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# Barriers to Implementing Large-Scale Online Staff Development Programs for Teachers

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## Abstract

This study on barriers to online staff development for classroom teachers was conducted as part of the planning activities of a delivery models project designed to develop guidelines for implementing large-scale online staff development programs. The study involved engaging 54 general and special educators in several professional roles from nine states in a series of focus groups to identify the barriers to online staff development. An instrument was designed to rank order the barriers in terms of perceived significance. Twenty-two barriers were identified. This project was in follow-up to the Online Academy (H029K73002) funded by the Office of Special Education Programs in the U.S. Department of Education (OSEP/USDOE).

## Background

This study on barriers to online staff development emerged from the work of the Online Academy (Meyen, 2002) and a supplemental project at the University of Kansas (Meyen, 2003). The Online Academy was a national project that involved the development of 22 online modules for preservice teachers. During the supplemental project five online staff development modules were developed which have been implemented by over 170 universities.

In preparation for implementing the online staff development modules, the supplemental project was expanded to include support for studying delivery models for implementing large-scale online staff development programs at the public school level. This work was referred to as the delivery models project. The barriers study was part of this effort.

The e-Learning Design Lab (eDL), which grew out of the Online Academy, was engaged to conduct the delivery models project and to work with teams of educators from nine states to study conditions that would enhance implementation of online staff development programs at the state, regional, or national levels. Four strategies emerged as the foci of the delivery models project.

1. Identification and validation of barriers that are likely to be encountered in implementing large-scale online staff development programs for teachers.
2. Engagement of planning participants in beta testing the online staff development

modules to ensure a common understanding of one approach to online staff development.

3. Identification of the parameters or conditions that surround the development and/or successful implementation of online staff development on a large-scale basis.
4. Framing of recommendations on how best to implement large-scale online staff development programs for teachers.

The results of the first three foci informed the planning process that led to implementation recommendations through the delivery models project. Early in the planning process six principles were framed. The first principle was specific to the study on barriers to implementing online staff development that is the focus of this paper. That principle was described as follows:

Knowing the barriers to implementation that will likely be encountered at the state and/or local levels is a prerequisite to developing delivery models for implementation. A wide range of policy, administrative, attitudinal, and practical issues can become barriers for which solutions need to be developed. It is possible to identify such barriers and to propose solutions. Failure to address them in planning may contribute to unnecessary problems in implementation. (Meyen et al., 2003, p.4).

This study was carried out as an integral part of the overall planning process for the delivery models project, and information derived from the study was central to the processes that lead to the ultimate decisions on recommendations for implementation. Due to space limitations, this paper focuses only on the results of the barrier study.

### **The Delivery Models Planning Project**

The project was based in the e-Learning Design Lab (eDL), a research and development lab that involved faculty and staff from Engineering and Education. A National Advisory Board comprised of nine individuals representing state education agencies (SEAs), regional resource centers (RRCs), local education agencies (LEAs), institutions of higher education (IHEs), and OSEP/USDOE was appointed. The following nine states were selected by the National Advisory Board in conjunction with OSEP representatives: Alabama, Idaho, Kansas, North Carolina, Oklahoma, Michigan, Montana, New Jersey, and Utah. Each team was comprised of a representative of the respective SEA and an institution of higher education, along with a principal, a staff development specialist, and at least one teacher. The SEA representative served as the team leader, coordinating all team activities. In one case a regional resource center representative served on a team. The state teams represented the primary source of data and input to the planning process.

Two two-day retreats involving the state teams and members of the Board constituted the setting in which most discourse and decision-making took place. Prior to the planning retreats, the Board engaged in planning sessions during which the initial goals were framed, the planning process conceptualized, and the retreat model agreed to. OSEP/USDOE awarded funds to each state to cover the costs for their team members to participate in the retreat sessions. Due to travel restrictions, two of the teams were not able to participate. However, accommodations were made to obtain their input. Some state teams also met face-to-face to supplement their project work. This process maximized the effectiveness of teams and individual members in influencing the direction of the project. The project website served as the primary communications vehicle. For example, agendas and summaries of meetings were shared via the site. Surveys were conducted electronically and the modules that were beta tested were accessed by the participants through the

website, with data also being collected online.

The final report for the supplemental project, along with the five staff development modules, can be accessed on the eDL website at [elearndesign.org](http://elearndesign.org).

## **Related Literature**

In reviewing the literature on barriers to online staff development, it became apparent that postsecondary institutions have considerable more experience in offering online instruction than of K-12 schools. Additionally, much of the literature on barriers in postsecondary institutions predates the emergence of Learning Management Systems and the creation of major units on university campuses to facilitate faculty members' creation of online courses or web-based supports. As a result of advances in technology and Learning Management Systems, barriers related to the technical aspects of online instruction may have changed while some related to attitudes, policies and resources may still persist. Variances in how online instruction is defined was also found. For example, asynchronous online courses present barriers that differ from those experienced in web-supported courses offered by institutions of higher education where instructors also periodically meet with students face to face. Given the differences between K-12 school learning environments for online staff development, and the capacity for online instruction in higher education, the recent literature pertaining to online staff development was the focus of this paper.

The research done on barriers in higher education is important, as is the extent to which it generalizes to online staff development. Berge (1998) reported on barriers identified by 42 instructors experienced in teaching post-secondary online courses. He defined online instruction as instruction in which course interaction is conducted completely online, or significantly online, and where a minimum of 50% of the graded part of the course is online. His conclusions included the observation that "Many barriers to learning and teaching at a distance are caused by lack of resources and people. Further, the most critical obstacles reported in this survey appear related to persons' resistance or fear of many changes that must occur at the individual and organizational level." Gellman-Danley and Fetzner (1998) made the point that selecting technology may be the easiest part of developing a distance-learning program in higher education adding that institutions of higher education will need to develop appropriate policies ranging from academic calendars to transferability. While the authors did not list these as barriers, the absence of policy or the establishment of inappropriate policies could easily translate into barriers.

In discussing knowledge management systems and e-learning as models for professional development, Zahner (2002) recommended that there be flexibility to change based on ongoing user assessment and feedback. Failure to meet this condition may result in a barrier to successful online staff development. Treacy, Kleiman and Peterson (2002) identified nine elements of successful online professional development (OPD). Several of the elements are closely aligned with the findings of the barriers study reported in Table 2, at the end of this paper. They include the following:

- Assess local professional development needs and develop an OPD plan based on these needs.
- Connect OPD with other ongoing, face-to-face professional development activities.
- Carefully select and train OPD specialist team members.
- Build a strong local team.
- Develop incentives.

- Publicize the OPD program and involve local stakeholders.
- Provide readily available and reliable access to technology and support.
- Foster a rich, interactive online learning community
- Integrate online workshops with face-to-face meetings. (p. 44)

In reference to barriers to e-learning in general, a survey by Development Dimensions International (DDI) (2002) revealed that 43% of the respondents had concerns about the content of e-learning programs while 31% expressed concern about technical issues, such as not having the necessary equipment.

These findings are consistent with the results of other studies on barriers to e-learning. For example, the National Staff Development Council and National Institute for Community Innovations (2001) reported that hidden costs, isolation of learners, and poor program design could be barriers to online learning. These results were reinforced by Greenagel (2002) who found the quality and content of e-learning programs to be an issue. The demands on school districts to provide technical support in maintaining equipment and providing professional development was also cited as a potential barrier (Reilly, 2002).

An early study focusing on online staff development by the RAND report (1995) claims that barriers to online staff development include teacher anxieties, school culture and organization, and technology difficulties. The same study reported that teachers do not trust that school systems will provide the support (e.g., time and flexibility) they need to succeed, while worrying that they would be blamed if they fail. Similar to the findings of the RAND report, the Scottish Further Education Training Needs Analysis (2001) identified three barriers to online staff training-time, culture, and equipment. Killion (2000) reported that barriers to online staff development include cost concerns, learner readiness, quality of content and the learning processes employed. Under costs, Killion included such hidden costs as the cost of hardware, Internet access, maintenance, and access to video as potential barriers.

In addition to examples of successful online staff development programs (e.g., the Los Angeles Unified School District and Peabody Public Schools America 2000), a literature base is emerging on barriers to online staff development. Some of this literature is specific to online staff development, whereas some sources generalize from barriers to online instruction. In reviewing the literature, it became clear that how authors have derived their perceptions of barriers have varied. Further, none of the studies combined the use of focus groups and a survey instrument as employed in this study.

## **Methodology**

Participants in the planning process varied in their experiences with online instruction. Most held personal views on the pros and cons of online staff development and the complexities of creating such programs on a statewide basis. It was also apparent that opinions varied about the readiness of the field for online staff development.

A group decision was made that it was important to identify barriers to implementing online staff development and that such information should inform the planning process. While participants agreed that barriers could be identified, solutions were considered more difficult to formulate due to the situation-specific nature of most barriers (i.e., the context in which barriers might be encountered). Nevertheless, the focus groups committed to identifying potential solutions for each barrier.

Procedures for identifying and validating barriers included the following:

- Two sets of focus groups were held. The first were organized around the roles represented on the state planning teams. These roles included SEA staff members, professors, classroom teachers, principals, staff development specialists, and a group representing educators in other roles. The second focus groups were organized by state teams. See Table 1 for the distribution of participants among focus groups by role.

**Table 1. Focus Group Participants**

Profession	n
State education agency staff	10
Professors	6
Principals	6
Teachers	14
OSEP/USDOE	3
Professional development specialists	8
Regional resource center staff and others	7
Total	54

- Each group received the same instructions—that is, to identify barriers to the implementation of large-scale online staff development programs and to suggest solutions to the barriers judged to be most significant. As part of the process, they were asked to select a facilitator and a recorder and to prepare flipchart notes reflecting major points of the discussion. They were also asked to edit their flip chart notes before reporting. Reports were made verbally, with time for questioning to ensure clarification of statements. Two eDL staff members also took notes during the reporting sessions. The individual flipchart reports were collected as archival data, and the recorder agreed to be available following the retreat to respond to questions from the staff as summaries were prepared. The same process was repeated in the second retreat. Interactions within focus groups added clarification and verification to the barriers
- Within a week following the retreat, the notes from the two focus group sessions were edited as statements describing barriers and solutions. As part of this process, submit form was developed and placed on the website, and participants were invited by email to contribute additional information on perceived barriers and solutions. The submit form used an open-ended format, so participants could submit as many barriers and solutions as they wished. This follow-up measure was based on a decision to allow participants time to reflect in private on what they perceived and had discussed as barriers at the retreat.
- There was no immediate online follow-up to the Barriers and Solutions survey on the website. Instead, a summary of barriers and solutions was prepared for use in discussion sessions during the second retreat. The summary integrated input from the focus group at the first retreat, and the responses to the website inquiry were organized by the perceptions of individuals by professional role and as a total group. The responses were edited for redundancies.
- During the second retreat, a set of focus groups organized by state teams was held. These groups were asked to eliminate redundancies in the summary document of barriers or to add barriers, if appropriate. During the group discussion at this retreat, it became even more evident that the barriers contained information meaningful to those who might be engaged in planning online staff development. Indeed, the mere process of reviewing the barriers stimulated intense discussions. While there was general consensus across roles and state teams on what constituted a barrier, the relative importance of each barrier was not

clear through the discussions.

- A total of 23 independent barriers were derived from the focus groups and the website solicitation for additional barriers following the first retreat. A second instrument comprised of these barriers was designed to elicit rankings of the relative importance of each barrier.
- In creating the final instrument, the barriers were edited only to reduce the length of the descriptions. This was done in an effort to make them more useful as statements for inclusion in the instrument. Specifically, following the editing process, each item in the original report was reviewed by the eDL staff who participated in the retreat to ensure the intent of the original reporting from the focus groups. Facilitators were consulted when clarification was needed.
- Respondents were instructed to rank each barrier according to a Likert scale using the following options.

1. Strongly disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly agree

The instructions for the instrument, which was completed online, contained a detailed summary of the procedures employed in identifying the barriers and in creating the instrument. The online response process was password controlled.

- Because barriers to online staff development may be specific to a situation in a district or professional role, no attempt was made to further refine the proposed solutions. It was assumed that the solutions will vary, depending on the local or personal situation.

## **Results**

### *Demographics of Participants*

Fifty-four individuals from nine states, OSEP/USDOE, and the Council for Exceptional Children (CEC) participated in the focus group during first retreat when the initial set of barriers was generated. This group also collectively generated proposed solutions. During the second retreat 48 of the original 54 participants participated in the discussion to refine the list and wording of the barriers. The identification and elaboration of the barriers was viewed as the primary product of the focus groups. Eighteen participants representing the nine teams elected to respond to the barrier rankings instrument, including seven teachers, four SEA staff, two university faculty, three staff development specialists, and two principals.

### *Results of the Ranking Process*

As mentioned, the original instrument contained 23 barrier statements. One was deleted as it was judged to be role specific and not related to teachers by the eDL editing team, with input from the facilitator of the original focus groups. Table 2 reports the mean scores on the 22 remaining items for the total group of respondents, teachers, and respondents “other” than teachers. As illustrated, on a scale of 1 to 5, the mean scores for the total group ranged from a high of 4.35 for the item “The lack of effective technical support and trouble shooting when a teacher experiences difficulty with an online staff development programs adds to the frustration of participating teachers,” to a low of 3.18 for the item “One of the most significant barriers to the involvement in online staff development by higher education is that their budgets are typically based on

enrollment.” While the latter item is not specific to staff development for teachers, it was decided to include in the instrument two items related to higher education identified by the focus groups, as institutions of higher education have historically assumed a significant role in delivering staff development.

The teacher group ranked the same barrier item highest, with a means score of 4.5, whereas the “other” group ranked this item second highest. Instead, as highest, they ranked the item “Getting schools to choose online activities as a required or optional staff development activity-- currently, many districts are still employing only traditional forms of staff development,” with a mean score of 4.33. Further, teachers ranked “Online professional development has not been researched as to the impact on teachers” as their lowest, with a mean score of 2.50. By comparison, the “other” group ranked as lowest the item “One of the most significant barriers to the involvement in online professional development by higher education is that their budgets are typically based on enrollment,” with a mean score of 2.92.

### **Summary of Lessons Learned**

Much was learned during the interactions within the focus groups and the large- group sessions as well as subsequent responses to the ranking instrument. The specific barriers are reported in Table 2, and therefore, will not be discussed here. The lessons learned are considered applicable to state, regional or national planning for large-scale implementation of online staff development. They include the following:

1. Participants’ confidence in the planning process is increased when it is known that all participants have had a common experience in completing online instruction rather than merely sharing perspectives or beliefs and assumptions.
2. While experiences and perspectives on barriers to online staff development may vary by role, consensus can be reached across roles on the barriers that are most critical to implementation.
3. The process of identifying and describing barriers was perceived to be an important element in the development of strategies for implementing online staff development. The interactions among participants in identifying and describing barriers were valued almost as much as the final listing describing the barriers.
4. Focus groups serve as an effective planning vehicle when individuals representing different roles are engaged in reaching consensus on topics such as barriers to online staff development.
5. Online staff development was viewed as an effective delivery model, but one warranting careful study to maximize opportunities for successful implementation.
6. While some barriers were viewed to be situation-specific, most were perceived in the focus groups as having a high probability of occurring and, therefore, requiring attention in the implementation process. The ranking process did not ask participants to respond to the probability of a barrier occurring.
7. In exploring barriers to implementation of online staff development, the conditions surrounding traditional face-to-face staff development repeatedly surfaced, indicating that there are barriers to implementation of staff development generally.
8. Solutions to barriers were largely considered situation-specific. Thus, while the proposed solutions were useful, they may not generalize to given local conditions.
9. The newness of online staff development, combined with the strong belief that online delivery is an important option for staff development, resulted in a vested interest by participants in the planning process. This may also have been influenced by the fact that participants were ultimately having responsibility for implementation

- of online staff development programs.
10. The teacher focus group generated the greatest number of barriers. They tended to emphasize conditions surrounding their participation versus infrastructure or administrative barriers.
  11. In conducting further studies of barriers to online staff development, the following warrant consideration:
    - a. The barriers from this study might be used as stimuli for generating a more extensive list of barriers for groups engaged in planning.
    - b. The literature on e-learning is evolving and needs to be further monitored to garner information on barriers that might generalize to online staff development.
    - c. Individuals who have implemented large-scale online staff development programs, including corporate providers, should be interviewed to identify their experiences that translate into potential barriers.
    - d. The experiences of the private sector in marketing online staff development to schools may be revealing in terms of barriers to implementation.
    - e. Despite the context-specific nature of many proposed solutions, there appear to be a sufficient number of common factors warrant collecting the insights from experienced implementers.

## Summary

This study was part of a planning project to develop guidelines for implementing large-scale online staff development programs for classroom teachers. Fifty-four educators from nine states participated in the planning process and the focus groups to identify and describe barriers to online staff development. Further, 18 participants responded to a ranking instrument. The study, conducted prior to the development of implementation recommendations by the planning group, focused on identifying circumstances that need to be addressed if teachers are to effectively engage in online staff development. The four most significant barriers, as judged by the total group of respondents, were as follows:

- Lack of effective technical support and troubleshooting when a teacher experiences difficulty with an online staff development program adds to the frustration of participating teachers.
- Lack of resources due a declining in the economy and, therefore, decreased budgets, is preventing some states from fully developing their technology infrastructures in the schools.
- Getting schools to choose online activities as a required or optional staff development activity is often difficult. Many districts are still employing only traditional forms of staff development.
- Lack of attention to connecting staff development with student outcomes may contribute to the devaluing of staff development.

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**Table 2. Summary Responses to Barrier Instrument**

		Mean Score		
Barrier	Title	Total	Other	Teacher
1	<b>Lack of sufficient technology in schools to ensure access to needed technology for support of teachers engaged in online staff development.</b>	3.53	3.50	3.33
2	The time factor is a serious barrier for teachers. Given their many responsibilities outside of teaching, teachers have very little time for participation in professional development.	3.59	4.00	2.83
3	One of the most significant barriers to the involvement in online professional development by higher education is that their budgets are typically based on enrollment.	3.18	2.92	3.50
4	The perception of teachers that they do not have time or expertise to participate in online activities is a serious barrier.	3.65	3.50	3.83
5	Creating incentives and/or reasons for teachers to participate in online activities is a serious barrier.	3.41	3.58	3.17
6	Many times the staff development opportunities offered in school districts are not at the level needed by principals.	3.65	3.92	3.17
		Mean Score		
Barrier	Title	Total	Other	Teacher
7	IHEs are not viewed as a resource in online staff development as large numbers of faculty have little if any experience in online staff development.	3.65	4.00	3.00
8	Getting schools to choose online activities as a required or optional staff development activity. Currently many districts are still employing only traditional forms of staff development.	4.24	4.33	4.00
9	There are few online professional development programs available that are related to the needs of teachers.	3.41	3.25	3.67

10	The lack of competition among providers of online staff development does not result in an environment where providers are investing in developing cutting edge designs online staff development.	3.53	3.75	3.17
11	<b>The lack of resources due to the decline in the economy is preventing some states from fully developing their technology infrastructures in the schools.</b>	4.29	4.25	4.33
12	Some people find it difficult to take courses without face-to-face feedback and this causes them to resist participating in online professional development.	3.88	4.08	3.50
		Mean Score		
Barrier	Title	Total	Other	Teacher
13	The lack of attention given to connecting staff development with student outcomes may contribute to the devaluing of staff development.	4.06	4.17	3.83
14	Some people find it difficult to read from a monitor. Consequently, they resist situations that cause them to do so.	3.41	3.50	3.33
15	There are few advocates at the district level in decision-making roles who are willing to provide the leadership to implement online staff development.	3.76	4.00	3.33
16	The process of developing and teaching online staff development can be overwhelming. All of the instruction must be developed in a very precise manner.	3.71	4.00	3.17
17	The current lack of available online staff development programming may discourage investing in online staff development.	3.65	3.83	3.33

Barrier	Title	Mean Score		
		Total	Other	Teacher
18	Getting school districts to buy into online professional development as an alternative to traditional training is difficult. There are still many people in leadership roles that resist technology delivered staff development.	3.88	4.08	3.50
19	The lack of direction, guidelines or models offered at the state level complicates the process of engaging districts in the implementation of online staff development programs.	3.71	3.92	3.33
20	Online professional development has not been researched as to the impact on teachers.	3.35	3.75	2.50
21	Some teachers resist engaging in staff development and may be even more resistant to participating in online staff development.	3.53	3.75	3.00
22	The lack of effective technical support and trouble shooting when a teacher experiences difficulty with an online staff development program adds to the frustration of participating teachers.	4.35	4.25	4.50

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