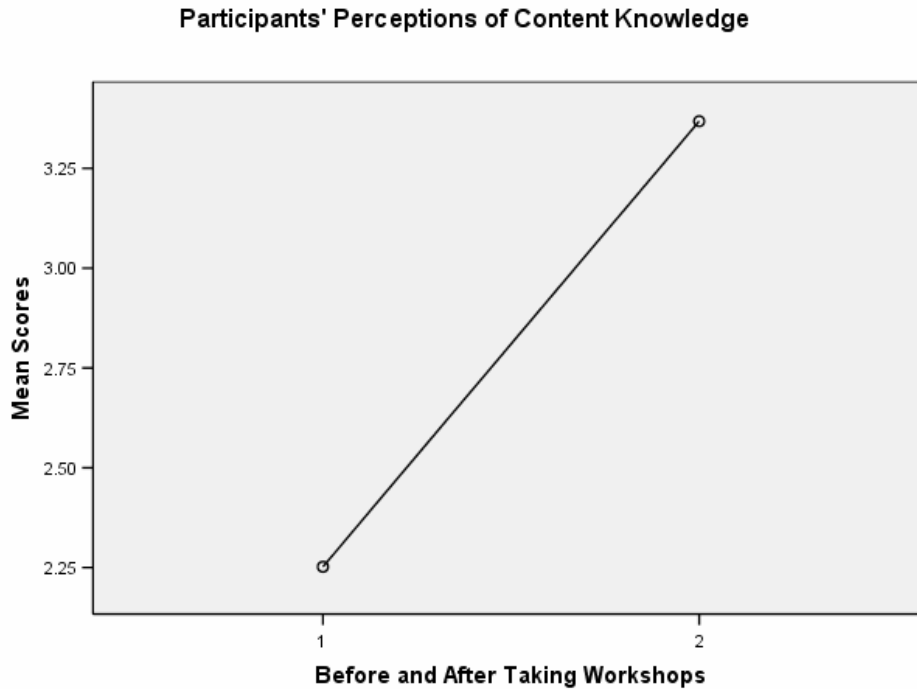


A dependent samples *t*-test was utilized to compare participants’ responses on the pre-survey, to their responses on the post-survey regarding knowledge of the workshop content. The *t*-test indicated a statistically significant difference in participants’ perceptions of their content knowledge, before and after taking the workshops $t(257) = 22.41, p < .001$. Specifically, participants reported significantly higher content knowledge after they completed the workshops ($M = 3.37, SD = .56$) than they had reported prior to taking the workshops ($M = 2.25, SD = .66$). Table 7 presents the means and the standard deviations regarding participants’ perceptions of their content knowledge. Graph 7 illustrates the change in participants’ perceptions of their content knowledge after taking the workshops.

Table 7

Mean and Standard Deviation for Participants' Content Knowledge			
	<i>n</i>	<i>M</i>	<i>SD</i>
Pre-Workshop Content Knowledge	258	3.37	0.56
Post-Workshop Content Knowledge	258	2.25	0.66

Graph 7



Participants were also asked to indicate on a scale ranging from strongly disagree to strongly agree, their perceptions of the utility of the workshops. The results from the post-survey revealed that the majority of participants strongly agreed that the content of the OPD workshops: could be easily transferred to the classroom (75%); was aligned with their school’s professional development needs (61%); addressed areas of pedagogical need (61%); and effectively linked pedagogical skills with content (59%). Table 8 shows participants’ perceptions of the usefulness of the OPD workshops.

Table 8

	Strongly agree		Agree		Disagree		Strongly disagree	
	#	%	#	%	#	%	#	%
Content could be easily transferred to the classroom	194	75	63	24	1	0	1	0
Was aligned with school's professional development needs	159	61	97	37	1	0	0	0
Addressed areas of curricular and/or pedagogical need	158	61	99	38	1	0	0	0
Effectively linked pedagogical skills with content	152	59	104	40	1	0	0	0

Note. Total = 259

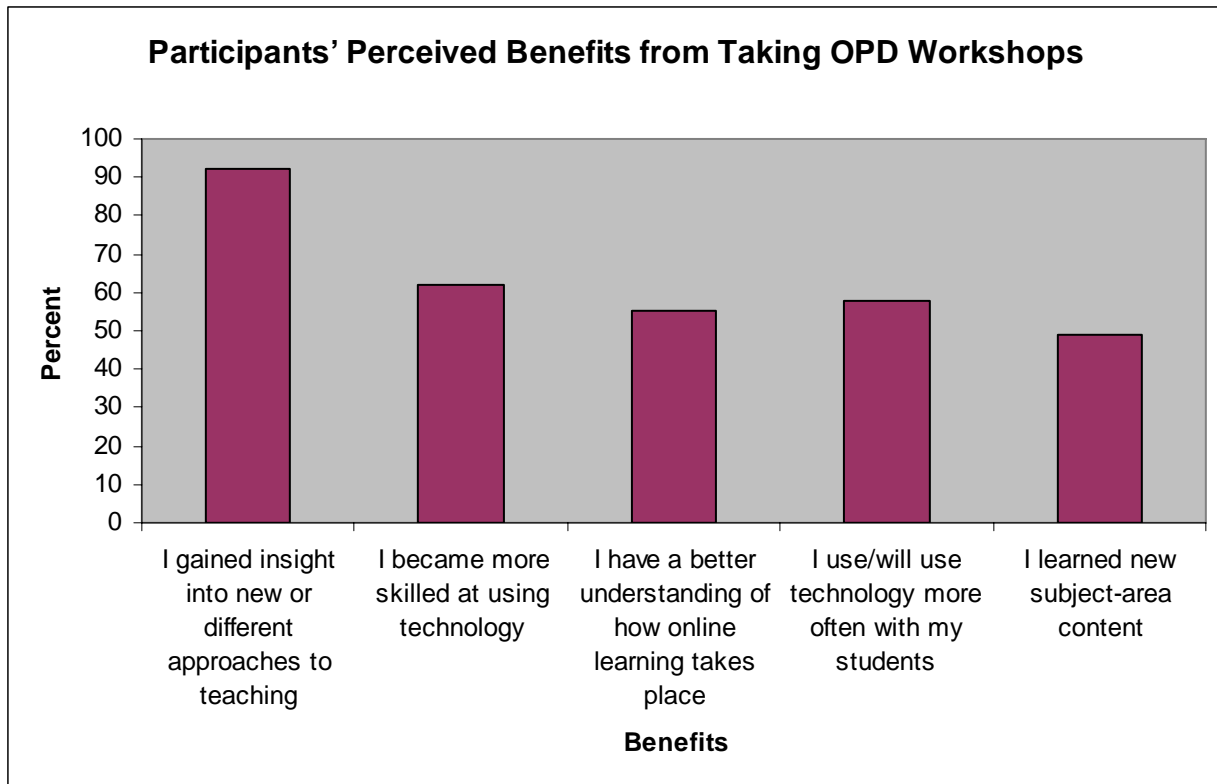
Having completed the OPD workshops, participants reported on 5 specific areas of perceived benefit. Specifically, the majority of participants (92%) indicated that they gained insight into new approaches to teaching. Additionally, more than half of the participants reported: improved technology skills (58%); increased use of technology with their students (55%); and an improved understanding of the online learning process (62%). However, less than half (49%) of the participants reported that they learned new subject-area content. Table 9 and graph 8 show participants' perceptions of areas of improvement after taking the OPD workshops.

Table 9

Participants' Perceived Benefits from Taking OPD Workshops		
	#	%
I gained insight into new or different approaches to teaching	237	92
I have a better understanding of how online learning takes place	161	62
I use/will use technology more often with my students	142	55
I became more skilled at using technology	151	58
I learned new subject-area content	128	49

Note. Total = 259

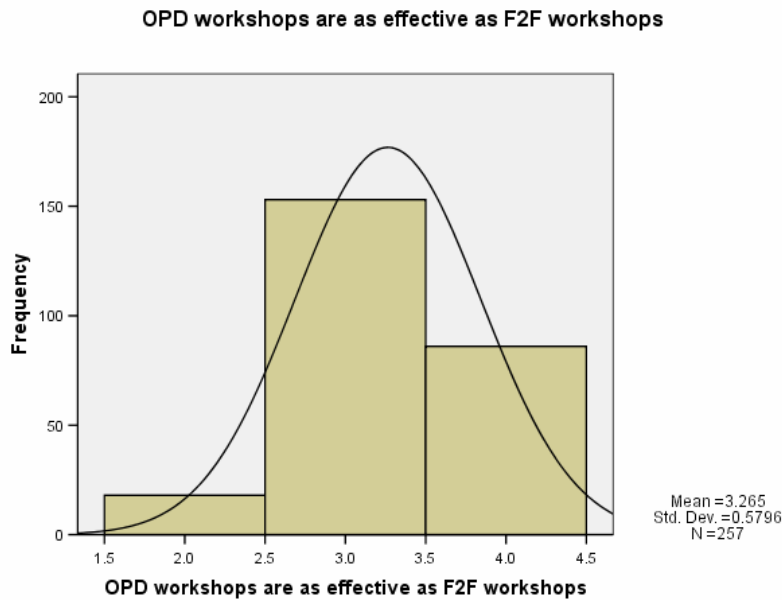
Graph 8



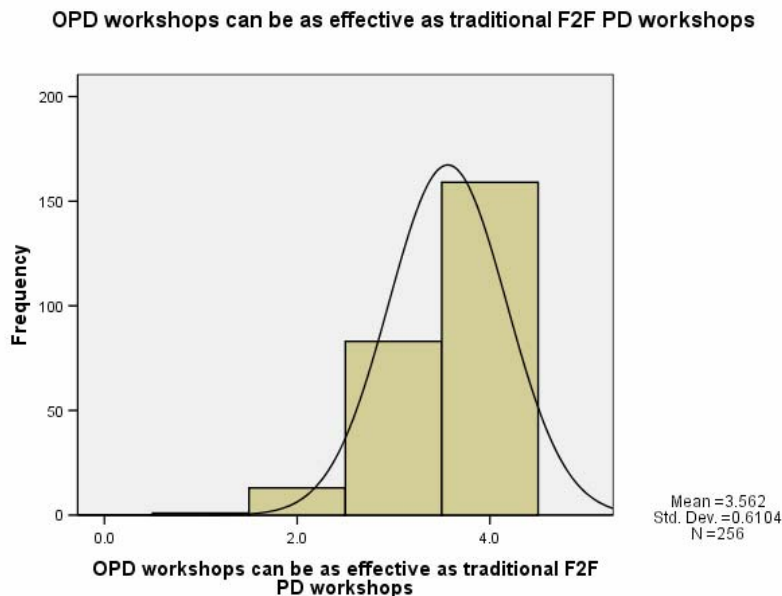
OPD vs Traditional Face-to-Face Workshops

On both the pre-survey and post-survey, participants were asked to rate on a scale ranging from strongly disagree to strongly agree, whether online professional development workshops could be as effective as traditional face-to-face workshops. Graph 9 and graph 10 display the distribution of scores for the pre-survey and post-survey respectively. An examination of the graphs showed that the distribution of responses on the post-survey was significantly asymmetrical.

Graph 9



Graph 10



A non-parametric Wilcoxon's dependent samples *t*-test was employed to compare participants' pre-survey and post-survey responses pertaining to whether OPD workshops can be as effective as face-to-face workshops. Wilcoxon's *t*-test revealed a statistically significant difference in participants' perceptions of OPD, before and after taking the workshops ($z = -6.47, p < .001$). Specifically, participants' responses on the post-survey indicated higher levels of agreement that OPD workshops can be as effective as face-to-face workshops ($M = 3.56, SD = .61$) than was reported on the pre-survey ($M = 3.27, SD = .58$). Table 10 presents the means and the standard deviations regarding participants' perceptions of the effectiveness of OPD workshops.

Table 10

Mean and Standard Deviation for Participants' Perceptions of the Effectiveness of OPD Compared with Face-to-Face Workshops			
	#	<i>M</i>	<i>SD</i>
Pre-Survey Perceptions of Effectiveness	257	3.27	0.58
Post-Survey Perceptions of Effectiveness	256	3.56	0.61

Participants also reported on 10 possible advantages of participating in an OPD workshop as opposed to a traditional face-to-face workshop. The ability to work according to one's own schedule (97%) and not having to travel (96%) were cited by most participants as the primary advantages of taking an OPD workshop. A majority of participants also indicated that time to reflect on materials (73%), less expense (73%), and interactions with participants who have diverse perspectives (63%) were important benefits associated with OPD workshops. It is noteworthy that fewer than half of the participants reported feeling somewhat anonymous (31%) and having access to content not available locally (38%) as significant advantages of taking an OPD workshop. Table 11 shows participants beliefs regarding the advantages of pursuing an OPD workshop.

Table 11

Advantages of Taking OPD vs Face-to-face Workshops		
	#	%
The ability to work according to my own schedule	251	97
Not having to travel	249	96
More time to reflect on materials and/or discussions	189	73
Less expensive	190	73
Interactions with participants who have diverse perspectives	163	63
Accessibility from geographically remote locales	155	60
Improving technical and/or Internet skills	147	57
Experiencing technology from a student perspective	131	51
Access to content not available locally	99	38
Feeling somewhat anonymous	80	31

Note. Total = 259

Information from the Follow-Up Survey

Data for the follow-up survey were collected in three rounds. Round 1 spanned January to March 2007; round 2 spanned May to June 2007, and round 3 spanned January to March 2008. Overall, 140 participants were selected from MO to participate in the follow-up survey. However, 70 MO participants (50%) actually completed the survey.

On the follow-up survey, participants were asked to rate on a scale ranging from not knowledgeable at all to very knowledgeable, their content knowledge of the workshop they had previously completed. A dependent samples *t*-test was utilized to compare participants' responses on the post-survey, to their responses on the follow-up survey. The *t*-test indicated no statistically significant difference in participants' perceptions of their content knowledge $t = 1.36 (66), p > .05$. Specifically, although some time had passed since participants had completed the workshops, there was no significant change in their perceptions of content knowledge between the post-survey ($M = 3.39, SD = .55$) and the follow-up survey ($M = 3.28, SD = .45$).

Participants were also asked whether they intended to utilize workshop material with their students, and 75% (48) of them indicated that they were already using content from the workshop. An additional 25% (16) reported they had not yet utilized workshop material, but planned to do so. None of the participants reported that they would definitely not use the workshop material with their class. Table 12 shows participants' responses regarding their plans to utilize workshop material with their students.

Table 12

Participants' Intentions to Utilize Workshop Material with their Students		
	#	%
I've already used this material with my class this year	48	75
I plan on using this material with my class	16	25
No, I definitely won't use this material with my class	0	0
Total	64	100

When asked to what degree they intended to utilize workshop material, of the 48 participants who were already utilizing workshop material, 63% (30) reported that they used the material with their students to a moderate degree. An additional 33% (16) indicated that they used the material to a strong degree. Table 13 presents participants' responses regarding the degree to which they utilized workshop material with their students.

Table 13

Degree to which Workshop Material was Utilized (Participants who have Implemented Workshop Material)		
	#	%
Extremely strong	0	0
Strong	16	33
Moderate	30	63
Minimal	2	4
Total	48	100

Data from the follow-up survey were used to ascertain participants' views regarding their experiences with the implementation of workshop material. Most of the participants who had already implemented the workshop material agreed that the workshop content: was easy to transfer to the classroom (63%); was supported by their school (60%); addressed the needs of their students (63%); and improved their classroom instruction (65%). Table 14 shows participants' experiences with the implementation of workshop material.

Table 14

Participants' Experiences Implementing Workshop Material (Implementers Only)								
	Strongly agree		Agree		Disagree		Strongly disagree	
	#	%	#	%	#	%	#	%
Workshop content was easy to transfer to classroom	18	38	30	63	0	0	0	0
School supports use of workshop content	17	35	29	60	0	0	1	2
Workshop addressed needs of students	16	33	30	63	1	2	0	0
Workshop enabled me to improve my classroom instruction	15	31	31	65	1	2	0	0

Note. Total = 48

Participants also reported on how well workshops prepared them to meet the needs of their students and to improve their instructional practices. Half (24) of the participants who had already implemented workshop material indicated that they felt very well prepared to implement lessons focused on state standards and implement new methods of teaching. More than half of the participants reported that they were very well prepared to integrate instructional technology into class lessons (56%), and address the needs of students with diverse learning needs (52%). However, less than half of the participants reported that they were very well prepared to address the needs of students with diverse cultural backgrounds (35%) or to address the needs of students with disabilities (23%). Table 15 shows participants' views of how well OPD workshops prepared them to implement changes in their classroom.

Table 15

Teacher Perceptions of Workshop Effectiveness (Implementers Only)								
	Very well		Moderately well		Not very well		Not well at all	
	#	%	#	%	#	%	#	%
Implement new methods of teaching	24	50	22	46	1	2	0	0
Implement lessons focused on state standards	24	50	19	40	4	8	0	0
Integrate instructional technology into class lessons	27	56	19	40	2	4	0	0
Integrate new student assessment techniques	16	33	26	54	5	10	0	0
Address the needs of students with diverse cultural backgrounds	17	35	27	56	4	8	0	0
Address the needs of students with diverse learning needs	25	52	20	42	3	6	0	0
Address the needs of students with disabilities	11	23	29	60	7	15	0	0

Note. Total = 48

Participants who completed the follow-up survey provided information regarding the one area of classroom instruction they believed improved the most as a result of participating in eFE workshops. Of those participants who implemented workshop material, 46% (22) indicated they were most improved in the area of instructional methods. An additional 31% (15) of the participants reported that their instructional technology skills had improved the most. Four (8%) participants indicated that they were most improved in the area of course content. Table 16 shows participants' perceptions of their most improved area of instruction as a result of participation in eFE workshops.

Table 16

Participants' Perceptions of Most Improved Area of Instruction (Implementers Only)		
	#	%
Instructional technology	15	31
Course content	4	8
Instructional methods	22	46
Student Assessment	7	15
Total	48	100

Participants were asked to compare students with whom they had utilized workshop material to previous students they had taught. Of those participants who had implemented the workshop material in their classroom, the majority of them agreed that students with whom they utilized workshop material: appeared more interested in the classes (65%); worked more cooperatively (56%); diverse learning needs were better addressed (73%); showed better academic performance (69%); performed more difficult work (54%), and products were of a

higher quality (56%). Table 17 presents participants' perceptions of improved performance for students with whom they implemented workshop material.

Table 17

Participants' Perceptions of Observed Changes in Students (Implementers Only)								
	Strongly agree		Agree		Disagree		Strongly disagree	
	#	%	#	%	#	%	#	%
Students appeared more interested in the classes	8	17	31	65	4	8	0	0
Students worked more cooperatively in the classes	8	17	27	56	7	15	0	0
Students' diverse learning needs were addressed better in classes	10	21	35	73	0	0	0	0
Students showed better academic performance in the targeted content	9	19	33	69	3	6	0	0
Students performed more difficult work in classes	10	21	26	54	5	10	0	0
Students' products were of a higher quality in classes	13	27	27	56	3	6	0	0

Note. Total = 48

Sustainability & Capacity Building (Information taken from State narrative)

MO has continued to successfully recruit highly skilled facilitators who showed strong content knowledge in the areas of the eFE workshops as well as in content areas of state need. MO successfully trained 24 facilitators in year two, compared to 14 facilitators trained in year one. The training workshop saw a 92% completion rate, which was an improvement from 79% in year one. Facilitators who completed the workshop were generally satisfied with the content and presentation of material.

Participants were recruited for the eFE initiative through a state wide marketing plan. This strategy included the distribution of informational packets, DVD's, emails in which all teachers received information explaining the project. One marketing strategy specific to year two was facilitators spending an hour after school talking directly to teachers about MO eFE and permitting them to log in to the workshops as guests. In addition, two new brochures were created; one specifically for teachers and one specifically for educators. There have been special efforts made to recruit participants from high needs schools. eFE in Missouri offered workshops free of charge to educators in the St. Louis and Kansas City school districts, but recruitment in these areas remained a challenge. Missouri further targeted high needs areas by providing 50 half scholarships for workshops that were considered to be addressing high needs content.

Strong partnerships in MO have been important to sustainability planning. The delivery of courses (in Moodle) free of charge has been extremely beneficial. State level partnerships that have been developed in year two include:

- A partnership with KETC/Channel 9. Focus groups have been conducted at the studio with St. Louis area teachers to get information about what content they would most like to see in workshops.
- The University of Missouri has created a podcast for the project which will allow educators to receive important information on their own time.
- Newslink sent email updates about workshops.
- Three Universities have agreed to offer graduate credit for completed courses.

Sustainability of the project has been built in to the project through relationships with MSU, MO PBS, and MO DOE. Workshops will continue to be delivered in Moodle through the University of Missouri at no charge. However, a minimal fee for course enrollment will assist in funding and sustainability. Therefore, participants continue to be charged \$125 per workshop and scholarships are offered to certain participants. Unlike year one when scholarships covered 100% of the charge for a workshop, in the interest of sustainability of the project the scholarship now covers 50% of the workshop fee. The move from 100% scholarships to 50% scholarships will help with long term planning for continued scholarship awards. In addition, graduate credit fees are \$100 per credit and \$25 of each credit purchased, will be returned to the EfE project.