

EVALUATION OF PRE-SERVICE TEACHER TRAINING

LEONARD GERARD MATARESE

Prof., Leonard Gerard Matarese, Daegu Catholic University/Daegu South Korea.
E-mail: leonardg@cu.ac.kr

Abstract - The purpose of this study is to evaluate pre-service teacher training at a college of education based on graduates' survey responses. The teachers surveyed are graduates of this institution and are currently teaching in the school systems. The study used an instrument entitled the Pre-Service Preparation of Teachers to Teaching, and was developed by Darling-Hammond (2006). The sample of this study included 528 teachers who were graduates of the College of Education at Kean University in Union, New Jersey USA and were teaching in elementary and secondary schools around the state. A Confirmatory Factor Analysis was carried out to test the validity of the instrument, and five factors emerged. The results of CFA indicate a good fit. Cronbach alpha and split-half reliability procedures were used to determine reliability. The subscales were found to be reliable. These factors were highly and positively correlated with each other. The teacher responses were compared on these five factors based on gender, experience, teaching level, location of the school, number of students in classroom and school, socio-economic status of schools, and whether teachers had a master's degree or not. T-tests and one-way ANOVAs conducted to see whether there were differences among groups. Teachers indicated that the pre-service training they had received in the college of education prepared relatively well on supporting different learning styles. Secondly, they rated equally program and teaching and teaching and learning competencies. They rated professional development the third while they rated their preparation as the lowest on creating a productive classroom. Recommendations were made based on these findings.

Keywords - Teacher Training, Pre-Service Teacher Training, Teaching Practice, Faculty of Education, and Teachers.

The purpose of this study is to evaluate teacher preparation at a college of education in New Jersey based on the views of the graduates who are currently teachers around the state. Whether teacher training makes a difference in the professional life of teachers is important. If it makes any difference, how this difference occurs has been investigated by scholars (Darling-Hammond, Chung, & Frelow, 2002; Porter, Youngs & Odden, 2001). These investigations led to reforms in teacher training programs around the world (National Commission on Teaching and America's Future, Carnegie Task Force on the Future of Teaching in the USA, OFSTED in England. Teacher effectiveness in order to increase student achievement levels is a major issue in educational research. If the differences among teachers, in terms of effectiveness, is large, then determining effective teachers and the factors that lead them to be effective are important for both educational reforms and basic educational research. If no difference exists among teachers, then other factors for effectiveness may become important (Nye, Konstantinoupolos, & Hedges, 2004).

According to (Bandura 1994) creating and strengthening self-beliefs of efficacy is through the vicarious experiences provided by social models. Seeing people similar to oneself succeed by sustained effort raises observers' beliefs that they too possess the capabilities master comparable activities to succeed. By the same token, observing others' fail despite high effort lowers observers' judgments of their own efficacy and undermines their efforts. The impact of modeling on perceived self-efficacy is strongly influenced by perceived similarity to the models. The greater the assumed similarity the more

persuasive is the models' successes and failures. If people see the models as very different from themselves their perceived self-efficacy is not much influenced by the models' behavior and the results it produces. Modeling influences do more than provide a social standard against which to judge one's own capabilities. People seek proficient models that possess the competencies to which they aspire. Through their behavior and expressed ways of thinking, competent models transmit knowledge and teach observers effective skills and strategies for managing environmental demands. Acquisition of better means raises perceived self-efficacy (Bandura 1994)

The evaluation of teacher effectiveness is not usually based on data. Evaluating teacher training programs based on output is accepted as an important topic that may lead to improvements in teacher training. Certain countries, such as the US require evaluation of teacher training programs and whether they contribute to student learning based on measurable data. Higher Education Law in the US provides a legal basis for evaluating performances of faculty of education graduates in the accreditation processes of teacher training institutions (Darling-Hammond, 2006).

The number of studies that focus on evaluating teacher effectiveness has been on the rise around MATARESE / Evaluation of Pre-Service Teacher Training the world. Some studies use methods such as structured response evaluations and evaluation centers. These methods and strategies are relatively new. Others use standardized multiple choice questionnaires, classroom observations, structured interviews, and they are more traditional approaches

to evaluate the complex teaching performance (Youngs, Porter & Odden, 2003).

Evaluation of teaching effectiveness for policy making purposes is not an easy task to carry out. The nature of education-teaching-learning and the high number of variables that influence the education present difficulties in assessing the usefulness of these evaluations. On the other hand, it is a difficult task to develop valid and reliable instruments to measure student performance levels in the beginning and in the end of courses. Finally, it is difficult to determine how and to what extent teacher training institutions contribute to teacher knowledge and skills pose difficulties (Darling-Hammond, 2006).

In order to measure outputs, teachers' knowledge, skills, attitudes, and characteristics should be defined since they all contribute to the success of evaluations in teacher training and determining effectiveness. Secondly, the measurement instruments which will be used in measuring the knowledge, skills, attitudes, and characteristics are crucial. Recently, there are three types of outputs in teacher training: First, teacher candidate performance data; second, standardized teacher test scores; and third, the effects of teachers' teaching on student-learning (Cochran-Smith, 2001).

Research results indicate that there is a high positive correlation between teachers' feeling of preparedness and the likelihood of becoming effective in teaching. For example, graduates of certain teacher training institutes believe that they contribute student learning more than their peers, home environment, and other factors. Although research results do not provide concrete evidence, there is a close relationship between teacher preparation to teaching and teachers' belief towards their effectiveness and the teaching environment (Darling-Hammond, 2006).

Guided mastery is a powerful vehicle for instilling a robust sense of coping efficacy in people whose functioning is seriously impaired by intense apprehension and phobic self-protective reactions. Mastery experiences are structured in ways to build coping skills and instill beliefs that one can exercise control over potential threats. Phobic personalities, of course, are not about to do what they dread. One must, therefore, create an environment so that incapacitated individuals can perform successfully despite themselves. This is achieved by enlisting a variety of performance mastery aids. Feared activities are first modeled to show people how to cope with threats and to disconfirm their worst fears. Coping tasks are broken down into subtasks of easily mastered steps. Performing feared activities together with the classroom mentor further enables phobic individuals to do things they would resist doing by themselves. Another way of overcoming resistance is to use graduated time. Phobic individuals will refuse threatening tasks if they will have to endure stress for

a long time. But they will risk them for a short period. As their coping efficacy increases the time they perform the activity is extended. Protective aids and dosing the severity of threats also help to restore and develop a sense of coping efficacy. After functioning is fully restored, the mastery aids are withdrawn to verify that coping successes stem from personal efficacy rather than from mastery aids. Once people develop a resilient sense of efficacy they can withstand difficulties and adversities without adverse effects.

The most effective way of creating a strong sense of efficacy is through mastery experiences. Successes build a robust belief in one's personal efficacy. Failures undermine it, especially if failures occur before a sense of efficacy is firmly established. If people experience only easy successes they come to expect quick results and are easily discouraged by failure. A resilient sense of efficacy requires experience in overcoming obstacles through perseverant effort. Some setbacks and difficulties in human pursuits serve a useful purpose in teaching that success usually requires sustained effort. After people become convinced they have what it takes to succeed, they persevere in the face of adversity and quickly rebound from setbacks. By sticking it out through tough times, they emerge stronger from adversity (Bandura 1994)

TEACHER COMPETENCE

Before addressing the meaning of teacher competence, we must first establish the meaning of competence. Competency is a term used extensively by different people in different contexts; hence, it is defined in different ways. Teacher education and job performance are two contexts in which this term is used. Competencies are the requirements of a "competency-based" teacher education and include the knowledge, skills and values a teacher-trainee must demonstrate for successful completion of a teacher education program (Cochran-Smith, M. (2001).

Some characteristics of a competency are as follows:

1. A competency consists of one or more skills whose mastery would enable the attainment of the competency.
2. A competency is linked to all three of the domains under which performance can be assessed: knowledge, skills and attitude.
3. Possessing a performance dimension, competencies are observable and demonstrable.
4. Since competencies are observable, they are also measurable. It is possible to assess a competency from a teacher's performance. Teaching competencies may require equal amounts of knowledge, skill and attitude, but some will not. Some competencies may involve more knowledge than skill or

attitude, whereas, some competencies may be more skill or performance based.

Individual performance and efficiency are important factors that contribute and directly related to institutional goals. Teacher performance evaluation is different than performance evaluations in other fields. The reason for this difference is the lack of or delayed feedback structure in teacher training. In order to evaluate, a task should be defined clearly and completely. Even if it is defined clearly, then it is not sufficient.

The restructuring of faculties of education and studies on accreditation are not a new phenomenon in the United States. A consensus has not been built yet around these concepts. Although the US Department of Education, and universities and faculties of education around the US carry out certain studies, these studies have not yet produced concrete results for teacher training and faculties of education on a state by state level. (National Commission on Teaching and America's Future 1996).

The US Department of Education had begun collaborating on the National Educational Development Project over two decades ago. This project characterized teacher competencies in four areas and they were similar to Rothstein's (1990) findings (Karakelle, 2005).

These competencies were defined as follows:

Subject Knowledge: Teachers knowledge in their field and curriculum.

Teaching-Learning Competencies: Planning, preparations for the courses, using instructional methods, communication skills, classroom management, developing healthy relationships with students, recording student development and evaluations of student learning.

Student Counseling Services: Teachers' contribution towards developing students as healthy and well-balanced persons in the student personality development services.

Personal and Professional Characteristics: Effective time-management, establishing professional relationships with other teachers, and demand for professional development.

The success of any educational system depends on teacher competencies (Evertson, Emmer, & Murray, 2003; Hoy, & Miskel, 2007). In order to understand teacher effectiveness, variables such as the teacher, student, program, teaching, learning, and classroom are needed to be taken into account (Anderson, 2004). Teacher training process may be related to indirect control over educational system (Ustuner, 2004). The task of teacher training institutions is to train qualified teachers and this is the basic training which also happens to be the most important one (Alkan, & Kurt, 1998; Erisen, & Celikoz, 2003; Seker, Deniz, & Gorgen, 2005). Changes in societies lead changes in

teacher training systems as well.

The restructuring of faculties of education brought some innovative approaches. Some of these innovations were: More structured teacher training, more emphasis on pedagogical knowledge over knowledge of subject matter, master's level training for secondary teachers, instructional design and material development, classroom management, emphasis on school experience, aiming at national competencies, and accreditation (Simsek, & Yildirim, 2001). However, some of these new approaches were discontinued later. Some of the reasons for returning back to the old system in pre-service teacher training included criticisms of the top-down approach in the development and implementation stages of the various state departments of education. (Aypay, & Kalaycı, 2008; Grossman, Onkol, & Sands, 2006).

METHOD

The Pre-Service Preparation of Teachers to Training includes 30 items and was developed by Darling-Hammond (2006). Responses were on a five-point Likert type scale. The questions began with a statement: "How well do you think your teacher preparation program prepared you to ..." and then the items followed.

A Confirmatory Factor Analysis was conducted and the five dimensions existed as in the original instrument. These factors were:

- Factor1: Instructional Design and Teaching,**
- Factor2: Supporting Various Learning Styles,**
- Factor3: Evaluation of Teaching and Learning to Provide Guidance,**
- Factor4: Creating a Productive Classroom,**
- Factor5: Professional Development.**

Confirmatory factor analysis (CFA) shows how the variable structure based on data fits in the theory. Researcher is able to decide based on CFA. CFA provides answers regarding what type of flaws or where there are problems, what needs to be done in order to overcome these flaws (Brown, 2006; Buyukozturk, 2005; Some fit statistics are used to determine the model fit. These indices are: Chi-square, Comparative Fit Index, Normed Fit Index, Relative Fit Index, Incremental Fit Index, and Root Mean Square Error of Approximation. The goodness-of-fit-statistics were confirmed based on the following values: Chi-square was significant ($X^2 = 847.2$, $N=228$, $df=340$, $p=0.00$), and the values of other fit indices were: RMSEA=0.081, NFI=0.83, CFI=0.89, IFI=0.89, RFI=0.79. They all indicated a good fit.

Cronbach Alpha internal consistency coefficients for reliability were calculated. The Cronbach alpha coefficient of the overall instrument was found to be .96. The coefficients for the sub-dimensions of the

instrument were: Factor1 (0.92), Factor2 (0.89), Factor3 (0.81), Factor4 (0.87), Factor5 (0.75). Based on the results it was concluded that this is a reliable instrument.

In addition to the percentages, frequencies, means, standard deviations, t-tests, One-way ANOVA, and Pearson correlation coefficients were used in this study. Correlation coefficients indicate that all the sub-dimensions of the instrument were highly correlated with each other. Correlation coefficients ranged from the lowest .72 to the highest .91. All correlations were positive.

The sample of the study includes 528 teachers that graduated from the College of Education at Kean University in Union, New Jersey between 1986 and 2018. In the sample, 70 % were females and 30 % consisted of males. Fifty percent of teachers in the sample graduated between 2006 and 2007. Only about 8 % were 2018 graduates. A little over 50 % graduated in 2000 and later.

RESULTS

In this section, the results of the study will be presented in the following order: Teacher responses were compared based on gender, school-level, class-size, socio-economic status of the school, school-size, experience, and whether teachers have a master's degrees or not. Moreover, teacher responses on how useful their teacher training program has been in their teaching included in this section.

When comparisons were made based on sub-dimensions, no significant difference was found in terms of gender. When the means of sub dimensions were compared, teachers thought that they had been prepared in the faculty of education to support various learning styles (factor2).

The second high ranking sub-dimensions were program design and teaching (factor1) and evaluation of teaching and learning to provide guidance (factor3). While teachers ranked their professional development (factor5) into the third place in the hierarchy. The factor that teachers rated themselves the lowest prepared was establishing a productive classroom environment (factor4). Based on these findings, it could be argued that this particular faculty of education should improve their pre-service teacher education in terms of factor4 and factor5 more than the others.

Teacher responses on their pre-service preparation do not differ on the location that teachers worked. The size of teachers' work location, whether in large cities, medium size towns, or villages, does not lead to a statistically significant difference regarding teacher views on their preparations. Teacher responses do not also differ on the school level that teachers were currently working. Whether teachers work in grades 1-5, 6-8 or secondary level did not result in any significant difference in their views. However, teacher responses differ on class size [F (2-

190) =3.652, $p < 0.05$]. When post-hoc comparisons were conducted by using LSD test, teachers who teach in classrooms with 30 or less students indicated that they were able to create productive classrooms when compared to teachers who teach in classrooms with 31-40 students.

Socio-economic status also led to a significant difference on teacher views with respect to program design and teaching sub-dimension [F(2-189) =3.299, $p < 0.05$]. The difference was found between teachers who work on low SES and high SES schools. Nye and colleagues (2004) also found that teachers make relatively higher difference in low SES schools.

Teacher views did not differ significantly depending on whether teachers hold master's degree or not. In contrast, differences in experience led to a significant difference on the factor4 [F (4-200) =2.45, $p < 0.05$]. The LSD results indicated that the teachers who graduated after 2006 had higher mean scores than the teachers who had graduated between 2001 and 2005.

CONCLUSION

This study sampled teachers that graduated from the same institution aimed at determining how well prepared they were for teaching. This study established discriminant validity and reliability of the Pre-Service Preparation of Teachers to Training based on the graduates of a college of education in New Jersey. The instrument provided results in New Jersey similar to the findings in the US. However, the sample of the current study is medium and not representative of the teacher population in New Jersey or to make a generalization regarding teachers in New Jersey.

Teachers in this sample indicated that the faculty might have prepared them better in classroom management and professional development. These results were consistent with the Darling-Hammond's (2006) findings. In the US, teachers found teacher education sufficient in terms of planning and organizing subjects, using teaching and evaluation methods. Teacher views were similar with respect to the place of work and the grade teachers work in this study. Abbott-Chapman, Hughes and Williamson (2001) also found that teacher views did not differ on the level they work. So, the finding of this study was consistent with those of Abbott-Chapman and colleagues.

Teachers' views differed based on class sizes in the current study. This finding is consistent with the other research in classroom management and school size studies. Teachers were able to establish order easily in smaller classrooms. This finding indicates that the faculty of education under consideration does not prepare students for crowded classrooms. This is not consistent with the current reality of class sizes in the educational system in New Jersey or the United States. Abbott-Chapman et al. (2001) and Nye and

colleagues (2004) found that classroom size makes a difference on teaching.

On the other hand, school size did not reflect a change on teacher views on teachers' pre-service teacher preparation. Nye and colleagues (2004) claim that teacher effects could be more important than the school effects. This might be an indication of class effects being more important than school effects.

Nye and colleagues (2004) found that teacher training is less important than teacher experience. Teacher views on further training did not differ in this study. However, Nye and colleagues indicated that this was one of the factors that influence student achievement. The finding of this study was that teacher views differed based on experience. As a result, this finding was consistent with Nye and colleagues' findings.

While the majority of teachers indicated that the faculty of education had prepared them in their undergraduate program in teaching on medium to high levels, only one-third of the teachers indicated that they were prepared rarely or not prepared at all. This finding should be taken into account by the faculties of education in general and the specifically by the faculty of education at the College of Education at Kean University. Improvements in pre-service teacher training in this institution might be needed.

The graduates of this specific faculty of education rated their preparation at the lowest level on establishing a productive classroom as well as their preparation for professional development. These areas might need a special attention by the faculty of education under consideration. Especially, classroom management skills required for an effective performance in classrooms with a large number of students might help teachers in the field when they go into teaching. Additional non-elective and elective courses on these areas might be useful while improvements on the existing courses could be helpful to the student teachers who were currently enrolled.

The sample of this study included teachers who graduated from the same faculty of education. This is a limitation because it is not a representative sample of teacher education institution graduates across New Jersey. More studies are needed on a larger scale and with more representative samples. New studies might take such variables as teacher satisfaction, in-service trainings they had received after graduation, and other relevant variables into account in teaching. Both quantitative and qualitative studies may further advance our knowledge on the effectiveness of teacher training.

REFERENCES

[1] Abbott-Chapman, J., Hughes, P., & Williamson, J. (2001).

- Teacher's perceptions of classroom competencies over a decade of change. *Asia-Pacific Journal of Teacher Education*, 29(2), 171-185.
- [2] Anderson, L. W. (2004). *Increasing teacher effectiveness*. Paris: UNESCO, International Institute for Educational Planning.
- [3] Aypay, A. (2003). The tough choice at high school door: An investigation of the factors that lead students to general or vocational schools. *International Journal of Educational Development*, 5(3), 517-527.
- [4] Aypay, A. ve Kalaycı, S. S. (2008). Assessing institutionalization of educational reforms. *International Journal of Educational Development*, 28, 723-736.
- [5] Bandura, A. (1994). Self-efficacy. In V. S. Ramachandran (Ed.), *Encyclopedia of human behavior* (Vol. 4, pp. 71-81). New York: Academic Press.
- [6] Brown, A. T. (2006). *Confirmatory factor analysis for applied research*. New York, NY: The Guilford Press.
- [7] Bukova, E., Elci, A. N., & Alkan, H. (2006, Mayıs). *Determining mathematics teacher competencies*. III. Onsekiz Mart University, Ankara.
- [8] Cochran-Smith, M. (2001). Constructing outcomes in teacher education: Policy, practice, and pitfalls. *Education Policy Analysis Archives*, 9(11). Retrieved February 20, 2009, from <http://epaa.asu.edu/epaa/v9n11.html>.
- [9] Darling-Hammond, L. (2006). Assessing teacher education: The usefulness of multiple measures for assessing program outcomes. *Journal of Teacher Education*, 57(2), 120-138.
- [10] Darling-Hammond, L., Chung, R., & Frelow, F. (2002). Variation in teacher preparation: How well do different pathways prepare teachers to teach? *Journal of Teacher Education*, 53(4), 286-302.
- [11] Evertson, C. M., Emmer, E. T., & Murray, E. W. (2003). *Classroom management for secondary teachers* (6Thedt.). Boston, MA: Allyn and Bacon.
- [12] Grossman, G., Onkol, P., & Sands, M. (2006). Curriculum reform in teacher education: Attitudes of teacher educators towards change in an EU candidate nation. *International Journal of Educational Development*, 27(2), 138-150.
- [13] Hoy, W. K., & Miskel, C. (2007). *Educational administration: Theory, research and practice* (8Thedt.). Boston, MA: McGraw-Hill.
- [14] National Commission on Teaching and America's Future. (1996). *What matters most: Teaching for America's future*. New York: Author.
- [15] Nye, B., Konstantopoulos, S., & Hedges, L. V. (2004). How large teacher effects? *Educational Evaluation and Policy Analysis*, 26(3), 237-257.
- [16] Porter, A. C., Youngs, P., & Odden, A. (2001) Advances in teacher assessment and their uses. In Virginia Richardson (Ed.) *Handbook of research on teaching* (4Thedt., pp. 259-297). Washington, D.C.: AERA.
- [17] Rothstein, P. (1990). *Educational psychology*. Newyork: McGrawHill Company.
- [18] Sabancı, A. ve Sahin, A. (2006). *Educational Administration: Theory and Practice*, 48, 531-556.
- [19] Steinberg, L., Pecheone, R., & Chung, R. (2007). Evidence in teacher education: The Performance Assessment for California Teachers (PACT). *Journal of Teacher Education*, 57, 22-36.
- [20] Simsek, H., & Yıldırım, A. (2001). The reform of pre-service teacher education. In R.G. Sultana (Ed.), *Challenge and change in the Euro-Mediterranean region: Case studies in educational innovation* (pp. 411-432). New York, NY: Peter Lang.
- [21] State of New Jersey Department of Education. Partnership for Assessment of Readiness for College and Careers (PARCC) (<http://www.nj.gov/education/assessment/>)
- [22] Youngs, P., Odden, A., & Porter, A. C. (2003). State policy related to teacher licensure. *Educational Policy*, 17, 217-236.

