

SELF EFFICACY CHANGES IN COLLABORATIVE COURSE FOR INCLUSIVE EDUCATION PRESERVICE TEACHERS

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Abstract: The number of inclusive schools improves significantly in the last 10 years in Indonesia. However, there is a lack of effort to prepare future teachers so they have inadequate knowledge, skills, and experiences to provide education services for diverse students including students with special needs. This research examines the changes of Indonesian preservice teachers' self-efficacy belief after being enrolled in a collaborative course that integrates between special education content and elementary education content. This study employed a mixed method approach for the analysis of questionnaire data from 34 preservice teachers and qualitative data of open-ended questions. The findings revealed that after being enrolled in a collaborative course, preservice teachers' self-efficacy changed significantly ($t_{34} = -2.16$; $p < .05$), especially in efficacy for instructional strategies ($t_{34} = -2.73$; $p < .05$). The qualitative data also supported this finding based on three cases of preservice teachers who have different genders, previous experiences, and attitudes toward students with learning problems. Several recommendations for future collaborative courses and a new direction for teacher preparation program are discussed.

Keywords: *preservice teacher, collaborative course, inclusive education*

PERUBAHAN EFIKASI DIRI SELAMA PERKULIAHAN KOLABORATIF UNTUK CALON GURU PENDIDIKAN INKLUSI

Abstrak: Jumlah sekolah inklusi di Indonesia meningkat tajam dalam sepuluh tahun terakhir. Namun, tidak banyak upaya yang dilakukan oleh LPTK untuk menyiapkan calon guru sehingga mereka memunyai pengetahuan, keterampilan, dan pengalaman yang kurang memadai untuk memberikan layanan pendidikan kepada siswa yang beragam termasuk siswa dengan kebutuhan khusus. Penelitian ini bertujuan untuk mengkaji perubahan keyakinan efikasi calon guru setelah mengikuti perkuliahan kolaboratif yang mengintegrasikan antara materi pendidikan luar biasa dan materi pendidikan guru sekolah dasar. Penelitian menggunakan pendekatan metode *mixed method* untuk analisis data kuesioner dari 34 calon guru dan data kualitatif dari pertanyaan terbuka dalam kuesioner. Temuan mengungkapkan bahwa setelah mengikuti perkuliahan kolaboratif, efikasi diri calon guru berubah secara signifikan ($t_{34} = -2.16$; $p < 0,05$), terutama dalam pengetahuan praktis untuk strategi pengajaran ($t_{34} = -2,73$; $p < 0,05$). Data kualitatif juga mendukung temuan ini berdasarkan tiga studi kasus calon guru yang memiliki perbedaan dalam gender, pengalaman dengan individu berkebutuhan khusus sebelumnya, dan sikap terhadap siswa dengan masalah belajar. Beberapa rekomendasi untuk pengembangan perkuliahan kolaboratif dan arah baru untuk program persiapan guru dibahas lebih lanjut.

Kata Kunci: *guru, perkuliahan kolaboratif, pendidikan inklusif*

INTRODUCTION

The implementation of inclusive education in Indonesia was initiated in 2001 through pilot projects in some schools (Hadis, 2005), and since then, the Indonesian government has developed policies to increase the number of inclusive schools across the country. Three national regulations about inclusive education have been enacted by the Minister of national

education (Undang-Undang RI 2003 No. 20; Permendiknas RI 2009 No. 70) to support the implementation of inclusive education. These laws continue to become more intensive, mandating local governments to increase support for inclusive schools. Each city in each province was required to select one school in elementary, secondary, and high school levels to be inclusive schools. Furthermore, the number of inclusive

schools is increasing. However, the quality of special education services in inclusive schools remains a big concern, especially in preparing future teachers to support the implementation of inclusive education.

Teachers are the key person for the implementation of inclusive education (Avramidis & Norwich, 2002; de Boer, Pijl, & Minnaert, 2011). The role of teachers is changing along with a shifting paradigm from teacher-centered towards child-centered learning, individual teaching to collaborative teaching (Rudiyati, 2013), and from offering services to providing support (Ferguson, 2008) that requires long-life learning. However, teacher preparation programs are inadequately prepare future teachers for diverse learners including students with special needs (Crowe, 2010). Nearly half of practicing teachers and new teachers in developed countries mentioned the inadequacy of their preparation program to meet the needs of students with different abilities (Darling-Hammond & Youngs, 2002; DeSimone & Parmar, 2006; Markow & Cooper, 2008; Smith & Tyler, 2011). A similar situation is happening in developing countries. In Indonesia, the majority of teacher preparation programs do not include inclusive education materials in their curriculum although it is required since 2016. Consequently, pre-service teacher programs provide lack of knowledge and experience to their students. There are some significant barriers to teacher education reform in order to support future teachers competencies to support inclusion including a) a lack of support from leaders in teacher preparation programs (Ahsan, Sharma, & Deppeler, 2012), b) a discrepancy between the limitation of the length of study, and the growing scope of curricula (Forlin, Loreman, Sharma, & Earle, 2009). Furthermore, collaboration among faculty member is suggested as one of alternative solution (Harvey, Yssel, Bauserman, & Merbler, 2010) by giving courses across disciplines or majors.

This study focused on self-efficacy as one of the outcomes of the study. Bandura (1997:211) stated that “self-efficacy derived from partial enactive mastery during the course of treatment predicted performance on stressful tasks that the individuals had never done before”. Teachers with higher self-efficacy might have greater

efforts and persistence to support students learning regardless their learning barriers (Schunk, 1991). In other word, teachers with high competencies in teaching skills could meet their expectancies to deal with students who struggle in learning. Bandura (1977) mentioned that there are four sources which develop personal self-efficacy: performance accomplishments, vicarious experiences, verbal persuasion, emotional arousal. Those learning experiences are supported by adequate knowledge and high proficiency in teaching skills that need to be developed during teacher education program. In an inclusive school, pre-service students will find a variety of ways and pace of students’ learning that need to accommodate. Furthermore, preservice teachers need to build their teaching efficacy during preservice programs to deal with possible uncontrollable situations.

While few universities in Indonesia already providing option for preservice teachers to take more special education courses as a minor, the majority of preservice teacher programs either do not provide any course or only offer one course in special education. In this study, the university offer a two-credit course in special education which is electives for all education majors. However, one course in the special education program did not significantly change the self-efficacy levels of preservice teachers (Sharma, Simi, & Forlin, 2015). Furthermore, this study integrates special education materials and elementary education content especially in teaching strategies for diverse learners as an initiative. In recognizing the future direction of teacher preparation program in promoting inclusive education, this is, therefore, important to investigate the effect of a collaborative model regarding pre-service teachers’ levels of self-efficacy belief.

This aims of the research examines the changes of Indonesian preservice teachers’ self-efficacy belief after being enrolled in a collaborative course which integrate between special education content and elementary education content.

METHODS

This research employed a mixed method study in order to better understand the changes of self-efficacy previous studies based on

previous researchers suggestion (Poulou, 2007; Tschannen-Moran, Hoy, & Hoy, 1998; Wheatley, 2005). The mixing of quantitative and qualitative data in this study occurred at the research analysis and inference stages. This study was conducted in one class in Elementary Education Department at one of public university in Java island, Indonesia. The university has both special and elementary education major under faculty of education. In this study, two researchers who are a faculty member from Elementary school and a faculty member from Special education department decided the integration between special education and elementary education content as voluntarily action through a collaborative course.

The course name is Instructional Strategy with two credits. The invitation was distributed by the first researcher who was not in charge for the course in order to minimize bias. The second researcher taught the class and did not get access to the participants data, so the students' participation was not related to how the grade was made. The participants were participated voluntarily through online invitation. The total participants in this study were 34 preservice teachers out of 41 students. 37 students voluntarily participated in this study, but 4 participants dropped because they did not fill out either pretest or posttest. Pretest and posttest survey employed The Teachers' sense of teacher efficacy scale (TSES; Tschannen-Moran, Megan, & Hoy, 2001) and they were distributed and were collected online to establish students' self-efficacy improvement in teaching before and after enrolling in the collaborative course.

The TSES items are partially applicable in teaching students with special needs (Zhang, Wang, Stegall, Losinski, & Katsiyannis, 2018), furthermore it was chosen because in Indonesia context some students with special needs are recognized as students with learning difficulties by their teachers. Some open-ended questions were added about demographic profile including gender, previous experiences, and previous courses in special education, and was distributed before the special education content (e.g., diverse learners and UDL principles) was delivered. The TSES scale has two different forms (long and short forms). The Cronbach's alpha coefficient

was .94 and reliability of the scale was calculated to confirm its internal consistency ($SD = .94$). This study used the long form as suggested by the authors to gather information of teachers' self-efficacy in 3 different categories: student engagement, instructional strategies, and classroom management.

The questionnaire asked respondents to indicate the extent of their belief in skills that they can do in 24 questions with nine different ranges of options from nothing to a great deal. The higher score of the respondents in this instrument, the greater of their self-efficacy dealing with their difficulties in the inclusive classroom. In this study, the questionnaire was translated into Bahasa Indonesia then validated by two Indonesian colleagues with active English skills. The options were reduced from 9 to 5 options, which represent from nothing to a great deal. The accumulation of scores would be 120. The reliability score after the translation was high with Cronbach alpha was .98 (Ambarwati, Rahmadona, & Pujaningsih, 2017).

In order to explore the efficacy dynamic, open ended questions were analyzed with purposive sampling selection. Respond of participants who have different previous experiences with individual with disabilities and level of self-efficacy changed were selected. The analysis was focused on participants' personal beliefs in facilitating, accommodating, feelings when teaching, readiness to teach, knowledge in teaching, self-confidence to teach and previous experience with diverse learners.

FINDINGS AND DISCUSSION

Findings

The age of participants range is 19-22 years old. All the participants were enrolled in the Teaching Strategy for Elementary Classroom course during Fall 2017. The demographic data from students who provided consent forms to join with this study can be seen in the Table. 1. Out of 34 respondents, 91 % ($n = 31$) were female, and 9% ($n = 3$) were male. The majority of participants have enrolled in one special education course (94%), and they have a variety of previous experiences with people with disabilities as a friend (47.1%) and siblings (20.6%).

Table 1. Demographic

Demographic	Frequency	%
Age (19-22)	34	100
Gender		
• Female	31	91
• Male	3	9
Previous course in special education		
• Yes	32	94
• No	2	6
Previous experiences with people with disabilities		
• Friends	16	47.1
• Siblings	7	20.6
• Neighbor	3	8.8
• Tutor	3	8.8
• Never	3	8.8
• Volunteer	2	5.9
N total	34	

Pre and posttest self-efficacy questionnaires were collected online by the first researcher to capture the outcome of the course. The researcher employed a paired *t*-test for the quantitative analysis which revealed that there was a significant difference in self-efficacy levels before (mean = 3.02, *SD* = .59) and after (mean = 3.27, *SD* = .64) students enrolled in the collaborative course ($p < .05$; $d = .41$). On average, the mean for pretest scores were .2 points lower than posttest

scores (Table 2). Three paired *t*-test also was run for three subgroups (student engagement, instructional strategies, and classroom management) and revealed that only efficacy for instructional strategies had a significant difference in preservice teachers' teaching before and after enrolled in a collaborative course student ($p < .05$, $d = .51$). There was no significant difference for efficacy in student engagement and in classroom management.

Table 2. Paired Samples Tests of Preservice Teachers' Efficacy Beliefs

		<i>N</i>	Mean	<i>SD</i>	<i>t</i>	<i>d</i>	<i>p</i>
Instructional strategies	Pre survey	34	2.98	.59	-2.73*	.51	.01
	Post survey	34	3.29	.66			
Student engagement	Pre survey	34	3.04	.64	-1.99	-	.06
	Post survey	34	3.28	.68			
Classroom management	Pre survey	34	3.05	.61	-1.37	-	.18
	Post survey	34	3.22	.69			

*significant at $p < .05$

Based on pretest and posttest, the participants' self-efficacy changed was vary. Some participants experienced higher self-efficacy level changed than other. The efficacy dynamic was explored more based on three cases. The cases were selected in regard to different previous experiences with individual with disabilities and different level of self-efficacy changed. Three cases were analyzed qualitatively. Three cases were presented to

show students' changes with variation of self-efficacy level changed and previous experiences.

Case AD

AD is a male with no experience interacting with people with special needs. In the pretest, AD wrote if he had students with learning problem, he would feel annoyed and then during the posttest, he stated that he would feel a little bit uncomfortable. Even though AD stated that he still felt uncomfortable, but in the posttest,

he mentioned his readiness for dealing with students with learning problems.

Case FY

FY is a female with a cousin who has a language problem. FY stated that she felt less ready in the pretest because of her limited knowledge about students' needs. However, it challenged her to learn more. Her response to accommodate diverse learners in pretest was correct in general by conducting assessment and providing guidance. In the posttest, FY stated that her confidence and her knowledge was improved to deal with students with learning problems. She stated that she felt somewhat ready and added more detailed explanation of how she will conduct her assessment to meet the need of each student. FY also stated that she felt sad when she has students with learning problems, but at the same time, it challenged her. It might be related to her previous experiences having a cousin who has reading problems and struggling in academic and social life.

Case RS

RS is a female who had friends with learning problems during her elementary school years and high school years. She has a strong will to support students with learning problems in the pretest, and it became stronger after collaborative course with very detail teaching approaches. In the posttest, RS stated that her simulation activities built her readiness to accommodate diverse learners. She reported that she felt the confidence to ensure all learners to learn regardless students' different abilities in learning. RS stated that she has the responsibility to support all learners including students with learning problems. Her previous experience of having a friend who struggles with academic difficulties might relate to her motivation to reach out students with educational barriers.

Based on qualitative analysis, the various changes might relate to how student teachers described their attitude and readiness when they have students with learning problems in their classrooms. The participants' attitude might relate to their previous experiences with individual with disabilities as either a family member or friend. Previous knowledge and experiences in case RS and FY also was stated

as a source of readiness for being a teacher who have adequate teaching confidence in dealing with students with special needs.

To sum up, the outcome of this study revealed the changed of preservice teachers' self-efficacy belief in teaching students with learning problems based on quantitative and qualitative analysis. After enrolling collaborative course, the participants felt more favorable toward students with special needs, described more detail regarding their teaching approach if they have students with learning problems in their classrooms and had more confidence to provide adequate teaching approach.

Discussion

The Indonesia government mandated all preservice programs to provide the inclusive education course for all future teachers since 2016, and one course in inclusive education is a good start to know about diverse learners. This study is part of efforts to provide more knowledge and adequate teaching skills for future elementary school teachers, as the previous study revealed that one course in inclusive education is not adequate to improve pre-service teachers' self-efficacy to a high level (Sharma et al., 2015). This study also provides a role model for future teachers to collaborate in teaching process, because in inclusive schools they are required to collaborate with special teachers (Rudiyati, 2013).

This study found the change of preservice teachers' self-efficacy based on both qualitative and quantitative data. This result aligns with previous studies which focus on a connection between fieldwork and coursework and found improvement in self-efficacy teaching in inclusive classroom (Gao & Mager, 2011; Lancaster & Bain, 2010; Peebles & Mendaglio, 2014). Moreover, this study strengthens the need for providing opportunity to practice, accessible support, guidance, a variety of strategies with sufficient information about inclusive education content especially in teaching approach.

The reason for significance different only found in preservice teachers' self-efficacy in instructional strategies with medium effect size ($d = .51$) while no significance changes for student engagement and classroom management. The reason for this might relate to the focus of the content for the collaborative

course which was limited to UDL principles so the target knowledge and skills only focused on teaching strategies. Furthermore, the focus of the collaborative course might not relate to their skills in collaboration and classroom management in the context of providing educational support even though group discussion and team work were applied during the course.

The result is also aligned with Bandura (1997) statement that one the sources of efficacy include verbal persuasion, for example lecturing, and the availability of sources affects personal self-efficacy. Furthermore, future studies need to address more components for collaborative courses that enhance teaching skills in inclusive schools as suggested by Suparno (2011) which include knowledge and skills about how to promote inclusive education and how to support students with special needs with differentiation of instruction, curriculum modification, and various evaluation. In addition, some courses that are viable for collaborative course stated by Brown, Welsh, Hill, & Cipko (2008) are evaluation and measurement, educational psychology and instructional technology, so the focus of the courses will be an emphasis on variety of assessment and how to modify learning materials and strategies as a part of teaching practices in inclusive education.

Since previous studies (Frey, Andres, McKeeman, & Lane, 2012; Spooner, Baker, Harris, Ahlgrim-Delzell, & Browder, 2007) which integrate special education content (e.g., UDL principles) for general education majors revealed improvement of teaching skills to deal with students with mild disabilities, future studies can evaluate both teaching skills and self-efficacy changes. This study integrated content easier because both special education department and elementary education department are located in the same building and both researchers have been collaborate in some number of studies. Some concerns might arise for the collaborative effort when there is no special education department in the faculty of education. However, some universal content in inclusive education can be downloaded online for integration content only without collaborative actions.

Three cases in this study showed improvement of the feeling of confidence to deal with diverse learners. The explanation may be related to their accomplishment

during collaborative course through teaching experiences and their previous experiences. As Bandura (1997) stated that mastery experience would improve self-efficacy belief, pre-service teachers gained direct information about their skills from their students through their teaching experiences. Preservice teachers already learn how to create flexibility in the classroom based on their students' learning preferences, so they know how to design their lesson plan confidently.

Wang, Tan, Li, Tan, & Lim (2017) also revealed that mastery experience was found during the teaching process in different forms of activities, such as helping students to improve academically and personally. It also includes creating flexibility in learning tasks and environment. Wang et al., (2017) found that teachers' knowledge is an important source for a higher level of teachers' efficacy belief to teach low achieving students. Furthermore, preservice teachers with high competencies in teaching skills could meet their expectancies to work with students who struggle with learning because of their capability for providing adequate educational services for the students with learning problems. Thus, the proper selection and the comprehension of special education content is crucial in collaborative course to increase pre-service teachers' self-efficacy.

Having previous experiences or not with individual with disabilities affect preservice teachers' self-efficacy. FY and RS have previous experience and hold more a positive attitude with higher self-efficacy level compared to AD. Previous studies support this result that there is a significant relationship between previous experience with people with disabilities and the levels of self-efficacy in teaching students with special needs (Loreman, Sharma, & Forlin, 2013; Peebles & Mendaglio, 2014; Sharma et al., 2015; Specht et al., 2016).

However, AD experienced improvement in his confidence and sense of efficacy teaching students with learning problems event though before enrolling to the collaborative course he did not have previous experience and interaction with people or students with disabilities and he seemed to have a negative attitude toward students with learning problems. This case aligns with the previous study conducted by Peebles & Mendaglio (2014) who found that pre-service teachers without prior experience

dealing with people or students with special needs also improved self-efficacy levels after completing a course and field works. Thus, the design of the pre-service program was found to have the promising effect to improve pre-service teachers' levels of self-efficacy for those who have no or little prior experience with people with disabilities or students with disabilities.

This study was conducted in a specific context and had a limited number of participants, so the result of this study cannot be generalized to other context without careful consideration. However, this study is pioneering the collaborative effort across departments in Indonesia to improve future teachers' competence in inclusive schools. The results of this study can provide guidance for future collaborative courses which need to consider preparation process, materials selection, and course evaluation. Future studies are needed to provide accumulative knowledge about how collaborative courses integrate and blend between special education content and general education materials. When the material is blended, the investigation of how its impact to students' knowledge and teaching skills in inclusive classrooms is needed.

The collaborative efforts in this study was limited in the course content so future studies are needed to examine the course outcomes when both special education and elementary education lecturers teach the collaborative course together. Investigation of changes in teaching skills based on the evaluation of the quality of preservice teachers' lesson plans will provide evidences of the changes in teaching skills as suggested by Spooner et al. (2007) because the appropriateness of the flexibility in the lesson plan will affect the course outcome instead of self-efficacy beliefs solely. Even though the changes of pre-service teachers' self-efficacy level were found in this study, the follow up study is needed to capture the dynamic of self-efficacy when they involve in student teaching. It is because in Indonesia context there are still fewer teachers in inclusive schools who can be a positive role models for pre-service students and provide coaching.

Furthermore, how to maximize mentor teachers' contribution in course works and fieldworks requires more exploration. The availability of positive supports from the environment that guide future teachers to reflect and learn from their mistakes is still rare in

collectivist society due to some cultural values. Furthermore, investigation of cultural values to create a constructive atmosphere for preservice teachers to learn and enhance their teaching competencies through reflection and feedback is needed.

CONCLUSION

This study revealed preservice teachers' self-efficacy in instructional strategies changed after enrolling a collaborative course even though they have either some and none previous experiences with individual with disabilities. Qualitatively, preservice teachers felt more comfort and confidence to interact with students with special needs and provide support after they knew more teaching approaches for students with special needs. This study provided more empirical evidences of Bandura's social cognitive theory, specifically about how preservice teacher's self-efficacy in teaching students with special needs is developed based on verbal persuasion and mastery experiences. In order to provide more vicarious experiences, teacher preparation program should carefully prepare the site where the preservice teachers conduct field experiences and provide adequate training for mentor teachers in order to be a positive role model.

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