POLICY, THEORY AND PRACTICES FOR TEACHERS’ DEVELOPMENT- THE PROFESSIONAL LEARNING COMMUNITY FOR TEACHERS IN TAIWAN AS A PRACTICAL EXAMPLE

LIN, SZU-CHI

Teacher Education Research Center, Taichung University of Education, Taiwan

DOI: http://dx.doi.org/10.37500/IJESSR.2021.4315

ABSTRACT
This research predicts the analysis of teacher professional development policies, theories and classroom practice, and takes the practice of the teacher professional learning community in Taiwan as an example to examine how the concepts of teacher professional development policies change teacher professional development and classroom practice. The results found that the difficulties for teachers’ professional development policies and theories to enter the on-site classroom practice are as follows: first, curriculum conversion is difficult to produce cross-domain migration; second, cross-school and cross-domain teacher learning communities are difficult to survive; third, water-point learning. Theoretical aspect: The professional development of teachers must strengthen the collaboration between universities and school partners. 3. Practical aspect: The professional development of teachers must show that teachers are learners.

KEYWORDS: teacher professional development, professional learning community, teacher professional development policy

1. INTRODUCTION
The teachers’ professional development evaluation policy for primary and secondary school teachers implemented in 2009 for ten years in Taiwan. According to Lin (2020), this policy has undergone three main stages: steady development, engagement expansion, and reorganization. It has cultivated the acceptance of professional development among teachers. In the past decade, the policy has encouraged teachers to learn in the format of classroom open observations and experience sharing. In 2017, the Ministry of Education in Taiwan had developed a teachers’ professional development support system with integrated policies. This support system established the partnership between central and local governments, schools and teachers under the principles of self-motivation, mutual assistance and the common good, is hoping to offer professional, emotional support for teachers and solve problems together (Sheu, 2019 ; Lin & Chen, 2018). The classroom open observations and diverse professional development models expose teachers to various innovative teaching scenarios. That encourages teachers to learn excellent teaching skills in replace of inappropriate practical techniques.
The new support system for teachers’ professional development has promoted the professional learning community for primary and secondary school teachers. By joining different learning communities, teachers could learn new teaching techniques and methods, which focused on elevating students’ learning motivation, effects and strategy, etc. These communities also stimulated discussions between teachers, improved teaching quality and promoted professional development, which led to better teaching practices (Chang et al., 2011; Pan et al., 2010). This support system allows the teacher to learn from peers, pursuing excellence, and no longer being isolated when facing challenges. It also maximizes the effectiveness of teaching activities and equips teachers abilities to respond to society and global changes quickly.

However, the integration of policy, theory and practice is essential to the smooth policy implementation. If the policy was developed by beliefs and discussion, how would this policy impact on-site teaching models and practices in different subjects and areas? How would teachers change their teaching methods and contexts in practice when implementing the teachers’ professional development policy? This study aimed to collect, analyze and interpret from the perspective of policy, teaching theory, and on-site teaching activities. The aims of this study,

1) To explore the relationship between policies, teaching theories and on-site teaching activities.
2) To investigate teachers' professional development and teaching practice changes in response to relevant beliefs and discussion of teachers' professional development policies.

2. The structure and implementation of Taiwanese teachers’ professional development policy
The teachers’ professional development policy had put in practice for ten years. This policy has been an incentive rather than an obligation for teachers and schools. The high and vocational school participation rate is the highest in terms of school participation rate, exceeding 90%; junior high and primary schools also are about 60%. In terms of teacher participation rate, teachers from high and vocational schools are the highest, while nearly just 40% of junior high and elementary school teachers participated. In 2017, the teachers’ professional development support system had been developed after relevant policy integration. More details were presented below.

2.1 Resource reorganization
Though the ten-year implementation of teachers’ professional development policy has made positive contributions to teacher’s professional knowledge and ability, teaching practice and professional engagement. It was inevitable to see the flaws after a long-term implementation. For example, relevant engagements and activities has become routines. The new teachers’ professional development support system was developed by reorganizing and merging similar administrative activities, visiting, assessments and workshops.
2.2 Professional support

Within the teachers’ professional development system, there are 5 stages of teacher’s career, including the initial stage (less than 3 years), the competent stage (3-8 years), the transition stage (8-15 years), the leadership stage (15-25 years), and the consultant stage (25 years - Retirement). These are two different categories, normativity and autonomy. For the normative support system, teachers would receive basic support at different stages for their career, including the regulations for the further studies and research of teachers (certification for teachers’ professional development) and the teachers’ professional assessment system.

For the autonomous support system, at different career stages, teachers can seek for support to meet individual needs. The support can be internal or external, physical or digital, related to teaching professional or subject-based, individual or groups (Sheu Terng-Ji, 2019).

2.3 Talent development

There are four levels of talent development within the teachers’ professional development system, such as basic and advanced mentors, teaching consultants or lecturers. There are a tracking system for professional service performance and revised training courses and certification standards. The certification would be issued retrospectively after the completion of workshops. (Law and regulation retrieving system of the Ministry of Education in Taiwan, 2017).

2.4 Workshops

There were a series of workshops hosted by the teachers’ professional development system, such as public lectures, workshops for course preparation and discussion in practice, and group teaching observation activities. The series of workshops has created a trend among learning communities across different schools and pushed the teaching professional development further. Besides, the development and consultation of the teacher learning community are the core of the support system. It aimed to enhance teachers and schools’ professional development and to plan competence-based course designs, teaching strategies, and multiple-dimensional assessments. These systematic programs have invited experts and scholars to offer suggestions in building up the local teachers’ professional development system in various counties.

3. The exploration of policy, theory and practice of teachers’ professional development

Education policy, theory and teaching practices are the combination of power, knowledge and motivation. Each component is vital and intertwines together. Any changes of each component influence the whole system. On the same note, to achieve the ultimate goal of the teachers’ professional development system, the reconstruction of curriculum concepts, reorganization and culture reshaping are the essential steps to build a professional development-oriented of curriculum management.
3.1. Reconstruction of curriculum concepts of the teachers’ professional development system

In Taiwan, teachers respond differently to the implementation of teachers’ professional development policy. They have personal interpretations toward the policy under the consideration of their practical situations. They might follow or re-create the policy whenever or wherever possible according to individual preferences while some teachers would seem to comply the policy but refuse in the heart or even reject it. Teachers are the primary vehicle of curriculum reform. If these teachers are unwilling or incapable of taking part in curriculum reform, this policy's success would be hard to achieve, and no positive contribution would be made. Guo (2003/2008) has indicated teachers' perceptions of curriculum was the core of the curriculum consciousness, and the perceptions also represented as the core understanding of the curriculum. If a teacher has the curriculum consciousness and find his/her position in the curriculum, this teacher will have personal opinion about the curriculum. In the literature, it was shown that the majority of teachers were incapable of self-developed courses. They were inclined to be informed "how to do" rather than "why to do" regarding self-developed courses. In responding to the series actions for curriculum reform, some teachers seemed to comply the policy with personal strategies and others tried to make no changes toward the policy. (Chou, 2002; Ou, 2003).

From the perspective of policy-power, theory-knowledge, and practice-motivation, in the past ten years, the teachers’ professional development policy's implementation has offered multiple-dimensional support for teachers' professional development. In terms of policy, these activities included peer reflections, peers and experts visits, action research participation, research team assistance, public workshops, teachers exchange programs, collaborative teaching and consulting teams (The function of teacher professional development). From the theoretic aspect, the focus was the knowledge of curriculum and metacognition. Teachers' personal development were strengthened via expert consultation and peer discussions, professional development enhancement and stronger peer partisanship. For the viewpoint of motivation, in the past decade, teachers tended to enhance individual teaching profession utilizing standard discussions, the cycle of course preparation, observation and discussion, teaching portfolio, action research participation and the learning community (Xu, 2017.). The teachers’ professional development system can teachers to develop innovative teaching methods, induce internal teaching motivation and active reflections that are beneficial to accumulate teaching energy and redefine curriculum value. The teachers’ professional development policy encouraged teachers to perform reflections before, during and after teaching activity (Chien, 2008). The teachers’ professional development evaluation policy adopts a formative evaluation method. Teachers can choose to follow the policy or not. Regardless of their choices, teachers should be aware of and active to reconstruct curriculum concepts as the first step of developing professional development-oriented curriculum management.
3.2 The school reorganization for teachers’ professional development
The teaching structure should be adjusted based on development over time. The idea of school-centered management was getting popular, and the concepts of teacher leadership and team leadership were known by more people (Wu, 2009). From the point of policy-power, theory-knowledge, and practice-motivation, the Ministry of Education proposed the ideas of teacher leadership, teaching leadership and curriculum leadership. Under this policy, adequate resources were offered for staffs hiring, resources and financial provision. Local governments, school and teachers were allowed to make decisions. The feedbacks and responses of on-site workers were receiving more attention. The school-centered management was utilized with an emphasis on teachers’ professional development. From the theoretic aspect, diversity and openness are the center of this policy. With the theoretical knowledge as the fundamental basis, teachers and staffs were encouraged to create professional learning communities, further strengthen the cycle of course preparation, observation and discussion, and develop the culture of individual speciality for each school. Administrative departments should design to serve teaching activities. Parallel organization structure should be applied to change the culture and atmosphere of schools. The suggestion was to focus on the responses and feedbacks of professional curriculum development amongst teachers, which would increase teachers’ motivation and passion. The second step of developing professional development-oriented curriculum management is to empower the reorganization of the school structure.

3.3 The culture reshaping for the teachers’ professional development
Culture reshaping is the core of successful reform. From the viewpoint of policy, the Ministry of Education has clearly stated that teachers' ideal image's core values are “the principles abided by teachers, responsibility, dedication and sustainability” in the teacher education white paper. The goals of the pre-service teacher program were (1) to have the characters of caring, passionate and insightful, (2) to have an international perspective, critical thinking and problem-solving skill, and (3) innovative, collaborative and possessed practical wisdom (The Ministry of Education, 2012). The various stages of teachers’ professionalization should plan to align this goal. For the second goal, there were actions to enhance teachers' professional knowledge and ability, practice and engagement. The Ministry of Education has published the professional standard of teachers to illustrate the expectation further (Kuo, 2014). Based on this policy blueprint, teachers should adjust their on-site teaching context to increase their professional knowledge; the collaboration between teacher universities, primary and secondary schools should be increased. Diverse alliance approaches should be encouraged to lead teaching journey, value and reflection in practice. The power of teacher groups could be gathered to reshape the teaching-learning culture.

In terms of the practice-motivation aspect, the immature teaching professionalism was indicated in the literature. The continuous professional development remained as individual choices. Furthermore, negative cultures were found among the teacher community, such as unwilling to change or over-confident in individual teaching profession, unstable political status, inconsistent policy and reluctant
to follow policy (Lin and Jie, 2014). Therefore, an excellent policy without excellent execution might lead to limited contributions. With the ten-year implementation, unprecedented changes were shown among teachers, including classroom open observation, peer support and teaching portfolio. Nevertheless, the trend of autonomous learning behaviors among teachers has not shown. The third step of developing professional development-oriented curriculum management will be reshaping the teaching culture toward professionalism.

From the above discussion, the mutual and interactive relationship between policy, theory, and practice is clear, which is also highly associated with the teachers’ professional assessment system's success. Although it seemed straightforward for policy makers and teaching practice planners that the implementation would quickly impact teachers’ professional development system, the system did not endorse by all on-site educators. The discrepancy between the interpretation of policy followers and the practical conduct was revealed, which was the current study's focus.

Wahlström and Sundberg (2018) have conducted a study across different countries and regions. They investigated the situation of Sweden’s new curriculum policy conducted in the curriculum under the existing traditional, theoretical framework in Northern Europe. The detailed communications and information conveyance between policy, traditional theories and teaching practices among decision-makers were recorded. They have presented the changes of teaching models and practices in Sweden under the new curriculum. Teachers from various regions discussed and reflected on the cultural differences without being restricted to the traditional or existing framework through cultural exchange. They focused on finding the suitable path and incentive from policy, theory and practice, which was a positive experience for us. Hence, the author would explore the relation between policy, theory and practices further and pursue a better understanding of this relation and practical approaches applying in different districts and subjects.

4. The use of teacher learning community to explain the relationship between teachers’ professional support system and on-site teaching practices

In respond to the new curriculum implementation, a series of professional development and learning activities were held in various formats, including the public lectures from school principals and teachers every semester as well as collaborative course preparations, observation and discussion within teachers’ professional learning community. The series of activities were viewed as the most effective ways for teachers to enhance teaching skills. The teachers’ professional learning community's operation has used a tool to examine the policy implementation and the obedience of step-by-step theoretic principles. The author has reviewed the teachers’ professional development system's relevant policies and found the current policy is an incentive rather than an obligation for enhancing teachers’ professional knowledge and ability. It also funded various professional development schemes.
However, the effectiveness of this policy for continuous professional development and active knowledge acquisition for teachers remained unclear. It was also unknown the teachers’ professional learning community's function to satisfy the practical needs and offer higher education quality for students. The following section would explore the above further.

4.1 The link between policy, theory and practices

4.1.1 Policy: Turning schools into learning-orientated organization is needed for teachers’ professional development

In Taiwan, teachers in primary and secondary schools were familiar with the professional learning community. Its relevant programs have proposed when implementing the main policy, including the teachers’ professional assessment system, advanced teaching plans, group cooperation and learning, learning community and activating teaching methods. The Professional Learning Community has been included in the curriculum guideline of 12-year basic education. It was one of the official teachers’ professional development programs.

However, there were two main barriers, time constraint and no incentives, to prevent teacher’s involvement of professional development activities. The tangible solutions were to encourage effective but flexible participation in the teachers’ professional learning community and consequently turning schools into learning-oriented originsations.

From the point of “teacher autonomous learning”, “teaching professional autonomy”, ideally, teachers engaging in the learning community was the duty. However, it was not the legal duty for assessing teacher performance now. For some teachers, they viewed the participation as an option. They preferred financial incentives in return, ignored or even refused to participate. However, teachers understood that students’ high-level thinking and diverse performance of autonomous learning have gradually been the cores when applying entry for secondary schools and university instead of sitting in the exam. Furthermore, teacher have gained more control of their teaching activities under the new curriculum which encouraged peer collaborations to replace the individual working pattern.

Instead of emphasizing teachers’ workshop attending hours, the key is to encourage teachers to effectively transform acquired knowledge into professional development, conduct teaching activities alongside assessment, empower and support their thoughts and methods. If a school can become a learning-oriented organization, it is advantageous for all educators to receive meaningful reflections for improvement, consequently, resulting in a proactive, interactive group with the common good.

4.1.2 Theory: The boost of the collaborative partnership between teacher universities and schools is needed for teachers' professional development

The collaborative relationship of the professional partnership was the key to the teachers’ professional development. The learning community can be created by members from various schools and
universities to strengthen collaborations and form a mutual relationship. Experts can offer knowledge and techniques to schools; in return, schools can be research resources. A reciprocal culture would be created for professional development for both parties. The partnership between universities and schools for promoting curriculum reform and the teachers’ professional development were the core to integrate policy, theory and practices.

As Sun (2009) puts in, “University, secondary and primary schools are two distinct worlds. Both have distinct models, versions, structures, languages, methods of acquiring knowledge, awareness of questions and answer interpretations. The emphasis of the former body is science, literacy-research-orientated, generic and abstract, while the latter group focus on practice, practical and physical usage in particular situations. (p169-170) “It was not easy to develop the partnership between universities and schools. Recently, the teacher learning community has brought changes to this partnership. Instead of receiving lectures from universities teachers in a traditional way, secondary and primary school teachers started to have the state to participant and make decisions. For this partnership, the learning community functioned as a new organization with new rules, which gradually enhanced the integration of policy, theory and practice.

4.1.3 Practice: Emphasizing teachers as learners should be the core of teachers’ professional development

The Ministry of Education in Taiwan has turned to encourage a bottom-up method for the teachers’ professional development policy implementation under the principles of diversity, minimum limitations, simplification and flexibility. The policy was to

1. structure local teachers’ professional development support system,
2. establish a mentoring system for beginner teachers
3. offer resources and support for teacher autonomous professional development
4. enhance professional knowledge and ability through the learning community
5. encourage consultation and instruction form teachers with speciality
6. provide incentives for teachers’ professional development

The effective on-the-job training system has been developed in many counties to strengthen teachers’ ability in responses to on-site teaching needs and encourage teachers to be lifelong learners, consequently setting up a lifelong learning role model for students with this new policy.

There were diverse groups or approaches applying in the teachers’ professional development, such as various flipped classroom courses and learning communities. For example, AICT, systemic standards-based curriculum design, pagamo teacher empowerment workshop, Shareclass, course preparation with Wen Meiyu, Math café, MAPS-teaching & question design, and other professional development groups. More and more teachers from various regions would actively engage in those communities. In
some teachers’ opinion, “the teachers’ professional development was strongly associated with school culture, atmosphere and structure (Article title, 2021). Schools that were not endorsed such groups or actives were usually associated with unsatisfactory teachers’ professional development performance.” Nevertheless, others gave positive comments. The concept of integrating policy, theory and practice into professional learning meant to build up a lifelong learner image for teachers.

There were not many teaching and practical changes found for teachers’ professional development under the traditional lecturing style in the past. The current learning community challenged the old methods and developed a new teaching model, emphasizing profound reflections.

4.2 Challenges for teachers’ professional development in the aspect of policy, theory and practice.

4.2.1 Difficulty of transferring practical experience between different subjects
The discrepancy between policy, theory and practice was found mainly owing to the lack of multilevel transformation for curriculum. The government set out the national curriculum; Scholars suggested the ideal curriculum based on theories; Teachers interpreted their precepted curriculum; the practical curriculum carried out in the classroom and the curriculum experienced by students. The curriculum has transformed at each level which led different conflicts and challenges to teachers and schools.

Teachers can learn teaching theories from scholars and experts or understand effective teaching skills, methods and strategies from experienced or industry teachers. However, the shared experience, skills, methods or strategies might be difficult to apply directly in practices due to environmental differences and individual capabilities. If teachers with a speciality can join teaching activities which might empower other teacher and lead to successful curriculum transformation between different subjects.

4.2.2 The challenging survival of learning community between different schools and subjects
Unlike regular academic training or subject-specific empowering workshops for teachers, the teacher learning community across different schools or subjects aimed to increase personal knowledge and expertise. Furthermore, different school cultures and geographic factors also speeded up the termination of a learning community. Hence, the learning community was not beneficial for teaching knowledge transformation and internal teaching programs.

The teachers’ professional learning community is the group that followed policy trend and theoretical concepts for ideal practices. Ideally, members from different schools and subjects in the same learning community can scaffold for each other. This mix-background community would be beneficial in boosting stimulations and reflections, which encouraged collaborations and offered the chance to get the essence of knowledge from teaching journeys for each other. However, sometimes, individual factors and cross-school atmosphere play a negative role in operating the community.
4.3 Inadequate learning duration led to minimum influences
Teachers have always been criticized for any successful or failed curriculum reform. The constantly revised policy and additional theoretic knowledge were rarely applied in practical teaching activities. Teachers tended to hold back or had a short period of participation.

Though the value of cross-subject community has provoked teacher’s motivation to learn more, the short participatory duration was not sustainable and sufficient for effective influences.

The spirits of the teachers’ professional learning community were to create cross-subject groups between different schools and, more importantly, to emphasize “Competence.” Competence is a set of ability enabling students to acquire comprehensive knowledge and skills in the classroom. They were able to think systematically to solve problem in daily life. In comparison, teachers focused on subject-specific knowledge in a one-way and top-down teaching style in the past. With the update on professional knowledge and ability, teachers should adopt a new teaching style. Since the ultimate goal is to encourage everyone to be a lifelong learner, systematic learning blocks can used to fill into teachers’ fragmented working time. As long as teachers can obtain knowledge from different learning blocks, the accumulative learning would gradually form a complete domain knowledge.

5. CONCLUSION
Implementing teachers’ preprofessional development policy in Taiwan has offered a better mechanism, potential strategies and methods. However, there were diverse approaches observed in practice and different experience between teachers and schools. The need for teachers’ preprofessional development was seen, but there were various complicated issues for policy implementation in practice. From the past experience, the teachers' professional development policy in Taiwan was no longer promoted in a top-down, one-way dissemination but also took the bottom-up discussions into consideration.

For teacher to have an internalized awareness of professional development, relevant policy and regulation support from governments to cooperate with schools are needed. Schools should become learning-orientated organizations. Universities and school partners work hand in hand and emphasize teachers as learners. All these are important steps toward the integration of policy, theory and practice. Among these, the operating situation of the professional learning community has been a tool to examine policy implementation and the obedience of step-by-step theoretic principles. One of the important strategies is to create a teacher professional learning community, which allows a group of teachers who have the same mission and love to learn together to share their enjoyment. They would generate meaningful discussions and share knowledge. Resource integration and sharing through cross-subject and school strategic alliances are beneficial in synergizing a stronger power to expand the "colleagueness" between teachers and promote cooperation between different teaching groups.
However, there are many challenges to take and areas to improve to organize the cross-subject and cross-school teacher learning community to develop individual speciality courses at each school. For example, the difficulty of transferring practical experience between different subjects, the challenging survival of the learning community between different schools and subjects as well as the inadequate learning duration led to minimum influences. Now, it is time to slow down and offer customized training for different schools to meet their needs accordingly. Base on real-life situations to design the educational direction of the curriculum by pushing back what children need and to introduce appropriate lecturers and resources according to the school situation in response to the unique vision and needs of each school. Initiating teachers’ motivation to actively participate in a learning community is positive in better focusing on teaching activities and students learning. This gives the learning community a real meaning. The community will be more persuasive and influential in spreading information and sharing experience, so that teacher partners can enhance their professional knowledge and have a better vision.

REFERENCES
Article title (2021). Voice from the scene—practical experience of teachers' professional development. “TFT” Teach for Taiwan Retrieved from: https://www.teach4taiwan.org
Chang, S.J., Feng, L.Y., Pan, D.R., Wang, C.C. (2011). The launch of the teachers' professional learning community in Taiwan. Journal of Education Research, 201, 5-27.
Chien, M.Y. (2008). The Development and Implementation of Reflective Teaching Using Action Research. Journal of Secondary Education, 59(1), 22-35.
Chou, S.C. (2002). Curriculum policy and education reform. Taipei City: Lucky Bookstore.
Guo, Y.X. (2003). On Teacher's Awareness of Curriculum and Its Cultivation. Educational Research, 6, 33-37.
Guo, Y.X. (2008). The 20 challenges for teachers. Shanghai: East China Normal University Press.
Kuo, S.F. (2014). The Reflections and Prospects of Professional Teachers of the New Generation. Journal of Teacher Education and Professional Development, 7(1), 47-70
Law and regulation retrieving system of the Ministry of Education in Taiwan (2017) The amended working guideline for teacher’s professional development, Ministry of Education. Retrieving from https://edu.law.moe.gov.tw/LawContent.aspx?id=GL000567
Lin, C.C. and Jie, M.L. (2014). The Study of Comprehensive Teacher Leadership and Positive Teacher Culture. School Administrators, 89, 104-120.
Lin, S.C. (2020). An Analysis on Schmidt V.A.'s Discursive Institutionalism and its implications to Taiwan's Teacher Professional Development Policy. Technium Social Sciences Journal, 10, 79-90. MOST 107- 2410-H-142-020-MY3.
Lin, S.C. and Chen, S.H. (2018). An Analysis of the Policy Changes and Continuities of Teacher Evaluation for Professional Development - from the Perspective of Historical Institutionalism. *Journal of Teacher Education and Professional Development*, 11(3), 61-81.

Neumerski, C. M. (2013). Rethinking instructional leadership, a review: What do we know about principal, teacher, and coach instructional leadership, and where should we go from here? *Educational Administration Quarterly*, 49(2), 310-347.

Ou, Y.S. (2003). The reconstruction of curriculum paradigm. Taipei City: Liwen Publishing Group.

Pan, H.L., Wang, L.Y., Cheng, S.C., Wu, J.S. and Cheng, S.H. (2010). *Process and Outcome Evaluation for Secondary School Teacher for Professional Development on a National Pilot Program (II)* (Report Number) Ministry of Education in Taiwan. (In Chinese)

Sheu, T.J. (2019). The exploration of the framework of the professional development support system for teachers in primary and secondary schools: the perspective of intertwining norms and autonomy. *Taiwan Educational Review Monthly*, 8(2), 01-06.

Sun, C.L. (2009). The Development of University-School Partnerships: A Literature Review. *Journal of Educational Practice and Research*, 22(2), 151-180.

The function of teacher professional development (no date). An integrated platform for the professional development of primary and secondary school teachers of the Ministry of Education. Retrieved from: http://teachernet.moe.edu.tw/MAIN/Article/ArticleDetail.aspx?proid=A-2&aid=19

The Ministry of Education (2012). White paper on teacher education. Taipei City: The Ministry of Education (in Chinese). Retrieving from https://depart.moe.edu.tw/ed2600/cp.aspx?n=37734BA79B67A89A&s=AF04D533FC93AA8D

Wahlström, N., & Sundberg, D. (2018). Discursive Institutionalism: Towards a Framework for Analysing the Relation between Policy and Curriculum. *Journal of Education Policy*, 33, 163-183.

Wu, P.L. (2009). Teacher Leadership: Rationale, Implementation and Implication. *Journal of Research on Elementary and Secondary Education*. 23, 53-80.

Xu Yuling (2017). A case study of using teaching file sharing platform to promote teacher professional development. Hsinchu County Educational Research Journal, 17, 119-150.

Xu Yu-ling (2017). Case study on the use of the teaching archives sharing platform to promote the professional development of teachers. Hsinchu County Education Research Collection, 17, 119-150.