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Collegial Peer Coaching Model: A Case Study in Empowering Science Teachers

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Abstract - This study was an attempt to develop and validate the proposed Collegial Peer Coaching Model (CPCM) for Science Teachers across various levels at Southern Luzon State University, Lucban, Quezon. The research design is a combination of descriptive-qualitative and developmental research methods involving 18 science teachers in the primary, secondary and tertiary levels. Three instruments were developed for the study—a teacher performance scale, a primer on peer coaching and an evaluation questionnaire. Results suggest that the participants had highly favorable performance ratings in the conduct of the three instructional components of the CPCM, as most participants achieved either 'very satisfactory' or 'outstanding' ratings after the conduct of the model, in comparison to their pre-CPCM ratings. The predominantly identified criteria for classroom observation are discussed as well as the quantity increases obtained by science teachers by group level along the three instructional components. The acceptability ratings also indicate very favorable scores. Among the conclusions made, it seems that

the science teachers' teaching science performance require more skills improvement and/or refinement in the component identified as the "management of the teaching-learning activities" than in "classroom management skills" and "personal qualities."

Keywords - Peer Coaching, Science Teacher Empowerment

INTRODUCTION

Professional practice often requires individuals to modify their attitudes, beliefs, and values. And changing one's behavior involves the modification of personal conceptions of teaching and learning. How one learned or how one was taught the subject had some influence in one's conceptions of teaching and learning. Professional development can take place only if one is motivated to change. Reflection is a tool to bring about that change. The study of teaching in conventional classrooms must be a collaborative exercise. A collaborative venture will promise reflection and develop both professional knowledge and classroom inquiry that will encourage open communication and criticism between the collaborations to achieve professional growth and improve practice. Conceptual freedom and conceptual unity are two principles that are essential for a successful collaborative work. Such things as modeling, coaching, intellectual reflective dialogues, viewing of videos of teaching practice and joint experimentation are natural components of the collaborative enterprise. Joint explorations must be carried out within ethical frameworks of reciprocity, mutual benefit and commitment to human caring. It will give everyone who participates a vision for new ways of looking at teaching and learning (Chamot and O'Malley 1994).

The interest in peer coaching has emerged in response to the literature on faculty development that is filled with concerns about transferability and action. Exposure to innovative teaching strategies such as cooperative learning or the case method is insufficient if faculty does not translate their new knowledge into classroom practices. It is suggested that change is hard and typically does not

occur without a group of colleagues who care and provide support and encouragement for one another (Cohen 1995). This study indicates that support for cooperation among faculty is just as strong as that for cooperation among students. Thus, peer coaching—faculty helping faculty—provides a powerful way to provide complex and sustained support (Ebenezer and Haggerty 1999).

Based on the foregoing perspective, the researcher was motivated to conduct a study on peer coaching by planning to tryout a peer coaching model among some faculty members teaching science subjects at the Southern Luzon State University (SLSU) in Lucban, Quezon, Philippines. The collegial type of peer coaching was used. This study tried to find out if this innovative strategy is effective to science instructors and in empowering science teachers.

FRAMEWORK

Educators for many years now have been working to make their teaching better. Despite having attended countless seminars on the subject of instruction improvement, teachers find that there is some wisdom that is difficult to impart in a group setting. Classroom-style teaching workshops are good for dissemination of information, but appear to be inadequate when the purpose is to create change in values or behavior. Peer coaching may be one answer for teachers who wish to improve their teaching in a supportive, non-threatening environment (Galbraith and Anstrom 1995).

Peer coaching is defined as a process in which two teachers visit each other's classes and later meet to discuss their observations and provide feedback on what they saw. Peer coaches strive to focus on positive reactions and solutions to possible problems as opposed to peer visits for evaluative purpose that many focus on ranking or ratings of teaching. Peer coaching aims to help fellow instructors improve their teaching and to give them someone with whom to share the ups and down of teaching (Garmston et al. 1998). One major reason as to why school systems support peer coaching is that coaching promotes a deeper analysis of teaching and learning, norms of collaboration and sharing, and an appropriate focus on and support for adult learning. It promotes development of many new skills precisely because it takes

place in a subculture that is not traditional in nature (Glenn 1993). For this reason, learning the new skills of collaboration and sharing feedback will require some new structures for use of time, new roles for teachers, and support for individuals who participate in the coaching. Research has identified many benefits of peer coaching for teachers. Among these benefits are a reduced sense of isolation, ability to implement new strategies effectively, a positive school climate, and a revitalized faculty.

There are many types and models of peer coaching. One of these is the collegial peer coaching which is described by Reference. The long range of goal of collegial peer coaching is self-perpetuating improvement in teaching. For example, a teacher to be observed may want to learn more about how to improve a particular area. This desire becomes the focus of the coaching sessions. The coach gathers classroom data on the teacher's priority and helps him/her analyze and interpret teaching/learning strategies while encouraging applications to future learning (Llagas 1995).

Teachers are advised to keep a teaching log of class activities that can be discussed when meeting with their partners. Examples of categories on the teaching log that can be used to reflect on and discuss with their partners include student activities and type of instruction. In addition, partners are advised to use a checklist when observing each other so that follow-up discussion is focused on what actually happened during the lesson (Meyer and Gray 1994).

A study on peer coaching as an effective staff development model for educators of linguistically and culturally diverse students, cites that continuing professional development is generally addressed to persons already possessing professional expertise. It is, therefore, essential that this professional development be based on their skills and that it aims basically to maintain or enhance these skills. Successful development also calls for the creation of an inclusion environment in which individuals are able to create bonds among one another share expertise and improve reciprocal skills through the acquisition of new knowledge and skills (Sweeny 1993).

Reference defines peer coaching as simply two or three teachers rotating roles and sharing in conversation, focused on a teacher's

reflection and thinking about his/her instructional processes that leads to a classroom practice. It creates an environment where teachers and students can be secured, connected, competent, and empowered.

Empowerment makes school a more effective place for learning because teachers use their insights and experienced teacher make better decisions, have flexibility and support to try new approaches/ teaching strategies and custom-fit what they do to meet the needs of schools and students, learn and grow on the job, work together to solve challenging problems, and believe that improved instruction is everyone's responsibility. Empowerment creates "team spirit."

OBJECTIVES OF THE STUDY

This study was an attempt to develop and validate the Collegial Peer Coaching Model for Science Teachers across various levels at SLSU. In more specific terms, the study aimed to: (1) analyze the teaching performance of science teachers in empowering them along the following instructional components: management of the teaching-learning skills, classroom management skills, and personal qualities; (2) conduct the collegial peer coaching activities using the model to empower science teachers; and (3) assess the acceptability of the Collegial Peer Coaching Model by group level in empowering: elementary science teachers, secondary science teachers, college science teachers.

MATERIALS AND METHODS

The study consisted of three phases, namely: Preparatory, Implementation, and Assessment of the Collegial Peer Coaching Model (CPCM). The design of the study is a combination of descriptive-qualitative and developmental research methods.

The descriptive method of research was used in gathering information related to the needs of the various components of the study. There were eighteen (18) Science Teachers involved in the study. Every level was composed of six science teachers. The developmental method of research was used in the preparation of the teacher performance scale, primer on peer coaching, and the collegial peer coaching model.

In the implementation phase, the descriptive-qualitative method of research was used in gathering and interpreting the data. The quality of relationship, activities and situations existing naturally between two science teachers as peer partner during the conduct of the collegial peer coaching model were investigated.

The researcher developed three instruments for the study namely: (1) the teacher performance scale which was used to analyze the science teacher participants' teaching performance; (2) the primer on peer coaching which was used as aided material by the participants during the conduct of the collegial peer coaching model; and (3) the evaluation questionnaire which was used to assess the acceptability of the collegial peer coaching model. This was administered to the 18 science teacher-participants after the conduct of the model.

RESULTS AND DISCUSSIONS

The average performance ratings of the science teachers by group levels along the three instructional components before and after the conduct of the Collegial Peer Coaching Model (CPCM) are as follows:

On the first instructional components which is the "management of the teaching-learning activities," before the conduct of the CPCM the elementary, secondary and college groups of science teachers obtained an average performance rating of 4.00, 4.02 and 4.07 respectively with all ratings having an equivalent interpretation of "very satisfactory" (VS), and combined groups rating of 4.03 interpreted as "very satisfactory" (VS). After the conduct of the CPCM, the elementary, secondary and tertiary groups of science teachers obtained average performance ratings of 4.45, 4.64, and 4.65 respectively with equivalent interpretations of "very satisfactory" (VS) and "outstanding" (O) for the ratings of the last two groups. The combined groups' rating is 4.58 interpreted as "very satisfactory" (VS).

For the second instructional component which is the "classroom management skills," the elementary, secondary, and college groups of science teachers obtained average performance ratings of 4.12, 4.09 and 4.17 respectively with all ratings having an equivalent interpretation of "very satisfactory" (VS) and combined groups' rating of 4.13 interpreted as "very satisfactory" (VS). After the conduct of

the CPCM, the elementary, secondary, and college groups' of science teachers obtained average performance ratings of 4.63, 4.61, and 4.66 respectively with all ratings having an equivalent interpretation of "outstanding" and a combined groups' rating of 4.63 interpreted as "outstanding" (O).

For the third instructional component which is the "personal qualities", the elementary, secondary and tertiary groups of science teachers obtained an average performance ratings of 4.15, 4.27, and 4.25 respectively with all ratings having an equivalent interpretation of "very satisfactory" (VS) and combined groups' rating of 4.22 interpreted as "very satisfactory" (VS). After the conduct of the CPCM, the elementary, secondary, and college groups of science teachers obtained an average performance ratings of 4.56, 4.69, and 4.74 respectively with equivalent interpretations of "very satisfactory" (VS) and "outstanding" (O) for the ratings of the last two groups. The combined groups' rating is 4.66 interpreted as "outstanding" (O).

In the conduct of CPCM, the predominantly identified criteria for classroom observation of the 18 science teachers are ranked as follows: (1) Observes appropriate wait-time procedure in asking questions; (2) Uses varieties of methods appropriate to science teaching and objectives; (3) Ask questions that stimulate students to think critically and logically; (4) Uses varieties of questions from low to high level forms of questions; (5) Uses motivational techniques that stimulate student interest; (6) Integrates values in the lesson; (7) Checks student's mastery of the lesson; (8) Uses test result as a basis for improving teaching and student's work; (9) Gives compliment to students who answered well; and (10) Gives students the opportunity to ask questions.

Furthermore, the quantity increases obtained by science teachers by group level along the three instructional components after the conduct of CPCM are discussed in the following. (a) For the first instructional components which is the management of the teaching-learning activities (MTLA), the elementary, secondary, and tertiary groups of science teachers obtained quantity increases of 0.45, 0.62, and 0.58 respectively. The combined groups' quantity increase is 0.55. the group's general performance rating in terms of MT-LA improved from 4.03 to 4.58. (b) For the second instructional component which is the classroom management skills (CMS), the elementary, secondary

and college groups of science teachers obtained quantity increases of 0.51, 0.52, and 0.49 respectively. The combined groups' quantity increase is 0.50. the groups' general performance rating in terms of CMS improved from 4.13 to 4.63. (c) On the third instructional component which is the personal qualities (PQ), the elementary, secondary, and tertiary groups of science teachers obtained quantity increases of 0.41, 0.42. and 0.49, respectively. The combined groups' quantity increase is 0.44. The groups' general performance rating in terms of PQ improved from 4.22 to 4.66.

Finally, the acceptability ratings given to collegial peer coaching model by elementary, secondary, and college groups of science teachers are 3.75, 3.63 and 3.95, respectively, all interpreted as "strong acceptable" (SA).

CONCLUSIONS

Based on the findings, several conclusions can be deduced. First, of the three instructional components, it appears that the science teachers' teaching science performance need more skills improvement and/or refinement in the component identified as the "management of the teaching-learning activities" than in "classroom management skills and personal qualities."

Likewise, the science teacher-participant obtained a quantity increase of 4.5 to 5.00 along instructional components indicating that they met the standards for quality assurance in teaching performance. Furthermore, the Collegial Peer Coaching Model is found to be strongly acceptable to three group-levels of science teachers—elementary, secondary and college.

Lastly, the conduct of CPCM appears to have empowered the science teachers along the following instructional components: well-managed teaching-learning activities, well-developed classroom, management skills, improved personal qualities, and increased collegiality.

RECOMMENDATIONS

The following recommendations are being made in light of the findings and conclusions of the study. First, a follow-up study should be conducted using the Collegial Peer Coaching Model in all disciplines. This would likely enhance the instrument, such as in terms of improving the text and further fine-tuning the other elements of the tool. Second, the participants who engaged in the collegial peer coaching should be followed up for purpose of quality assurance. This will also significantly facilitate the enhancement of the instrument.

Third, the study should be replicated in the field. In doing this, the following suggestions may be properly considered: (1) lengthening the time frame given to the participants in the conduct of the collegial peer coaching model; (2) conducting the collegial peer coaching model by inter-department or by school; (3) increasing the number of days for the orientation-seminar on collegial peer coaching before the conduct of the model. Finally, students be also be gauged through interviews or checklist questionnaires on whether Collegial Peer Coaching Model has enhanced their performance. Improved school performance of students should always be a key consideration on any endeavor seeking to improve the teaching efficacy of mentors.

LITERATURE CITED

Chamot A. and J.M. O'Malley
1994 The CALLA Handbook: Implementing the Cognitive Academic Language Learning Approach, Addison Wesley, Reading, MA.

Cohen N.H.
1995 "The principles of adult mentoring scale," M.W. Galbraith & N.H. Cohen (Eds.), Mentoring: New strategies and challenges (New Directions for Adult and Continuing Education, no. 66), Jossey-Bass, San Francisco, pp. 15–32.

Ebenezer J. and S. Haggerty
1999 Becoming a Secondary Science Teacher, Prentice-Hall, New Jersey.

Galbraith P. and K. Anstrom
1995 "Peer Coaching: An Effective Staff Development Model for Educators of Linguistically and Culturally Diverse Students, Directions in Language & Education," National Clearinghouse for Bilingual Education, vol. 1, no. 3.

Garmston R.J., L.E. Lipton and K. Kaiser
1998 "The psychology of supervision," Handbook of Research on School Supervision, Simon & Schuster Macmillan, New York, pp. 242-286.

Glenn R.A.
1993 "Teacher attribution: Affect linkages as a function of student academic and behavior failure and teacher efficacy," Dissertation Abstracts International, vol. 54 (12-A).

Johnson D.W., K.A. Smith and R.T. Johnson
1992 Cooperative Learning: Increasing College Faculty Instructional Productivity, Ashe Eric Higher Education Reprot No. 4, John Wiley & Sons, New York.

Llagas A.
1995 "Emerging School Culture," Educator's Journal, no. 4 (Special Issue), p. 5.

Meyer J. and T. Gray
1994 Peer Coaching: An Innovation in Teaching, New Mexico State University, Las Cruces.

Sweeny B.
1993 Supporting a Peer Coaching Program: The Need for a Coaching Coordinator, Corwin Press, Thousand Oaks, CA.

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