

BUSINESS EDUCATORS' PERCEPTIONS OF THE IMPACT OF THEIR PROFESSIONAL DEVELOPMENT ON CLASSROOM INSTRUCTION

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Abstract

Objective: This research investigated teachers' perceptions of the impact of professional development on the classroom instruction of secondary business teachers and the relationship between the impact of professional development and the number of hours spent in professional development. **Background:** Quality professional development for teachers can improve students learning. Research shows that more teacher skill and content knowledge translate into increased student achievement. **Method:** Descriptive and correlational research methods were used. Participants included 109 secondary business educators in one state who were asked to complete an online survey about the perceived impact professional development had on their classroom instruction and how many hours they spent in individual professional development during a 12-month time period. **Results:** Impact on instruction was considered positive since the average score of 118 reflected a modest agreement with impact statements. No significant correlation was found between the impact of professional development on instruction and the number of hours spent in professional development. **Conclusion:** Teachers revealed an overall satisfied attitude with the instructional impact professional development produced; however, more hours in professional development did not automatically translate into a perceived greater impact on instruction. **Application:** Professional development offerings should be carefully selected by the administrator and the teacher based on the needs of the teacher and his/her students.

Introduction

The purpose of high quality professional development is to improve student learning by improving, enhancing, or updating classroom instruction. Teachers are impacted through professional development because they “learn to think and teach differently” (PCBEE, 2005, ¶14), their roles are strengthened, and they have students whose learning improves. The National Staff Development Council considers professional development “a comprehensive, sustained, and intensive approach to improving teachers’ and principals’ effectiveness in raising student achievement” (Hirsh, 2009, p.12). The objectives of professional development are “to make a difference in teaching, to help educators reach high standards,

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and ultimately to have a positive impact on students” (Guskey, 2005, p. 12), and business teachers need continued training to keep up with new standards, changing technologies, and an evolving culture. The purpose of this study was to examine the perceived effect of professional development on business education teacher’s classroom instruction.

Recognizing the need for change is seen as a condition for excellence in any school system (Crites, 2006). Professional development for the business educator has implications for teacher retention, curricula in teacher education programs, activities of professional organizations, as well as significant teaching improvements and student achievement (Crews, Moore, Rader, & Rowe, 2006). A resolute effort to maintain a knowledge base that is consistent with current trends can translate into positive results for students in secondary business classes.

Purpose and Research Questions

The purpose of this study was to investigate the perceived impact of professional development on business education teachers’ classroom instruction. The following questions were answered:

1. What impact does professional development have on teachers’ perceptions of the classroom instruction of secondary business teachers?
2. Is there a relationship between teachers’ perceptions of the impact of professional development and the number of hours spent in professional development?

Review of the Current Literature

Professional development is the “process that improves the job-related knowledge, skills, and attitudes of business educators” (PCBEE, 2005), and the goals of this professional development are improved teaching and student learning. Determining whether professional development meets those goals is an important and logical step toward establishing meaningfulness in professional development. The literature shows a direct link from a teacher’s skill in the classroom and his or her knowledge of the course content to student achievement (Birman, Desimone, Porter, & Garet, 2000; Desimone, 2011; Holloway, 2003; Landt, 2002; Mizell, 2003; Sanborn, 2002; Schmoker, 2002; “Strengthening Teacher Quality,” 2000; Yoon, Duncan, Lee, Scarloss, & Shapley, 2007).

According to Desimone (2011), five core features associated with effective professional development are content focus, active learning, coherence, duration, and collective participation.. These features encourage teachers to focus on learning their content as well as learning how their students learn that content; to get involved in opportunities that require active learning; to be consistent with the professional development they partake in; to make sure the learning is sustained over a period of at least 20 hours; and to work on building learning communities

with those in their content area, subject, or school. No Child Left Behind (NCLB) legislation also defines quality professional development as professional development that includes a focus on content, are of sustained duration, and demonstrate coherence in their alignment with state standards.

The National Board for Professional Teaching Standards (NBPTS, 2002) standards for Career and Technical Education (2001) specified the need for continual professional renewal. As an example, Standard 11 Collaborative Partnerships states that teachers must be “alert to student needs” (p. 65) and advocates leadership. This standard notes: “Designing an integrated curriculum is central to broadening the base of contextual learning activities and creating rich learning experiences for students” (p. 66). The focus is again on student learning.

A study involving the professional development of high school science teachers showed that the impact of the professional development was greater if it involved collaboration, specifically a cohort of teachers from the same school (Buczynski & Hanson, 2010). This study also showed that teachers highly valued training on foundations of education, such as how students learn. These teachers found value in the content and collaboration of professional development and the impact was felt in the classroom.

Teachers may obtain professional development in a variety of ways. A study by Frampton, Vaughn, and Didelot (2003) examined the effectiveness of professional development provided through a professional development school (PDS). Thirty-four percent of the teacher participants felt that the PDS had a positive effect on student achievement because of the teachers' increased knowledge and practice, 36% felt that student achievement increased because of teachers' increased confidence in their ability to teach, and 37% said that after the PDS they were more willing to try new ideas and methods in the classroom.

Landt's study (2002) on the professional development of cooperating teachers is important for recognizing the variability of professional development opportunities. This qualitative study found that cooperating teachers gained professional development through the process and requirements of supervising a student teacher. They learned the importance of observation and became more aware of their own teaching practices. Following this experience, the cooperating teachers used more authentic activities for students and scrutinized their own teaching methods more frequently.

A variety of topics for professional development are also addressed throughout the educational system. Professional development that focuses on special education issues is a topic of concern because of the past NCLB legislation. Braden, Huai, White, and Elliott (2005) maintained that “continuing professional development to enhance inclusion is essential to ensure meaningful and appropriate educational assessment practices for students with disabilities” (p. 69). An Illinois study involving 10-15 hours of direct training for teachers and additional informal discussion and responses found that teachers had more confidence in their ability to make “participation and accommodation decisions” (Destefano, Shriner, & Lloyd,

2001, p. 19) with special education children. Specifically, the teachers involved, after having the professional development, changed accommodations and the way students participated in math and language assessments. Teachers changed the way they taught as a result of this professional development that they completed.

Classroom technology integration is another common topic of professional development. Redmann and Kotrlík (2004) reported business teachers integrating technology into instruction at advanced levels with teachers stating that they had “moved beyond simply experimenting with technology integration” (p. 83). These teachers received training through various forms of professional development, including workshops/conferences, self-initiated learning, university courses, and collaboration with colleagues.

Professional development that focuses on specific content knowledge is one of the known factors contributing to effective professional development (Desimone, 2011). Research by Desimone, Smith, and Ueno (2006) related to math education found that the teachers with the most content knowledge are the ones participating most in the professional development related to math content. The teachers weakest in math content were less likely to be involved in that type of professional development.

The time spent actually attending professional development activities is reported as a factor in the effectiveness of professional development. As mentioned previously, duration is considered a core feature of effective professional development (Desimone, 2011). At least 20 hours over a semester’s time is considered the effective quantity. It was found that many teachers surveyed in the USDOE (2005) study had obtained fewer than eight hours of professional development in the previous 12 months. More elementary teachers received more than 33 hours of professional development focused on content area and teaching methods than did secondary teachers. Teachers with three or fewer years of experience were less likely to earn more than eight hours of professional development. Yoon et al. (2007) reported that “substantial professional development” (p. iii) (defined as an average of 49 hours in a school year) can raise student achievement by 21 percentage points.

One school system utilized video study groups as professional development for teachers (Gates, Barton, & Lavelle, 2011). These groups met periodically over a period of one school year. Teachers began to teach differently and noted that they were challenged to think differently about teaching and learning. In one example, a math teacher began to allow more class discussion and experienced his students staying on task and learning differently by discussing with peers. More than three quarters of the teachers who participated in this study said that the professional development had affected their teaching “somewhat or a great deal” (p. 56).

Desimone (2011) also suggests that effective professional development follows a basic framework—teacher participate in professional development; as a result their knowledge and skill is improved; that new and improved knowledge and skill improves the way they teach; and finally, increased student learning is the result. The outcomes of the framework are measured in three tests: “Do teachers

learn? Do they change their practices? And...does student achievement increase as a result?" (p. 70).

In summary, the literature shows a regard for the need for continual professional renewal and lifelong learning. It also reveals that teachers who participate in professional development are willing to collaborate more, see the value of reflection, have more content knowledge, and have more confidence to try new ideas and methods in their classrooms. The factors of content focus, active learning, coherence, duration, and collective participation are known contributors to effective professional development. This study investigated how secondary business education teachers perceived the impact of their own professional development on the way they taught.

Methodology

Descriptive and correlational research methods were used in this study. Researchers obtained the list of business education teachers in the state studied from the state department of education. Of the 1,007 business education teachers in the state, the researchers chose to randomly (using a random number formula in *Microsoft Excel*) select 410 participants to participate in this voluntary study by completing an online survey about their professional development activities, interests, and perceptions over the previous 12 months. Email addresses were obtained from school websites and by calling individual schools as necessary.

The researchers developed a survey after careful review of the literature regarding the impact of professional development on actual classroom instruction. Based on a technique suggested by Patton (2001), the researchers personally distributed the survey to an experienced teacher and asked this teacher to verbalize her thoughts while completing the survey under the researcher's observation. To address the content-related validity of the instrument, the survey was also given to a panel of experts to determine if the research questions were correctly addressed using the survey. Corrections were made to clarify several questions and change minor formatting issues.

The next step for ensuring validity of the instrument involved a pilot study and subsequent item analysis using the proposed instrument. Using SPSS, an internal reliability estimate was calculated for question one of the instrument, which addressed research question one in this study. This question contained 30 statements. Cronbach's Alpha coefficient revealed an internal consistency of $=.95$. No adjustments were made to the instrument after the pilot study since no inconsistencies were found.

Limitations and Delimitations of the Study

This study was delimited to 410 full-time secondary business teachers in one state. All business teachers in the state were not used because of time, expense, and the difficulty in obtaining valid teacher email addresses.

The threats to internal validity of this research were primarily a subject characteristics threat and an instrumentation threat. Subject characteristics threat may have existed because teachers inherently differ from one another in a variety of ways that could have affected the results of this study. School systems and administrators differ and, along with their attitudes towards professional development, may have influenced the teacher in the area of professional development. The amount of funds available for individual professional development may also have been a factor that impacted the subjects in this research.

External validity or generalizability of the results to the whole population of business education teachers in the state studied or to those in other states is subject to the representativeness of the actual respondents. A representative sample of the whole population of business education teachers was important to the study for the purpose of generalizing to the business education teachers in the state studied; therefore, a random sample of all business teachers was selected for participation in this study. Generalizability to other states may also be possible; however, the manner in which professional development is conducted in other states as well as state and systemwide education expenditures will have bearing on the generalizing of results. In order to offset limitations, incentives were used and the survey was distributed through the convenience of a link in an email. Participants were given three weeks to complete the survey and were sent a reminder during week two. The low response rate (28.91%) is attributed to the time of year (i.e. beginning of May) and the length of the survey and may affect the generalizability of the study. The researchers made reasonable efforts to contact all non-respondents one week after the initial email. No other non-response methods were used since the school year had ended.

Findings

An analysis of the findings of the study include (a) a demographic profile of the respondents, (b) the impact professional development has on teachers' perceptions of the classroom instruction of secondary business teachers, and (c) the relationship between teachers' perceptions of the impact of professional development and the number of hours spent in professional development. Of the 377 surveys actually distributed (410 were sent, but 33 were never received due to invalid email addresses), 109 surveys were returned, resulting in 28.9% response rate. Respondents (N=109) were represented by approximately three-fourths (n=78) female, over half (n=56) held master's degrees, almost three-fourths (n=79) taught 9-12 grades, and almost half (n=52) had from 1-10 years of experience while one-fourth (n=28) had from 1-5 years of experience. The respondents' demographics are presented in Table 1.

Table 1
Demographic Profile

Variable	n	Percentage
Gender		
Male	14	12.8
Female	79	72.4
Missing data	16	14.6
Degrees Earned		
Bachelor's	13	11.9
Some Graduate School	16	14.6
Master's	56	51.3
Specialist	6	5.5
Doctorate	1	0.9
Missing Data	17	15.5
Grades Taught		
6-9	6	5.5
9-12	79	72.4
Both	7	6.4
Missing Data	17	15.5
Teaching Experience		
1-5	28	25.6
6-10	24	22.0
11-15	16	14.6
16-20	9	8.2
20+	13	11.9
Missing Data	19	17.4

An analysis of the findings of the study is presented below by research question.

Research Question 1

What impact does professional development have on teachers' perceptions of the classroom instruction of secondary business teachers? Teachers were asked to respond to 30 statements about how their teaching has changed as a result of attending in-service and other professional development activities during the previous 12 months. An impact score (which represents the level of impact professional development has had on their classroom instruction) was calculated

for each respondent by adding up the individual’s total points based on the Likert scale used. The highest possible impact score was 150. This was computed by multiplying the highest satisfaction level possible (5) (or dissatisfaction level for negative statements) by the number of statements (30). Table 2 data show the statement and the resulting percentage responses. The mean impact score of professional development on classroom instruction was 117.98, and the standard deviation was 18.04. “Agree” and “Strongly Agree” were the highest reported responses to the following four statements: “I have reflected on how I teach specific topics” (93.4%); “I continue to be excited about the subject(s) I am teaching” (93.5%); “I am implementing new ideas, practices, and/or techniques” (93.5%); and “I have learned something new and then taught it to my students” (95.3%).

Table 2
Table of Impact Statements and Results

Answer Options	Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree	M	n
a. I am implementing new ideas, practices, and/or techniques.	39.8% (43)	53.7% (58)	0.9% (1)	4.6% (5)	0.9% (1)	3.3	108
b. I continue to be excited about the subject(s) I am teaching.	40.7% (44)	52.8% (57)	2.8% (3)	2.8% (3)	0.9% (1)	3.2	108
c. I have learned something new and then taught it to my students.	34.6% (37)	60.7% (65)	1.9% (2)	1.9% (2)	0.9% (1)	3.2	107
d. We do more project-based assessments.	33.6% (36)	53.3% (57)	3.7% (4)	8.4% (9)	0.9% (1)	3.1	107
e. I have reviewed state and/or national standards to insure I am meeting those standards.	33.3% (36)	57.4% (62)	2.8% (3)	4.6% (5)	1.9% (2)	3.1	108
f. I have reflected on how I teach specific topics.	28.0% (30)	65.4% (70)	3.7% (4)	1.9% (2)	0.9% (1)	3.1	107
g. I did not learn any new methods of demonstrating ideas or concepts.	4.7% (5)	4.7% (5)	4.7% (5)	49.1% (52)	36.8% (39)	3.1	106
h. I have updated the examples I use in class as a result of professional development.	32.4% (35)	53.7% (58)	4.6% (5)	8.3% (9)	0.9% (1)	3.0	108

Table 2 (continued)

Table of Impact Statements and Results

i. I have not changed any teaching techniques or strategies.	0.9% (1)	7.4% (8)	7.4% (8)	50.9% (55)	33.3% (36)	3.0	108
j. I have a greater comprehension of the content I teach.	32.4% (35)	52.8% (57)	5.6% (6)	7.4% (8)	1.9% (2)	3.0	108
k. I am more aware of my teaching practices.	29.9% (32)	56.1% (60)	4.7% (5)	8.4% (9)	0.9% (1)	3.0	107
l. I have gained new contacts/friendships useful for future collaboration.	31.1% (33)	50.0% (53)	11.3% (12)	6.6% (7)	0.9% (1)	3.0	106
m. I have learned to demonstrate new ideas differently.	25.0% (27)	61.1% (66)	5.6% (6)	8.3% (9)	0.0% (0)	3.0	108
n. I shared new ideas, lesson plans, and/or handouts or links with others in my department or school.	29.6% (32)	59.3% (64)	4.6% (5)	4.6% (5)	1.9% (2)	3.0	108
o. I have reconsidered how I present lessons.	30.6% (33)	51.9% (56)	5.6% (6)	11.1% (12)	0.9% (1)	2.9	108
p. I expect more from my students now.	30.6% (33)	47.2% (51)	10.2% (11)	12.0% (13)	0.0% (0)	2.9	108
q. My students achieved more in class as a result of my learning through professional development.	27.8% (30)	50.0% (54)	14.8% (16)	6.5% (7)	0.9% (1)	2.9	108
r. The standards I set for myself are now higher.	27.8% (30)	55.6% (60)	7.4% (8)	7.4% (8)	1.9% (2)	2.9	108
s. Professional development has caused me to reconsider or scrutinize some of my teaching practices.	22.2% (24)	54.6% (59)	9.3% (10)	12.0% (13)	1.9% (2)	2.8	108
t. My overall classroom management has changed for the better.	23.4% (25)	51.4% (55)	10.3% (11)	13.1% (14)	1.9% (2)	2.8	107
u. I have more confidence and courage to try something new.	31.8% (34)	52.3% (56)	6.5% (7)	8.4% (9)	0.9% (1)	2.8	107

Table 2 (continued)
Table of Impact Statements and Results

v. I am incorporating more grammar and reading enhancing activities in my lesson plans.	23.1% (25)	56.5% (61)	7.4% (8)	11.1% (12)	1.9% (2)	2.8	108
w. I have not changed the way I test students.	0.9% (1)	15.7% (17)	3.7% (4)	54.6% (59)	25.0% (27)	2.8	108
x. I have changed my thoughts about the way I interact with my students.	25.0% (27)	48.1% (52)	8.3% (9)	16.7% (18)	1.9% (2)	2.7	108
y. I have developed and used more rubrics.	22.4% (24)	50.5% (54)	7.5% (8)	19.6% (21)	0.0% (0)	2.7	107
z. I have a better understanding for the importance of membership in professional organizations.	22.2% (24)	44.4% (48)	18.5% (20)	13.9% (15)	0.9% (1)	2.7	108
aa. I have learned a new method of teaching.	16.7% (18)	59.3% (64)	5.6% (6)	17.6% (19)	0.9% (1)	2.7	108
bb. I have changed the way I assess student work.	16.7% (18)	52.8% (57)	9.3% (10)	19.4% (21)	1.9% (2)	2.6	108
cc. My teaching of special education students has improved.	12.0% (13)	44.4% (48)	26.9% (29)	13.9% (15)	2.8% (3)	2.4	108
dd. My classroom management has not changed.	5.6% (6)	38.9% (42)	9.3% (10)	34.3% (37)	12.0% (13)	1.9	108

Research Question 2

Is there a relationship between teachers’ perceptions of the impact of professional development and the number of hours spent in professional development? Participants were asked about the number of hours spent in the previous 12 months on professional development that they chose (this does not include in-service). In-service in the state studied includes seven days built into the school calendar. The researchers did not include those hours in this portion of the study in order to determine the professional development teachers chose to obtain individually. On average, respondents received 158.1 hours each (n=98) of professional development during a 12-month period. If graduate credit hours are excluded, respondents participated in an average of 38.6 hours each of professional development during a 12-month period.

The Pearson correlation coefficient (r) was used to determine the relationship that exists between the impact score and the hours spent in individual professional development. The data were screened and missing scores were omitted from the analysis ($n=98$). A negative correlation was found ($r=-.10$) between the impact score and hours spent in individual professional development activities. A non-parametric correlation was performed using the Spearman r approach. The Spearman correlation was chosen since the investigated relationship was not expected to be linear. A .06 correlation (significant at the alpha level of .05) was found between the impact score and the hours of professional development ($p=.28$), indicating that there is not a significant correlation between the two variables. Figure 1 shows the general direction of the data.

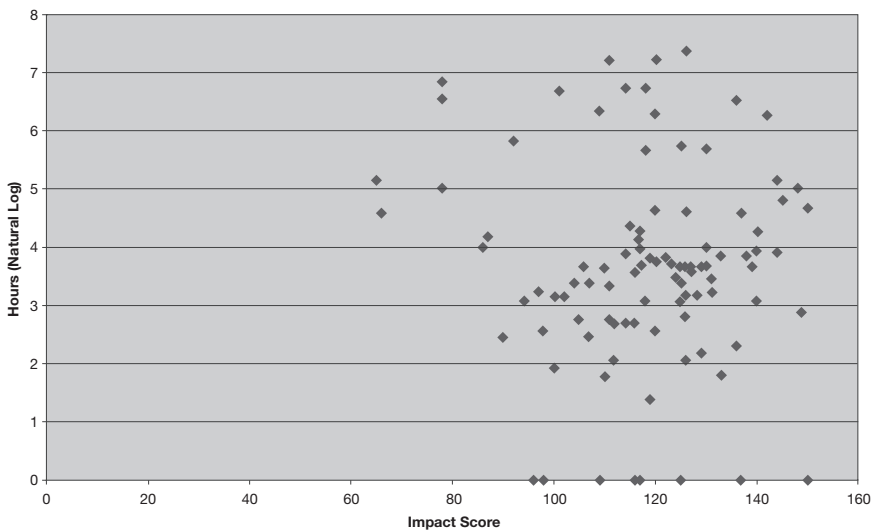


Figure 1. Correlation: Impact Scores and Hours of Professional Development

Conclusions

The mean impact score of 118 reported in this study implies that teachers agree (or disagree in the case of negative statements) with most of the 30 statements regarding the impact of professional development on their instruction. A score of 120 would indicate an overall satisfied attitude on the instructional impact of professional development. On average, business teachers in this state are experiencing positive impacts on their instruction due to professional development activities. They are reflecting on the way they teach (93.4%); they are excited about the subject matter (93.5%); they are implementing new ideas, practices, or techniques (93.5%); and they are learning new things and teaching it to their students (95.3%). They also have more courage to try new things (84%).

Results from this study show no correlation between the hours of professional development and the impact score. These findings do not agree with the USDOE

study (1999) that reports that increased time in professional development contributes to a teacher's perception of improvements to his or her teaching.

Past studies show that increased time in professional development contributes to a teacher's perception of improvements in his or her teaching (USDOE, 1999). This previous study describes teachers who received more than eight hours of professional development as being more likely to say their teaching was improved "a lot" (p. v). The USDOE study criticizes short-term workshops or conferences due to segregation from the classroom context, a lack of hands-on activities, and a lack of reflection and collaboration with contemporaries. They also, according to the study, lack intensity because of the short-time period and do not have the ability to effect any meaningful change. The current study does not agree that more hours of professional development automatically translate into a greater impact on instruction.

Implications for Practice

Based on the findings of this study, business education teachers, at least in one state, feel positively about the influence professional development is having on their teaching and believe it is valuable; they are reflecting on their teaching and implementing new ideas—over 90% agreed or strongly agreed with statements to that effect, and the number of professional development hours does not appear to translate to a greater impact on classroom instruction. Therefore, it would seem professional development offerings should be carefully selected by the administrator and the teacher based on the specific needs of the teacher and his/her students.

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