LLT Journal, e-ISSN 2579-9533, p-ISSN 1410-7201, Vol. 22, No. 1, April 2019

LLT Journal: A Journal on Language and Language Teaching
http://e-journal.usd.ac.id/index.php/LLT
Sanata Dharma University, Yogyakarta, Indonesia

THE NEW GENERATION OF HIGH QUALITY ESL/EFL TEACHERS: A PROPOSAL FOR INTERDISCIPLINARY TEACHER EDUCATION

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DOI: doi.org/10.24071/llt.2019.220104
received 2 January 2019; revised 11 February 2019; accepted 25 March 2019

Abstract

This paper argues that ESL/EFL teacher education programs should be the leading agents of change in transforming a nation. With its emphasis on English mastery, an ESL/EFL teacher education program generally produces teachers with sufficient English to comprehend development/global issues, such as climate change, poverty, and inequality. The emphasis on the mastery of English as the international language will make pre-service teachers relatively better able to understand and produce multimodal English texts around those development/global issues compared to pre-service teachers from other subjects. Building on the earlier work such as in Content and Language Integrated Learning (CLIL) and content area literacy, ESL/EFL teacher education can realize this vision with an innovative idea: an interdisciplinary teacher education program. This paper envisions that an ESL/EFL pre-service teacher education program collaborates with other subject area teacher education programs (e.g., social studies, science) working on an overreaching theme, such as sustainable development, or others. Indeed, for a developing nation, such as Indonesia, having quality teachers who can think and teach in an interdisciplinary manner can be very strategic not only in improving and transforming its education but also in accelerating its social and economic development.

Keywords: foreign language teacher education, educational transformation, educational change, interdisciplinary teacher education

Introduction

Recently, a number of research findings remind Indonesians that much work still needs to be done to improve the educational quality. While many are already familiar with the consistently poor results of the performance of Indonesian students in various national and international assessments, few realize what these results really mean in a big picture. An analysis from the data in the OECD's PIAAC (Programme for International Assessment of Adult Competencies) report (OECD, 2016) by Professor Lant Pritchett, an economist at Harvard's Kennedy School of Government, estimates that Indonesia needs about 128 years to reach the current level of literacy of average of OECD countries (Kaffenberger & Pritchett, 2017; Pritchett, 2016). More shockingly, this data used the samples from Jakarta, arguably the most developed part of the country. A more concerning

situation was further given by Professor Pritchett when analyzing the data from the Indonesia Family Life Survey (IFLS) from 2000 to 2014. He concludes that given the current rate of learning progress of Indonesian students, it would take 1000 years for Indonesian youth to reach the expected level of fundamental mathematical skills needed for the 21st century (Pritchett, 2018).

As a matter of fact, Indonesia has been experimenting with a number of education initiatives to improve its education quality. For example, Indonesia often changes its national curriculum to incorporate new models of teaching and learning. Since the reform era in late 1990s, Indonesia has had at least three types of curriculum: competency-based curriculum, school-based curriculum (a more decentralized philosophy), and 2013 curriculum (a more centralized philosophy with an emphasis on character education) (Wahyuni, 2016). At the school level, Indonesia has tried initiatives such as school-based management and international-standard school model (e.g., Coleman, 2011; Sakhiyya, 2011). Like many countries around the world, Indonesia also overhauls its teacher quality as a strategy to improve its educational quality (e.g., Chang et al., 2014; Jalal et al., 2009; Syahril, 2016). In fact, this is perhaps the biggest and most expensive innovation in Indonesian education (Fahmi, Maulana, & Yusuf, 2011). Unfortunately, none of these initiatives seem to elevate the nation's education quality as expected. Instead the results of Indonesian student learning have consistently been below quality expectations despite making a little progress overtime (e.g., Bank, 2015; Fasih, Afkar, & Tomlinson, 2018; Rosser, 2018).

This paper rests on a central premise – improvement of education quality should start from education schools, in particular in their role in producing quality teachers. While many scholars and policymakers around the world argue that quality student learning is mostly determined by teacher quality (e.g., Barber & Mourshed, 2007; Paine & Zeichner, 2012; Sanders & Rivers, 1996), I argue that teacher quality is mostly determined by the quality of teachers' teacher education.

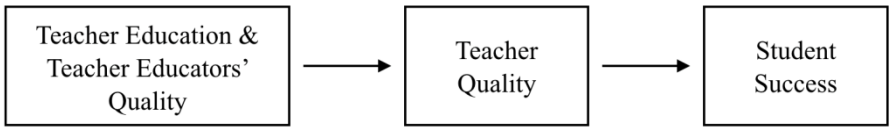

Figure 1. Teacher education's role in teacher quality and student success

Moreover, teacher education should be engaged not only in addressing the educational issues of the past and the present, but also in transforming its programs to meet the needs of the societal future. In this paper I would like to discuss how teacher education can be engaged in such transformation by focusing on the idea of interdisciplinary. The new generation of teachers in the 21st century, I argue, should have the capacity for interdisciplinary thinking. My discussion will start with the conceptions of teacher quality from the fields of second language teacher education and teacher education. After that, I will discuss the proposal for a new generation of teachers by focusing on the interdisciplinary idea. I will explain why the English Language Teacher Education can lead the proposal for an interdisciplinary teacher education. Finally, I will discuss the potential challenges for implementing interdisciplinary teacher education.

Teacher Quality: A View from Second Language Teacher Education

The new generation of ESL/EFL teachers must be of very high quality. In this section, I will look into how teacher quality is defined by the literature in the field of second-language teacher education (SLTE). In general, the discussion about teacher quality among SLTE scholars seems to focus on the question about the knowledge base for language teachers. Despite the establishment about language teaching as a field especially applied linguistics in 1960s, the discussion about the knowledge base of language teachers only started in mid 1990s. Scholars in SLTE (e.g., Faez, 2011; Farrell, 2018; Johnson, 2009; Richards, 2008) explain that there are three strands of knowledge base in SLTE.

The first one is the "knowledge about," which is related to the content of language and language learning, the structure of the language, and some largely mechanistic pedagogy to transfer the knowledge to students (behaviorist paradigm). This was the dominant view about what language teachers need to know and be able to do in language teacher education programs until mid 1990s. This includes topics such as second language acquisition, fossilization, input/output processing, contrastive analysis/grammar, error correction, discourse analysis, phonology, etc. For foreign language teacher education, the dominant view was that student teachers should take primarily or exclusively of an undergraduate major in a foreign language that focuses largely on literature, cultural knowledge, and language proficiency. The criticism was that little or no attention was paid to pedagogical knowledge, and language teachers, despite knowing the theory and principles of language teaching, often failed to apply such knowledge in their classrooms. This led to the next development.

The second strand of knowledge base in SLTE is the "knowledge how," which is related to how language teachers should teach, classroom teaching skills and pedagogic issues. Following the discussion about the knowledge base in general education research, the understanding about knowledge base of good language teachers also expanded to include concepts such as pedagogical content knowledge (Shulman, 1986), or often shortened as PCK. PCK refers to the knowledge teachers need to transform content into accessible and learnable forms. For example, Richards (1998) proposes six dimensions that constitute core knowledge base of second language teachers, which are: (1) theories of teaching, (2) teaching skills, (3) communication skills, (4) subject matter knowledge, (5) pedagogical reasoning and decision making, and (6) contextual knowledge.

The third strand expands the knowledge base to include how language teachers learn to teach. This strand is influenced by the social nature of learning, that learning is situated within certain settings and contexts that influence how learning takes place (Lave & Wenger, 1991). This view is drawn on sociocultural theory. It argues that teacher learning should not be viewed "as translating knowledge and theories into practice but as constructing new knowledge and theory through participating in specific social contexts and engaging in particular types of activities and processes" (Richards, 2008, p. 6). Therefore, the process of learning is seen as the process of socialization into a community of practice.

From these insights we can define a quality teacher as a teacher who has excellent knowledge about the content, knowledge about how to teach the content, and how to continue learning about teaching in their social settings/contexts. Next, we will reflect on the conception of teacher quality from the larger body of knowledge in teacher education.

Multiple Meanings of Teacher Quality

Having read the body of literature of teacher education, I have come to the conclusion that teacher quality means differently to different stakeholders in different contexts. For example, Kennedy (2010b) explains that the notion of quality in teacher quality can have numerous interpretations. Kennedy (2008) further suggests that the many definitions of teacher quality can be grouped into three broad areas: personal resources, performance, and effectiveness.

Personal resources

Personal resources are related with all the things teachers bring with them to the jobs (Kennedy, 2008). This category can include knowledge, skills, expertise, beliefs, attitudes, values, personality traits, and credentials.

a. Quality as tested ability

In this definition of quality, teachers with good test scores are regarded as quality teachers. The assumption is that the higher the test scores, the better the quality. Recruiters usually use this notion of quality to determine teachers they hire. Teachers with high test-scores are more likely to be recruited. Regulators sometimes use this interpretation of quality to determine which teachers need professional development programs or even to be removed from teaching duties. Teachers whose scores are below a certain threshold can be considered to follow a certain program to improve their quality or to be reassigned to non-teaching posts.

b. Quality as credentials

Credentials can be in the form of certificate or experience. For example, teachers with a license are considered to be the ones who have been professionally trained and have all the quality attributes to deal with teaching problems in various contexts. Credentials can also refer to the numbers and/or types of experiences. Teachers with many years of experience are usually considered to have a better quality than the ones with fewer years of teaching experience.

c. Quality as the ability to reason and learn from experience

Many teacher educators usually have the belief that teachers need to be lifelong learners. They believe that teachers need to continue to grow over time. To be engaged in such growth, the ability to reason and learn from experience is a key factor. Teachers are considered reflective practitioners (Schon, 1984). In this definition, quality refers to a teacher's ability for reasoning and learning from experience.

d. Quality as beliefs and values

Teachers with certain beliefs and values are considered to be more compatible and adaptable to the recruiters' school contexts. For example, religious or religion-oriented schools tend to recruit teachers with similar beliefs. Schools with a strong stance on student-centered learning tend to hire teachers who have the same philosophical view.

Performance

The second category, performance, is related to teachers' day-to-day work (Kennedy, 2008). This can include practices within the classroom, learning activities that are provided for students, and practices outside the classroom. Many stakeholders believe that what matters most in quality is not teachers' personal resources but what they actually do when teaching students. For example, teachers need to show how they successfully manage classrooms and engage students in quality learning (e.g., higher-order thinking). They need to show that they can create inclusive, caring, challenging, and stimulating classroom environments in which all students learn actively both inside and outside the classroom.

We need to be mindful of the attribution error of equating *teacher* quality with *teaching* quality (Kennedy, 2010a). Teacher quality is not the same as teaching quality. Attributing personal traits exclusively towards a teaching performance is problematic because situational factors – such as teaching time, teaching materials/resources, and teacher's work assignments –also influence teaching performance.

Effectiveness

The third category, effectiveness, refers to teachers' impact on students (Kennedy, 2008). This may include raising students' test scores, fostering student learning, increasing student motivation, and fostering awareness, responsibility, and engagement for social/community issues. In recent years, the definition of quality in education is often related to student achievement, in particular test scores. Thus, teacher quality is often associated to a teacher's ability to raise student test-scores. Stakeholders with this interpretation tend to think from the economics perspective, especially about the best use of the limited resources and expenditures in improving education quality.

A comprehensive view of these three areas (personal resources, performance, and effectiveness) will lead to a very ambitious definition of teacher quality that reflects the complexities of the work of a teacher. It is not enough for a quality teacher to have excellent personal resources (e.g., knowledge, skills, expertise, beliefs, attitudes, values, personality traits, credentials). He/she also has to produce consistent quality performances inside and outside the classrooms (while being at the mercy of situational characteristics) that result in effective impacts on student learning. While the conception of teacher quality from the field of teacher education looks more multifaceted compared to the one from the field of second language teacher education, I argue that we need to further expand this conception to address what is required for education in the 21st century.

A New Generation of Teachers: Interdisciplinary Teachers

Twenty-first century students live in an interconnected, diverse and rapidly changing world. Emerging economic, digital, cultural, demographic and environmental forces are shaping young people's lives around the planet, and increasing their intercultural encounters on a daily basis. This complex environment presents an opportunity and a challenge. Young people today must

not only learn to participate in a more interconnected world but also appreciate and benefit from cultural differences (OECD, 2018).

When thinking about what skills required by teachers to promote education and learning for the future, we need to start by asking what type of competencies will be needed for our students to be successful in the future. The world is changing especially with the rapid advancement of digital technology. To prepare students for the future, countries around the world are rethinking their education and redesigning the system. One of them is Finland, the country often praised for its excellent educational quality.

Starting 2016, all basic schools (students aged 7 to 16) in Finland have gradually introduced and implemented a new curriculum framework using an interdisciplinary approach in the teaching and learning, called "phenomenon-based learning" or learning by topics (Brown, 2017; Silander, 2015; UEF, 2017). In this approach, students use a topic (e.g., climate change, immigration, water) and look at it through multiple lenses from various subjects/disciplines. Thus, this approach transforms the traditional school approach, which usually divides learning into individual subjects such as math, language, chemistry, geography, etc. Instead, students learn all required knowledge and skills from across subjects by examining phenomena as a whole, like in the real-life context, utilizing the 21st century skills such as critical thinking, creativity, innovation, team work and communication. Moreover, in the phenomenon-based approach, learning is considered as a process that is built around students' personal knowledge-building and regulation of their own learning. Although the idea of integrating different subjects using themes and progressive pedagogical methods (e.g., inquiry learning, problem-based learning, project learning and portfolios) is not new at all in education, requiring all schools in a country to do this approach is indeed a bold decision. One central argument for the phenomenon-based approach is laid out by Professor Kirsti Lonka, a professor of educational psychology at Helsinki University, as follows:

> Traditionally, learning has been defined as a list of subject matters and facts you need to acquire - such as arithmetic and grammar - with some decoration, like citizenship, built in around it. But when it comes to real life, our brain is not sliced into disciplines in that way; we are thinking in a very holistic way. And when you think about the problems in the world - global crises, migration, the economy, the post-truth era - we really haven't given our children the tools to deal with this inter-cultural world. I think it is a major mistake if we lead children to believe the world is simple and that if they learn certain facts they are ready to go. So learning to think, learning to understand, these are important skills - and it also makes learning fun, which we think promotes wellbeing. (Spiller, 2017)

Indeed, today's global problems are complex and this requires an interdisciplinary approach to solve them. For example, solving the issue of climate change requires a comprehensive understanding about the influence of the oceans, rivers, sea ice, atmospheric constituents, solar radiation, transport processes, land use, land cover and other anthropogenic practices and feedback mechanisms that link this system of subsystems across scales of space and time (National Academy Sciences, 2004, as cited in Greef, Post, Vink, & Wenting,

2017). Therefore, this kind of approach calls for new professionals in the workforce who will need to develop new solutions and make decisions about the world's pressing issues, to deal with the complexities of the future society (Greef et al., 2017).

To respond to these challenges, we need a new generation of teachers produced by a reimagined teacher education system. Future teachers should be able to think and work in an interdisciplinary manner, the one that facilitates higher-order thinking skills, expands the explanatory capacity of knowledge, and provides the additional richness of viewing the topic through multiple lenses (You, 2017). Teaching in an interdisciplinary manner will make learning easier for students because they can see it as more realistic and useful; thus, it will result in an increase of students' motivation, and participation. We urgently need an interdisciplinary teacher education to prepare teachers who can teach in an interdisciplinary manner – a form of professional preparation and socialization that provides future teachers with "an education that intentionally fosters, across multiple fields of study, wide-ranging knowledge of science, cultures, and society and an active commitment to the demonstrated ability to apply learning to complex problems and challenges" (Greef et al., 2017).

I argue that the English (L2/FL) Teacher Education Programs can initiate an interdisciplinary teacher education programs that produce the new generation of teachers. Central to this argument is that one traditional emphasis of an English language teacher education program is the mastery of English language. The ability to receive and produce multimodal texts in English language, thus, the ability to comprehend many themes across disciplines in English language, will make pre-service English language teachers better able to comprehend many disciplinary texts in English compared to pre-service teachers in other subject areas.

The field of second language teacher education can implement an interdisciplinary teacher education by building on the work that has been conducted in Content and Language Integrated Learning (CLIL) approach in language learning. CLIL is defined as "educational methods in which 'subjects are taught through a foreign language with dual-focused aims, namely the learning of content, and the simultaneous learning of a foreign language"' (Marsha, 2002, as cited in Bonces, 2012, p. 179). Coonan (2017) explains that CLIL was developed in Europe in 1990s to improve the quality of a foreign language competence. A CLIL teacher can be a non-language subject teacher, a foreign language teacher (normally non-native), or a combination of both. The main difference, however, is that in the interdisciplinary teacher education, the teacher is trained to the specialist in both the language and the content. Expanding a bilingual instruction/CLIL type of program to a special interdisciplinary certification teacher education program can be done by integrating science and language programs, language and social studies programs, or language and STEAM (science, technology, engineering, arts and mathematics) programs.

Some recent work in the area of literacy also provides a foundation for an integrated learning of language and subject. The broader view of literacy and literacy teaching inspired by the New London Group, L2 and FL learning has

shifted the focus of language learning from "what texts mean in an absolute sense, [to] what people mean *by texts*, and what texts mean *to people* who belong to different discourse communities" (Kern, 2000, p. 2; emphasis in original). What is now considered as literacy goes beyond the ability to engage with a print text format but it includes multiple literacies in multiple modalities (Cazden, Cope, Fairclough, & Gee, 1996). This broader view of literacy and literacy teaching also calls for an L2/FL language curriculum that integrates language, culture, and literature (Kern, 2000; MLA, 2007). In fact, with this new view, "content literacy has the potential to maximize content acquisition" (McKenna & Robinson, 2006, p. 12, as cited in Kajder, 2007).

A German Model of Interdisciplinary Teacher Education

A model of an interdisciplinary program can be found in a new certificate on interdisciplinary teaching at the University of Gottingen, Germany (Bögeholz, 2018). This program has a focus on Education for Sustainable Development (ESD) with four subject specialist qualifications: natural science education, social studies, education for sustainable development, and bilingual instruction. Student teachers learn content knowledge and pedagogical content knowledge in two disciplines in natural science and/or social science, and in bilingual instruction. They also need to complete integrated practical modules in natural science, social science and bilingual instruction. In addition they also need to learn about ESD, starting from the content knowledge, pedagogical content knowledge, and completing an integrated practical module in ESD. Part of the program outcomes are teachers are able to transfer (inter-)disciplinary content knowledge and pedagogical content knowledge to design learning environment for ESD, develop, test teaching concepts regarding climate change, biodiversity, resource conservation, cooperate with schools and outdoor education institutions, motivate for SD-related lifestyle, and motivate to participate in the society.

Challenges

The proposal for interdisciplinary teacher education is still at the beginning stage. Further critical discussions need to be made to reach a more comprehensive understanding about this idea, what it means, and how to implement it. It also needs pilot programs to understand what it means to run an interdisciplinary teacher education in various contexts.

There are at least three foreseeable challenges in initiating and implementing an interdisciplinary teacher education program with an L2/FL language component. First, the field is still struggling with the theory and practice divide within the language teacher education itself (Farrell, 2018). Adding a new dimension, such as interdisciplinary approach, to the program may not be preferable when the core task is still not addressed successfully. Indeed, language teacher education programs are still struggling in identifying what program content is necessary to help novice teachers teach in their first years of teaching. Pre-service teachers seem to struggle to reconcile their own instructional histories as learners and the concepts they learn in SLTE programs (Johnson, 2013). This is the classic problem known as "apprenticeship of observation" (Lortie, 1975).

Second, in developing nations such as Indonesia, the concern about English language mastery is very high, and it influences how English teacher education programs shape their programs. The emphasis in content is actually not new both in the fields of teacher education and second language teacher education. In fact, the concern about the content mastery is one of the main critiques not only for language teacher education programs but for all teacher education programs in general all over the world. In Indonesia the concern of weak content mastery among teachers produced by teacher education programs is still felt until now. It is quite common for non-government schools to recruit teachers from top universities, not from teacher education programs, because they want to have teachers with stronger content mastery.

Finally, interdisciplinary teaching calls for a new professional identity and institutional culture among teacher educators. Instead of focusing on their own study programs or departments, they will have to break the common silos to actively collaborate in developing, implementing, and assessing an interdisciplinary teacher education curriculum among common topics/themes/problems. This sea-change will require a restructure of how faculty members work. The transitional process towards a strong collaboration across the university can be disruptive for many.

Conclusion

Today's world is interconnected and is rapidly changing as the impact of the exponential growth of digital technology innovations. To meet the challenges of the 21st century, education needs to be transformed. As a key component in quality education, having quality teachers is central in any educational transformation.

Up to date, education experts do not have a unified definition of teacher quality. The field of second language teacher education seems to focus the definition of teacher quality around the knowledge base: knowledge about what to teach, how to teach, and how to learn to teach. A more comprehensive framework about teacher quality is proposed by Kennedy (2008) by highlighting three areas of quality: personal resources (e.g., knowledge, skills, expertise, beliefs, attitudes, values, personality traits, and credentials), performance, and effectiveness.

Moreover, the quality of teachers in any education system cannot exceed the quality of its teacher education. Thus, teacher education is key in any educational transformation. In this paper, I put forward a proposal for interdisciplinary teacher education led by ESL/EFL programs. While the idea of an interdisciplinary education has been implemented in many contexts, with Finland being the leading country to include interdisciplinarity in its education system, the idea of interdisciplinary teacher education is relatively new. Building on earlier work in language teacher education such as Content Language Integrated Learning (CLIL) and content area literacy, I argue that ESL/EFL teacher education programs have a strong foundation to realize the idea of interdisciplinary teacher education.

While acknowledging the challenges in realizing the idea of interdisciplinary teacher education in ESL/EFL teacher education (e.g., theory/practice divide,

content mastery, the need for a new professional identity and institutional culture), I believe that teacher education, including language teacher education, should consider experimenting with the interdisciplinary idea for what we need now is not simply a reform but a transformation. A quote from Abraham Lincoln in the Emancipation Proclamation during the Civil War in the United States in 1863 perhaps best captures the spirit that is needed for educational transformation:

> The dogmas of the quiet past are inadequate to the stormy present. The occasion is piled high with difficulty and we must rise with the occasion. As our case is new, we must think anew and act anew. We must disenthrall ourselves, and then we shall save our country. (Abraham Lincoln)

Indeed we must think anew and act anew as educators and teacher educators. Even if you do not agree with the interdisciplinary teacher education proposal, I hope at least you agree that we need to join the urgency to rethink how education and teacher education can address the challenges of the 21st century world. Developing nations such as Indonesia must take a very active stance to reimagine what is possible for its education system for it cannot afford to wait 128 years or 1000 years as suggested by Professor Lant Ritchett. Indonesia needs a breakthrough, and interdisciplinary education and teacher education is a very compelling approach to be considered.

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