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Concerns based adoption of instructional technologies for learning for Russian pre-service early childhood education students : a pilot study

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Concerns based adoption of instructional technologies for learning for Russian pre-service early childhood education students : a pilot study

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The purpose of this study was to investigate the changes in concerns toward the use of instructional media for pre-service Russian elementary education teachers. Participants were a combination of 16 second- and third-year students in the early childhood department of Herzen Pedagogical University located in Saint Petersburg, Russia. The Stages of Concern Questionnaire (SoCQ) was used to gather data for the study. A pre-test was administered before a specially designed series of seminars and workshops on instructional technologies for learning were conducted. Post-test results were gathered at the conclusion of the seminars and workshops. Findings indicated that awareness levels of the Russian pre-service students became less of a concern over time and that more attention was given to the refocusing stage. Middle stages in regards to the Stages of Concern only demonstrated moderate changes, which might suggest the length of the seminars and workshops could be extended.

Concerns Based Adoption of Instructional Technologies for Learning for Russian Pre-service
Early Childhood Education Students: A Pilot Study

A Graduate Research Paper

Submitted to the

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by

Garth D. Cornish

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CHAPTER 1

STATEMENT OF THE PROBLEM

This paper presents the results of a pilot study focused on the hypothesized changes in the concerns of Russian pre-service elementary education students toward the use of instructional media. Specifically, the research investigated changes in concerns after a series of seminars and workshops for Russian pre-service elementary education majors on the use of instructional media for learning and attempted to use a psychometric form of measurement, the Concerns Based Adoption Model (CBAM), to examine the changes in concerns that occurred from the beginning to the conclusion of the seminars and workshops.

As more technological innovations are introduced into classrooms, observers have pointed out that many technological advances adopted by American school boards and advocated by university researchers and foundation-funded reformers seldom have remained in classroom use after the novelty evaporated (Cuban, 1986). This same phenomenon has now surfaced to some extent in the Russian Federation, probably due to the increased introduction of instructional media into classrooms and a lack of proper training on their use. Fuller and Case (1969) suggest that in order for educators to provide better courses which are relevant and which will increase students' satisfaction with their pre- and in-service education, it is necessary to identify and assess those matters which most concern them.

Consequently, the purpose of this study was to design and implement a set of seminars and workshops on the use of instructional media in learning and to employ the CBAM as a means of psychometrically measuring the changes in concerns that occur in the students.

Introduction

The problem to be considered in this study was how to develop and deploy a series of seminars and workshops based on Heinich, Molenda, Russell, and Smaldino's book entitled Instructional Media and Technologies for Learning (1999) and then measure the changing concerns of the Russian pre-service elementary education students that occurred. In particular, the study was concerned with the types of attitude and concerns shifts that would become apparent across the Stages of Concern as outlined by the Concerns-Based Adoption Model [CBAM] (Hall, George, & Rutherford, 1977). Due to the nature of the design of the pilot study no additional outside variables were measured beyond the context of the employment of the CBAM.

Purpose of the Pilot Study

This research paper had a dual purpose. The first was that of identifying the initial concerns relating to the use of instructional media for a group of pre-service students at a university in Russia. The second purpose was to investigate whether the seminars and workshops that were conducted had an influence on the concerns of Russian pre-service students with regards to the methodologies used to employ instructional media effectively.

Statement of Need

This pilot study was based on three primary areas of need. They were; (a) to introduce a new course to Russian educators on one of the many methodologies for using instructional technologies in the classroom, (b) Russian concerns on how effectively to employ technology in the classroom, and (c) to measure accurately and identify participants' shifts in concerns prior to and immediately following the series of seminars.

Hypothesis

Research Hypothesis

The first research question attempted to identify the initial concerns of the pre-service Russian students related to the use of instructional media. The second problem under investigation was to

examine quantitative changes in the future teachers' concerns towards instructional media use based on a series of seminars and workshops that were conducted over a five-day period. Employing the seven stages of concern that Hall et al. (1977) developed in the Concerns-Based Adoption Model, the study investigated changes in concerns toward instructional media use for Russian pre-service students and the relationship of such change to the series of seminars and workshops that were conducted in between the administration of the pre- and post-test Stages of Concern Questionnaires (SoCQ).

Hypothesis

Change occurs in the concerns of Russian pre-service students towards the use of instructional media between the beginning and the end of the given series of seminars and workshops on instructional media in the classroom.

Null Hypothesis

No change occurs in the concerns of Russian pre-service students towards the use of instructional media between the beginning and the end of the given series of seminars and workshops on instructional media in the classroom.

Limitations

The following limitations of the study are acknowledged:

1. The study conceived as a pilot study, is of limited scope in relation to the amount of subjects who participated. The study was further limited by the fact that only 10 out of a possible 16 Stages of Concern Questionnaire results (6 omitted on the basis of non-completion) were tabulated.
2. The study was conducted using pre-service Russian students enrolled in a state-supported teacher preparation program in the Russian Federation. Findings may stimulate discussion but should not be generalized beyond the singular group until research on a larger scale is conducted.

3. The seminars and workshops were conducted over an intense five-day period. The researcher assumes that the unique nature of the seminars and workshops compensated for the short time frame and, therefore, had a strong impact on the participants

4. The study was based on a sample population of undergraduate students of English and Early Childhood Education at a Russian university. Thus, the generalizability of the results to other populations with different native languages or education backgrounds may be limited.

Definition of Terms

For purposes of clarity, the study utilized specific definitions of the following terms:

1. Concern—"The composite representation of the feelings, preoccupation, thought, and consideration given to a particular issue or task" (Hall et al., 1977, p. 5).

2. Instruction—Deliberate arrangement of experience(s) to help a learner achieve a desirable change in performance; the management of learning, which in education and training is primarily the function of the instructor.

3. Medium—A means of communication. Derived from the Latin *medium* ("between"), the term refers to anything that carries information between a source and a receiver. Plural: media.

CHAPTER II

REVIEW OF LITERATURE

This chapter begins with a historical overview of technology in education and the implications that it has had in the classroom. A general description is provided in relation to teachers' classroom use of technology in education in order to show a context for understanding the current need for reform in pre-service teacher preparation institutions.

A further review of the literature on the roles of teachers in the use of instructional media is then presented. Primary concern is placed on what factors impacted practicing teachers the most in their undergraduate work prior to entering the teaching profession. In relation to the primary factors that impacted teachers' use of instructional media, the review of literature will continue on the attitudes that teachers hold towards technology in the classroom.

Finally, instructional media is considered in relationship to the concerns that pre-service students have and in particular those they have towards innovation. The Concerns-Based Adoption Model as theorized by Hall et al. (1977) will be reviewed in some depth while paying lesser attention to other models measuring changes in concern.

Historical Context of Technology in Education

"Teaching is practical work carried out in a socially constructed, complex and institutionalized world of schooling, and as such must be examined contextually as well as historically situated to understand why teachers do what they do" (Ross & Jenne, 1993, p. 2). During the course of the twentieth century, public schools have modified their governance, programs, curricula, organization, and instruction in varying degrees. The shifts schools have taken towards instructional technologies and their use have also played into the current design of public schools that are present today. Beginning in the mid-nineteenth century, technology in classrooms began to increase dramatically through increased use of such instructional technologies as textbooks and

chalkboards and has continued until present with the appearance of the radio, film, television, and finally computers. "Yet the teacher has been singled out as inflexibly resistant to 'modern' technology, stubbornly engaging in a closed-door policy toward using new mechanical and automated instructional aids" (Cuban, 1986, p. 2).

Technology truly began intense introduction into K-12 classrooms during the early part of the twentieth century. Saettler (1968) indicates that motion pictures were first used in 1910 by the Rochester, New York, public schools. As with any large-scale introduction of new technology, they were compared to conventional instruction through various research projects. Students' outcomes were measured with standards based achievement tests being administered to "control" and "experimental" groups and comparing the two sets of results against each other (Cuban, 1986). But with the introduction of any technology, obstacles toward the adoption of film were frequent for the following reasons; (a) teachers' lack of skills in using the equipment, (b) cost of films, equipment, and upkeep, (c) inaccessibility of equipment when it was needed, and (d) finding and fitting the right film to the class (Cuban, 1986, p. 18).

Following the introduction of film, technology in education and the use of alternative instructional media began to expand at a dramatic rate in classrooms around the world. This was due in part to the increased promise of scientific research that was taking a strong foothold in industry and colleges. The first large-scale evidence of this could be seen with the innovation of the radio as a form of instructional media, which began in the early part of the twentieth century and then followed by television in the 1950s. As with anything, though, television was pushed into teachers' curriculum in order to appease the non-teaching reformers who believed that this new innovation would fill the communication gap between teacher and student (Cuban, 1986).

When computers were introduced into classrooms the same problems arose. The reformers, school directors, and school board members who brought the computers into the classrooms did

not always do this with any defined plan of implementation that allowed teachers to utilize these new tools properly.

Over the short history of relatively advanced introduction of technology into classrooms, a pattern began to emerge in relation to the problems, with which teachers were confronted; (a) accessibility to hardware and software, (b) implementation of the innovation, (c) the classroom and school environment, and (d) the nature of the teaching profession. Teachers have developed a sense for the new innovations that are being introduced into their classrooms and they are approaching them cautiously, considering the pros and cons of their use.

Role of Teachers in the Use of Instructional Technology

As may be expected, teachers are the role models for their students by using varying forms of instructional technology in their classrooms but Cuban (1986) suggests that teacher selection, training and experience, and the beliefs teachers hold combine to produce a deep-seated conservatism, a reluctance to alter prevailing practices and to use mechanical devices in classrooms. These beliefs that teachers hold are developed through a lifetime of experiences and education but before teachers have entered into their chosen profession they have been molded in the classrooms of their university or college by their professors and training received. When teachers finally enter into the actual classroom, one of a teacher's primary responsibilities is careful identification of only those options which will enhance a student's skills and develop his understanding of the target concepts.

The personal beliefs, values, attitudes, and perceptions of pre-service teachers have received little recent research attention (McCutcheon, Schmidt, and Bolden, 1991). Bontempo and Digman (1985) surveyed pre-service teachers' beliefs and attitudes, reporting that undergraduates entered the program viewing teaching as "important, rewarding, and difficult." Furthermore, research has indicated that the attitudes of pre-service secondary school teachers show that they look forward to teaching as a career and are very positive about teacher practices. Pigge and Marso (1987) studied

the attitudes and perceptions of beginning education majors at a medium-sized university and concluded that elementary education students had a more positive view toward teaching than other student teachers, but had major concerns over the availability of instructional materials and meeting needs of different students in the elementary schools.

Book, Byers, and Freeman (1983) studied pre-service teachers' attitudes toward teacher preparation, finding that their sample had an extremely strong belief that "experience is the best teacher." White (1992) reported that pre-service students in one university demonstrated a need for diagnosis and prescription skills and a strong foundation in learning and teaching theory so that pre-service teachers might know how and why teachers make decisions about student learning.

Considering the research and current demands being placed on teachers in the field, many new programs in teacher education have incorporated a form of informatics training to provide teachers with practical knowledge about information technology and the ability to assess its impact on schools and society, while also learning how to effectively employ it in their classrooms.

The Concerns-Based Adoption Model

Due to the traditional loose coupling of districts and institutions and a tradition embracing considerable autonomy of classroom teachers, the role of individual teachers appears to be especially important in the adoption of specific instructional practices. The Concerns-Based Adoption Model (CBAM) (Hall et al., 1973) provides a theoretical approach for addressing the process of innovation adoption from an individual perspective.

Over the past twenty-five years the Research and Development Center at the University of Texas at Austin has been developing the CBAM. This model grew from research on implementation of education innovations in school and college environments. Developed by Hall and Loucks (1978) and their colleagues, the Concerns-Based Adoption Model was based upon the work of Fuller and Case (1969) which examined changing concerns of pre-service students as they moved through teacher preparation at the University of Texas. Fuller, a pioneer of the concepts

basic to the model, observed the mental health of student teachers. She found that the concerns of students occurred in a natural sequence beginning with concerns about self (“I wonder if I can do it?”), progressing to concerns about the task (“I don’t have enough time to prepare for the next day!”), and finally impact concerns (“Are the children really benefiting?”). Hall and Loucks further developed the work of Fuller by expanding it to seven stages that describe “certain perceptions, feeling, motivations, frustrations, and satisfactions about innovations and the change process” (Hall & Loucks, 1978, p. 53).

The sequential stages of the measurement tool, the Stages of Concern Questionnaire (SoCQ), are intended to be unique in nature and provide a means of tracking innovation adoption by individuals. The viewpoints are based upon the selective nature of perception involving task-demands.

Hall and his colleagues (1977, p. 5) suggest:

The composite representation of the feelings, preoccupation, thought, and consideration given to a particular issue or task is called concern. Depending on our personal make-up, knowledge, and experiences, each person perceives and mentally contends with a given issue differently; thus there are different kinds of concerns... To be concerned means to be in a mentally aroused state about something. The intensity of the arousal will depend on the person’s past experiences and associations with the subject of the arousal, as well as how close to the person and how immediate the issue is perceived as beings.

The stages are shown in Figure 1 below. Awareness (stage 0), Information (stage 1), and Personal Concerns (stage 2) are most intense. As implementation begins Management Concerns (stage 3) becomes the most intense with Stages 0, 1, and 2 lessening in intensity. With time after a successful adoption of an innovation, the impact concerns of Consequences (stage 4), Collaboration (stage 5), and Refocusing (stage 6) become the most intense. Hypothetically, an

individual's concerns profile would have a wave motion as the person moves from unawareness and non-use of an innovation into beginning use and then more highly sophisticated use.

By design, the SoCQ is a generally accepted tool as an aid in adapting inservices to the designer/adopter needs. The model has been successfully employed in many research studies, but more particularly, the model has been used in studies that investigated the adoption of technology. Matthews, Parker, and Wilkinson (1998) used the Stages of Concern framework to measure faculty adoption of technology. Wedman and Heller (1984) used the SoCQ to describe teachers' concerns before beginning an inservice effort.

The utilization of the Stages of Concern Questionnaire with pre-service students is consistent with CBAM theory that "all teachers, both preservice and practicing, go through a developmental sequence in adopting any innovation" (Vogel & Aiken, 1985, p. 768). Leary (1983) has further demonstrated that an in-service program geared to teachers assessed Stages of Concern has a predictable influence on their stages of concern about an innovation, their level of use of that innovation, and the way the innovation is adapted for use by the adopting teachers.

-
- 0 AWARENESS:** Little concern about or involvement with the innovation is indicated.
- 1 INFORMATIONAL:** A general awareness of the innovation and interest in learning more detail about it is indicated. The person seems to be unworried about herself/himself in relation to the innovation. She/he is interested in substantive aspects of the innovation in a selfless manner such as general characteristics, effects and requirements for use.
- 2 PERSONAL:** Individual is uncertain about the demands of the innovation, her/his inadequacy to meet those demands, and her/his role with the innovation. This includes analysis of her/his role in relation to the reward structure of the organization, decision making, and consideration of potential conflicts with existing structures or personal commitment. Financial or status implications of the program for self and colleagues may also be reflected.
- 3 MANAGEMENT:** Attention is focused on the processes and tasks of using the innovation and the best use of information and resources. Issues related to efficiency, organizing, managing, scheduling and time demands are utmost.
- 4 CONSEQUENCE:** Attention focuses on impact of the innovation on students in her/his immediate sphere of influence. The focus is on relevance of the innovation for students, evaluation of student outcomes, including performance and competencies, and changes needed to increase student outcomes.
- 5 COLLABORATION:** The focus is on coordination and cooperation with others regarding use of the innovation.
- 6 REFOCUSING:** The focus is on exploration of more universal benefits from the innovation, including the possibility of major changes or replacement with a more powerful alternative. Individual has definite ideas about alternatives to the proposed or existing form of the innovation.
-

Figure 1. Stages of Concern as developed by Hall et al. (1977)

Summary

CBAM concepts are valuable for understanding and managing the change process. The model is a practical and inexpensive diagnostic tool which includes intervention guidelines for the change manager. The SoCQ provides a means of measuring movement of an individual pre-service student toward employment of the innovation of instructional technology use.

CHAPTER III

METHODOLOGY AND PROCEDURES

This study was designed to investigate shifts in concerns toward instructional media use. By utilizing Hall et al's. (1977) seven SoC levels, it was hypothesized that a greater level of willingness to use future applications of instructional occurs for Russian pre-service students between the beginning and the end of the given series of seminars and workshops on instructional media in the classroom.

This chapter contains a description of the methodology and procedures used to perform the study. It is important to realize that the research was conducted as a pilot study for Russian pre-service students and only utilized the Stages of Concern Questionnaire as a means of measuring the changes that occurred.

Subjects

The participants in this pilot study were 10 pre-service Russian students in the Department of Early Childhood Education and English at Herzen State Pedagogical University located in Saint Petersburg, Russia. All students volunteered to attend a series of seminars and workshops that took place at the target university in May of 1999.

Instrumentation

The instrument utilized to gather data for the study was the Stages of Concern Questionnaire (SoCQ). The SoCQ (Hall, George, & Rutherford, 1977) measures changes in concerns over time as an innovation is adopted. The questionnaire consists of 35 concerns-based statements, five for each of the seven stages of concern assessed by the questionnaire. Responses on each statement can range from 0 to 7 with 0 indicating a very low concern or irrelevance at the present time and 7 indicating a very high concern. The instructors direct the participants to indicate their present degree of concern for each statement. The original version of the questionnaire used the word innovation, which for the purpose of this study was changed to "instructional media." For

example, number 6, originally “I have a very limited knowledge about the innovation.” was changed to read “I have a very limited knowledge about instructional media.”

Procedure

In May of 1999 copies of the Stages of Concern Questionnaire were distributed to the pre-service students prior to beginning the series of workshops and seminars. They were requested to complete anonymously the questionnaire and then return it to the researcher. The instructions on the questionnaire asked them to read each question and answer it in terms of their present concerns. Data from the questionnaire was used to determine their entry concerns. At the end of the seminars and workshops a scrambled version of the SoCQ was distributed with the same procedure to complete them anonymously.

Data Analysis

Responses to the SoCQ were tallied as both raw scores and percentiles. Raw scale scores were tabulated for each of the seven sub-scales and converted to percentiles. Then individual data were aggregated to deduce the mean scores for each stage. This provided information as to the dominant high and low stages of concern of the students that was interpreted based on the definitions of the Stages of Concern.

CHAPTER IV

RESULTS

As noted earlier, stages of concern are developmental and the focus of concern changes over time, from being relatively high on Stages of Concern 0, 1, and 2, on the pre-test, to being relatively high on Stages of Concern 4, 5, and 6 after intervention and post-test. Furthermore, the Concerns-Based Adoption Model which underlies use of the SoCQ theorizes that movement toward employment of an innovation occurs as an individual's personal, management, and consequence concerns regarding use of an innovation concerns are aroused and successively resolved. Figure 2 illustrates the entry concerns of the 10 pre-service subjects.

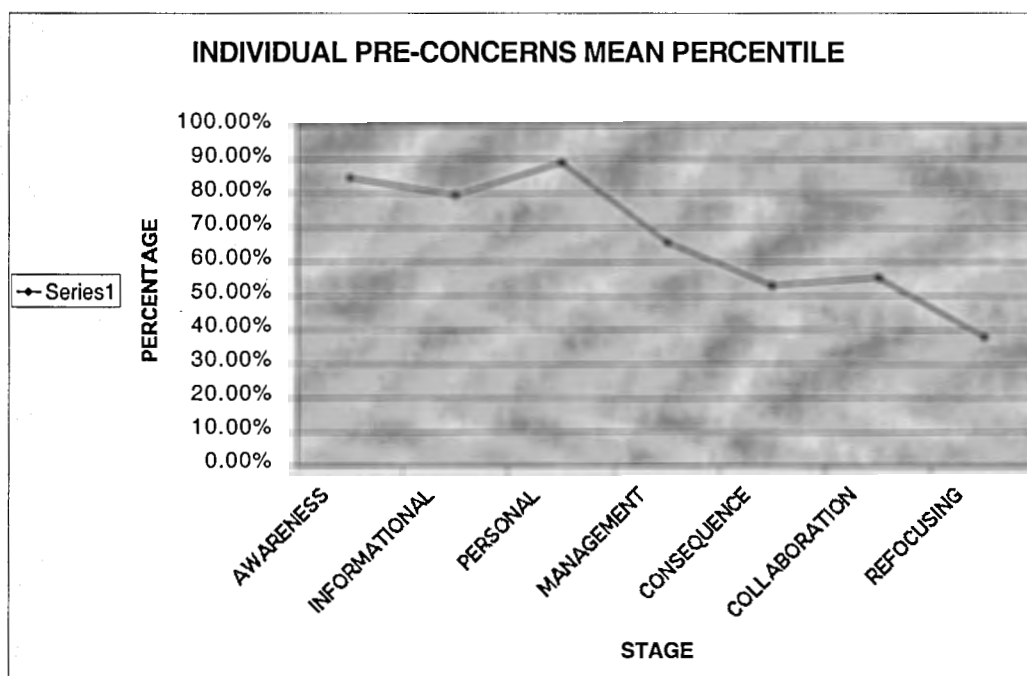


Figure 2. SoCQ Mean Pre-Concerns Profile for the students prior to beginning training.

It is evident that the Russian pre-service students who participated in the pilot study demonstrated high levels of concern for stages 0, 1, and 2 before training and towards higher stages after the training sessions. It is evident that when an

individual is uncertain about the demands of the innovation, her/his inadequacy to meet those demands, and her/his role with the innovation. This includes analysis of her/his role in relation to the reward structure of the organization, decision making, and consideration of potential conflicts with existing structures or personal commitment. Financial or status implications of the program for self and colleagues may also be reflected. (Hall et al., 1977, p. 7)

Following the series of seminars and workshops, the students were administered the scrambled version of the SoCQ. Figure 3 shows the results of the post-workshop assessment.

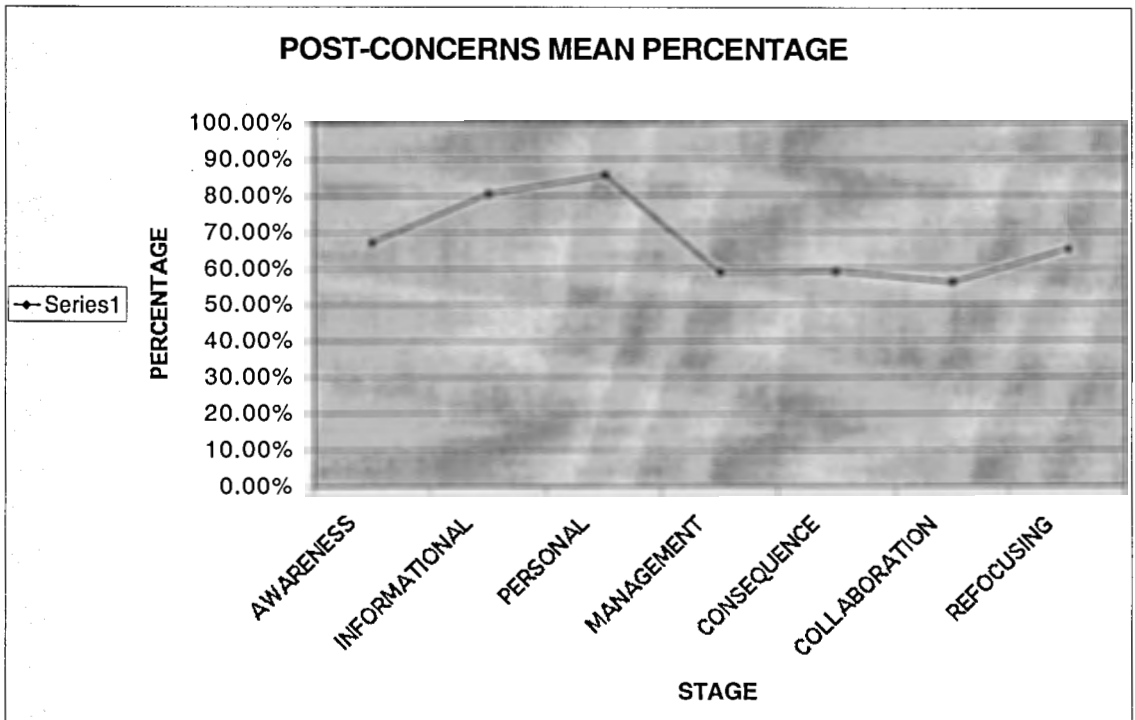


Figure 3. SoCQ Mean Post-Concerns Profile for the participating Russian pre-service students

The students involved in the pilot study demonstrated changes along the changes of concern with increases in stages the higher levels of concern but at the same time only moderate decreases in the initial stages with stage 2 remaining fairly consistent (see Figure 4).

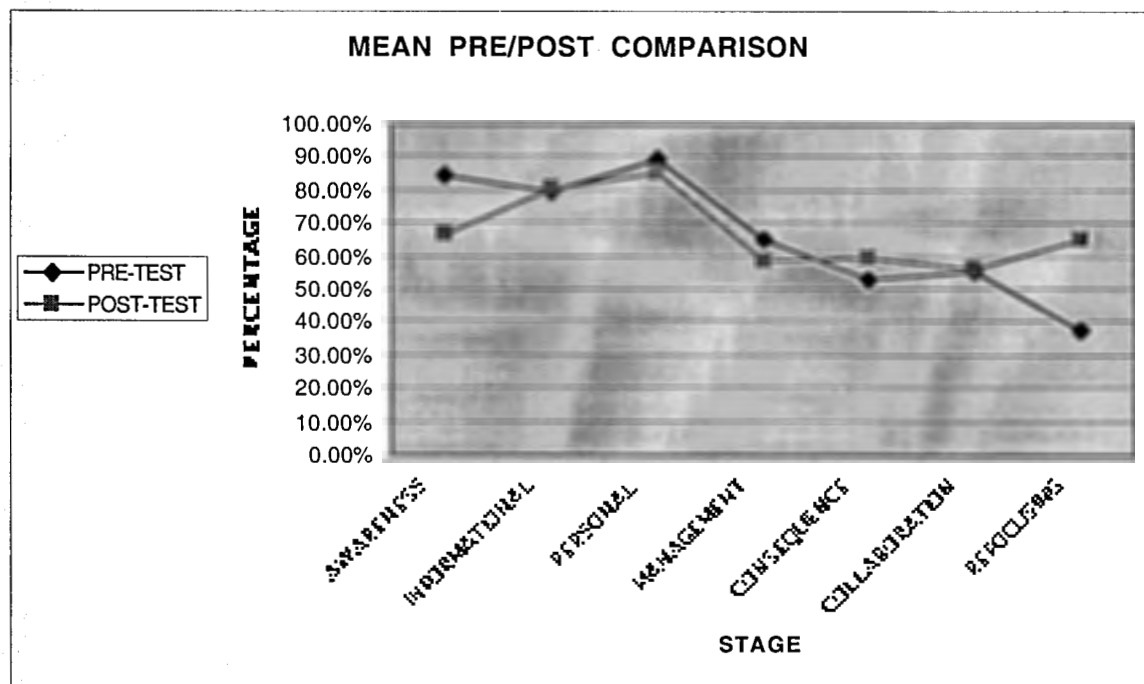


Figure 4. SoCQ Mean Pre/Post-Concerns Profile Comparison

It is difficult to analyze the results of the pre- and post-test results of the SoCQ, due in part to the limited time frame in which the seminars and workshops took place. Stages 0 shows a decrease in awareness, which indicates increased concern about or involvement with the innovation.

Through stages 1 to 6 only marginal changes are noted which may be an indication that not enough time was allotted to develop the areas of concern. Stage 6, (refocusing), demonstrated the most intense change across the stages of concern. Due to the uniqueness of the topic for Russian pre-service educators, they may be more focused “on exploration of more universal benefits from the innovation, including the possibility of major changes or replacement with a more powerful alternative” (Hall et al., 1977, p. 7).

These patterns do not exactly coincide with the Concerns-Based Adoption Model hypothesized development of stages of concern but would rather be a combination of the “inexperienced user” and the “experienced user.” Russian educators have not had much educational instruction or experience in implementing instructional media into the classroom which would lead to an increase in levels of concern at the refocusing level, while at the same time the seminars and workshops were too short in length to develop adequately stages 1 to 5. They did have enough opportunity to become more aware of the issues involved in instructional media which in turn allowed them to shift focus to other concerns.

CHAPTER V

SUMMARY AND CONCLUSIONS

Summary

Many factors impinge upon Russian pre-service students' movement through the Stages of Concern. This progression requires more than knowledge of the innovation, time to use the innovation, and successful experiences with the innovation. Furthermore, pre-service students' movement through the stages is highly personal and can be impacted by their current capabilities and other demands. Providing hands-on workshops and one-on-one assistance will foster the movement through the stages for most participants. However, for some, their "history, dynamics, and capabilities may make resolution of certain concerns nearly impossible" (Hall, George, & Rutherford, 1977, p. 15). Hence, every Russian pre-service student is not expected to progress through all of the stages. Support must be provided to them at their stage of development as they learn to use different forms of instructional media in Russian classrooms and even prior to that while they are still completing their higher education.

This pilot study demonstrated that the first step must remain at determining the stages of concern and providing support as they learn to use the new technology. According to Roberts and Ferris (1994) this takes approximately 1,000 hours of training. Training, support, time, and leadership are necessary for the successful integration of technology into classrooms. In Russia this might pose a particularly difficult problem because cutting-edge classroom technologies are just beginning to filter down to Russian pre-service students and into teacher training universities.

Conclusions

The analysis of results indicated the following conclusions:

1. Change did occur for Russian pre-service students toward instructional media use between the beginning and the end of a given series of seminars and workshop.

2. The Concerns-Based Adoption Model and its related Stages of Concern Questionnaire have been used in prior studies involving other pre-service students. This pilot study further demonstrated the use of the SoCQ in measuring Russian pre-service students is a viable method of documenting change.

Limitations and Recommendations

1. Since this was a small-scale study, its results are tentative. It is recommended that the study be replicated with a larger population.

2. The study was conducted using Russian pre-service students enrolled in a state-supported teacher preparation program in the Russian Federation. Findings may stimulate discussion but should be limited to this group until similar research is conducted with a larger population.

3. The seminars and workshops were conducted over an intense five-day period. The researcher assumes that the unique nature of the seminars and workshops compensated for the short time frame and, therefore, intervention had a strong impact on the participants. The seminars and workshops should be extended to test the changes in concerns and how the middle concerns are affected by duration.

4. The study was based on a sample population of Russian undergraduate pre-service students of English and Early Childhood Education at a Russian university. Thus, the generalizability of the results to other populations with different native languages or educational backgrounds may be limited.

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Appendix A
Instrumentation

Stages of Concern Questionnaire

The purpose of this questionnaire is to determine what people who are using or thinking about using various programs are concerned about at various times during the innovation adoption process. The items were developed from typical responses of school and college teachers who ranged from no knowledge at all about various programs to many years experience in using them. Therefore, a good part of the items on this questionnaire may appear to be of little relevance or irrelevant to you at this time. For the completely irrelevant items, please circle "0" on the scale. Other items will represent those concerns you do have, in varying degrees of intensity, and should be marked higher on the scale.

For example:

This statement is very true of me at this time.	0	1	2	3	4	5	6	7
This statement is somewhat true of me now.	0	1	2	3	4	5	6	7
This statement is not at all true of me at this time.	0	1	2	3	4	5	6	7
This statement seems irrelevant to me.	0	1	2	3	4	5	6	7

Please respond to the items in terms of your present concerns, or how you feel about your involvement or potential involvement with instructional media use. We do not hold to any one definition of this program, so please think of it in terms of your own perceptions of what it involves. Remember to respond to each item in terms of your own present concerns about your involvement or potential involvement with the above named innovation.

Thank you for taking time to complete this task.

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R & D Center for Teacher Education, The University of Texas at Austin

SoC Questionnaire Items - Instructional Media Use

0 1 2 3 4 5 6 7

Irrelevant Not true of me now Somewhat true of me now Very true of me now

- | | |
|---|-----------------|
| 1. I am concerned about students' attitudes toward this innovation. | 0 1 2 3 4 5 6 7 |
| 2. I now know of some other approaches that might work better. | 0 1 2 3 4 5 6 7 |
| 3. I don't even know what the innovation is. | 0 1 2 3 4 5 6 7 |
| 4. I am concerned about not having enough time to organize myself each day. | 0 1 2 3 4 5 6 7 |
| 5. I would like to help other faculty in their use of the innovation. | 0 1 2 3 4 5 6 7 |
| 6. I have a very limited knowledge about the innovation. | 0 1 2 3 4 5 6 7 |
| 7. I would like to know the effect of reorganization on my professional status. | 0 1 2 3 4 5 6 7 |
| 8. I am concerned about conflict between my interests and my responsibilities. | 0 1 2 3 4 5 6 7 |
| 9. I am concerned about revising my use of the innovation. | 0 1 2 3 4 5 6 7 |
| 10. I would like to develop working relationships with both our faculty and outside faculty using the innovation. | 0 1 2 3 4 5 6 7 |
| 11. I am concerned about how the innovation affects students. | 0 1 2 3 4 5 6 7 |
| 12. I am not concerned about this innovation. | 0 1 2 3 4 5 6 7 |
| 13. I would like to know who will make the decisions in the new system. | 0 1 2 3 4 5 6 7 |
| 14. I would like to discuss the possibility of using the innovation. | 0 1 2 3 4 5 6 7 |
| 15. I would like to know what resources are available if we decide to adopt this innovation. | 0 1 2 3 4 5 6 7 |
| 16. I am concerned about my inability to manage all the innovation requires. | 0 1 2 3 4 5 6 7 |
| 17. I would like to know how my teaching is supposed to change. | 0 1 2 3 4 5 6 7 |

18. I would like to familiarize other departments or persons with the progress of this new approach. 0 1 2 3 4 5 6 7
19. I am concerned about evaluating my impact on students. 0 1 2 3 4 5 6 7
20. I would like to revise the innovation's instructional approach. 0 1 2 3 4 5 6 7
21. I am completely occupied with other things. 0 1 2 3 4 5 6 7
22. I would like to modify our use of the innovation based on the experiences of our students. 0 1 2 3 4 5 6 7
23. Although I don't know about this innovation, I am concerned about things in the area. 0 1 2 3 4 5 6 7
24. I would like to excite my students about their part in this approach. 0 1 2 3 4 5 6 7
25. I am concerned about time spent working with nonacademic problems related to this innovation. 0 1 2 3 4 5 6 7
26. I would like to know what the use of the innovation will require in the immediate future. 0 1 2 3 4 5 6 7
27. I would like to coordinate my efforts with others to maximize the innovation's effects. 0 1 2 3 4 5 6 7
28. I would like to have more information on time and energy commitments required by this innovation. 0 1 2 3 4 5 6 7
29. I would like to know what other faculty are doing in this area. 0 1 2 3 4 5 6 7
30. At this time, I am not interested in learning about this innovation. 0 1 2 3 4 5 6 7
31. I would like to determine how to supplement, enhance, or replace the innovation. 0 1 2 3 4 5 6 7
32. I would like to use feedback from students to change the program. 0 1 2 3 4 5 6 7
33. I would like to know how my role will change when I am using the innovation. 0 1 2 3 4 5 6 7
34. Coordination of tasks and people is taking too much of my time. 0 1 2 3 4 5 6 7
35. I would like to know how this innovation is better than what we have now. 0 1 2 3 4 5 6 7