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The Needs Analysis of Supporting Beginning Teachers in schools in Remote Rural areas

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Abstract
This paper analyzes the need to support beginning teachers in schools in remote rural areas. An exploratory mixed-method design was used to gather data through affinity diagram technique and surveys. The results showed that the teachers need to upgrade and develop themselves personally, socially, and professionally. Many of the challenges facing the beginner teachers are beyond the reach of the pre-service classroom and preparation program in universities. Thus, the induction program designed from this study can be customized and applied to help the teachers. Beginning teachers should take it as a priority to attend seminars, train-ing sessions or workshops as they are in much need of more knowledge and skills.

Key Words: Needs analysis, beginning teacher, induction program, rural schools

Introduction

Beginning to teach is known all over the world as a particular and complex stage of teachers' learning (OECD, 2005). Many studies have shown that progressing from teacher education to the actual practice of the profession is difficult for many teachers, and this often has a great influence on the next stages of their career (Gold, 1996; Meister & Melnick, 2003; Watzke, 2007; Fantilli & McDougall, 2009; Kearney, 2011). Teaching for the first time could be a stress-ful experience, but the fact is this important transition period does not have to be full of tension and anxiety. The first stage of the teaching career is an im-portant factor that determines any teacher's professional growth because teach-ers' first experiences in school and classroom may either enhance or inhibit their lasting commitment to the teaching profession (Gilles et al, 2001; Faltado & Faltado, 2014).

In Thai schools, new teachers (those with three years and above teaching ex-perience) who are appointed as assistant teachers in remote rural areas schools often face the most challenging teaching assignments.

They are also overloaded with extracurricular activities and duties. They are usually given the toughest assignments in the worst classrooms, with inadequate curricular materials and supplies and little opportunity to pour out their frustra-tions or to

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learn from their peers.

In 2013, the Thailand Government introduced an induction program for as-sistant teachers. Assistant teachers are evaluated by their principal, a senior teacher and a member of the school board every three months throughout their first two years on the job. Evaluators receive a manual to support their work, and assistant teachers receive in-service training in the form of written material on how to perform their duties in school. If the assistant teachers do not pass the induction program test, they are required to quit their teaching job. However, there are no data on the delivery or completion rates, so the pass rate of the as-sistant teachers is not known (OECD/UNESCO, 2016). What Thailand's induc-tion program seems to lack is mentoring, a key component of most induction programs. Neither does it have any bearing on teachers' certification, which is contrary to international practice. Most countries with mandatory induction pro-gram require the successful completion of the program for full teachers' certifi-cation (OECD, 2005). Thailand should also ensure that the program is available to assistant teachers that are on temporary contracts. It is also important to de-termine what `support needs to be developed to help them to be competent and achieve their professional growth.

Theoretical Framework and Literature Review

Needs of supporting beginning teachers

Researchers argue that the first stage of teaching is crucial in the success, retention and development of teachers, and previous studies have covered a broad range of beginning teachers' needs. For example, Faltado and Faltado (2014) classified the needs of the beginning teachers as follows: job-related needs, professional development needs, environmental-related needs, social adjustment needs, and understanding legal rights. Fantilli and McDougall (2009) pointed out many unforeseen realities in the role of beginning teachers. These include the physical demands of being on a school bell schedule, teaching a split grade while simultaneously meeting the needs of exceptional students, dealing with personal emotions of anxiety, insecurity, frustration, isolation and even depression, and a lack of support from administration. Compounding these de-mands is the need to deal with the lack of financial recognition, planning, as-sessing, reporting, classroom management, meeting expectations, communi-cating with parents, and emotionally charged situations in the classroom. Con-sistent with Meister and Melnick (2003), they suggested that behaviour issues, meeting the diverse needs of students, time constraints, immense workload, lack of communication skills when dealing with parents in difficult situations were of primary concern.

Furthermore, Kelchtermans and Ballet (2002) found that the praxis shock of beginning teachers not only has to do with issues at the classroom level, but also with teachers' socialization in the school as an organization. It is argued that understand-

ing beginning teachers' micro-political experiences is an important issue in teachers' experience of their induction phase not only for the theory development on teachers' career-long learning, but also for improving the qual-ity of teacher education and induction programs.

Induction period of beginning teachers

Beginning teachers have many concerns, regardless of how well prepared they are upon graduation. This professional phase is known as induction and is a transitional period in teacher education, between pre-service preparation and continuing professional development (Huling-Austin et al., 1989). The induction period is the primary phase in the continuum of beginning teachers from their progression into the learning community and continuing professional develop-ment throughout their career. Researchers point out that the support and guid-ance in the first period of teaching are critical in arresting growing attrition rates and enabling the capacity to establish beginning teachers as valuable members of the profession (Smith & Ingersoll 2004, Wong 2004).

This induction period spans the first three to five years of a teacher's career. During this period, beginning teachers are unsure of their skills in classroom management, planning, finding classroom resources, time management, working with coworkers, and dealing with parents (Eisenman & Thornton, 1999). Teach-ers go through three stages of concerns during their induction period (Gilles, 2001). The first stage - the survival stage - beginning teachers struggle with per-sonal and professional competence. Their apprehensions include ineffective classroom management, student and peer acceptance and doubt of their teaching capabilities. In the next stage (mastery) beginning teachers' concerns are more situational and include skill mastery, teaching methods and classroom resources. In the final stage (impact), their concerns shift fully to how they are affecting their students.

The European Commission (2010) suggested that teachers' first period in their career is crucial for their development, both professionally and personally. As previously indicated, the term 'induction' is used to refer to various process-es by which newly qualified teachers are inducted into the teaching profession and is normally associated with the first years of teaching after completing a program of initial teacher education. Therefore, induction has a pivotal role in the continuum of teachers' lifelong learning, creating opportunities to relate to initial teacher education and to prepare teachers for lifetime career development. Three dimensions of the induction program were also distinguished: the profes-sional dimension, the social dimension and the personal dimension. These are the main ingredients for a coherent and system-wide induction program. These ingredients are translated into design criteria for an induction program based on the observation that beginning teachers need three basic kinds of support: per-sonal, social and professional.

Teaching in remote rural schools

The impact of a place is a key challenge to be considered in the induction period of beginning teachers. Barley (2009) pointed out that rural schools have difficulties in recruiting or retaining qualified teachers. Prospective teachers need help to understand better the nature of rural teaching. Despite many ad-vantages, challenges such as collegial isolation, low salaries, multiple grades or subject teaching assignments, and lack of familiarity with rural schools and communities face new teachers in rural schools. The nature of teaching can be different in rural areas than in suburban or urban areas. Because of the small size of rural districts and schools, teachers often need to teach multiple subjects and possibly multiple grades, sometimes in multigrade, mixed-age classrooms. These findings are consistent with those of Hellsten et al. (2011), who studied the experiences of beginning teachers in rural schools. Their shared themes re-lated to the challenges of working in rural communities include: acceptance; understanding the community; isolation; overlap between personal and profes-sional lives; and impact of the rural context on workload. In addition, the par-ticipants made recommendations for teachers considering employment in these environments as follows: to prepare to obtain a rural teaching position; seek out mentoring relationships, and make connections within and outside of the com-munity. Despite this, Peterson et al. (2018) summarize the expectation of rural teachers that their role extends beyond the classroom and they are to reciprocate with support for their community. Themes arising from the participants' initial teacher education experiences suggest the need to give greater attention to the significant lifestyle adjustments and identity transformations that rural students must make when moving from their communities to urban centers to complete their teacher/early childhood educator preparation.

Research Questions

1. What are the current competencies and needs of beginning teachers in remote rural schools?
2. What are the gaps between current competencies and perceived needs of beginning teachers in remote rural schools?
3. Are there any differences between perceived needs of beginning teachers according to (A) sex, (B) major course studied, (C) years of teaching, (D) level of teaching, (E) type of teaching, (F) subject to teach, and (G) number of teaching hours.

Methodology

This study used an exploratory mixed-method design to gather data from the beginning teachers in rural schools in Thailand through affinity diagram tech-nique and surveys. The mixed-method approach is characterized by the collec-tion and analysis of qualitative data from the initial affinity diagram in the first phase of research, fol-

lowed by the collection and analysis of quantitative data from survey in the second phase that builds on the results of qualitative method (Creswell, 2009).

The first phase, the affinity diagram is a tool used to gather large amounts of needs data from the panel and organize them into groups based on their rela-tionships (Straker, 1995; Haselden, 2003). The tool is commonly used within groups of beginning teachers and help to cluster needs data gathered during the groups' brainstorming. In the affinity diagram process, participants will have to find common needs of support for beginning teacher in remote rural schools through affinity diagram technique as follows:

1. Record each need on post-it cards. Each participant features needs of supporting according to his own experiences and writes it on a post-it card.
2. Look for needs that seem to be related. Each participant puts post-it cards up on the board along with arguing needs written on a post-it of its own. Then the other participants continue post-it by post-it as they place similar needs together and create new groups when needs do not fit into an existing cluster.
3. Sort cards of needs into groups until all cards have been used. The cluster of needs are rearranged after considering the relevant charac-teristics or relation ships and put together with the component of a need for a draft. Once completed, the affinity diagram is used to create items for survey in the next phase.

In the second phase, the author generated common needs for items of the questionnaire. The questionnaire was presented to the committees of the induc-tion program on beginning teachers' quality of life and professional develop-ment to examine its validity and to verify the components and common needs of support in the last step. Then each of the items was implemented to form the scale used to collect data through the quantitative method.

A survey was designed to ask the beginning teachers taking the training course about their competencies and training needs. In Section 1, the teachers were asked about some characteristic variables. In Section 2, 24 pairs of items were used to ask the beginning teachers about their perceptions of their current competencies and their perceived training needs in parallel. The pool of items was generated from the result of the affinity diagram. 24 parallel items were used in the present survey. The beginning teachers responded to the items about their perception of their current competencies in 24 areas on a 5-point scale (1 = very weak to 5 = excellent). For their training needs, they responded to the same 24 areas also on a 5-point scale (1 = no such need to 5 = very much need). All the completed surveys were treated anonymously.

Participants

The sample of this study was a population of beginning teachers selected using a purposive sampling during their 1-3 years of teaching experience. These teachers were

chosen because of their teaching status and involvement in an induction program for quality of life and professional development in remote rural schools under the patronage of Her Royal Highness Princess Maha Chakri Sirindhorn.

For the first phase, the qualitative component of the study, 14 teachers were chosen through purposeful selection unknown to the researcher. The ones in-vited for the panel brainstorming are from 14 schools in the Nan Province of Thailand.

For the quantitative phase, 111 beginning teachers, all of them in this pro-gram, from over 111 different remote rural schools of Thailand responded to the questionnaire by mail survey. The survey period lasted approximately three weeks. Because of some missing data, 102 forms were analyzed in total.

Analysis

In the first step of analysis, the author examined the overall mean scores and standard deviation of the beginning teachers' ratings on their current com-petencies and perceived needs. A current competency mean score higher than 3.50 on the 5-point scale was taken a favorable perception of their competen-cies; likewise, a mean score higher than 3.50 for a need means the beginning teachers see it as a strong need. In the next step, a discrepancy technique was used to analyze the priority need index (PNI) as below (Lane, Crofton, & Hall, 1983).

$$PNI = (I-D) \times I$$

In the final step, in o examining the perceived needs, the beginning teachers were categorized into 2 or 3 groups based on their personal characteristics and career: (1) sex, (2) major course studied, (3) years of teaching, (4) level of teaching, (5) type of teaching, (6) subject to teach, and (7) number of teaching hours. However, the data in this study are not required to fit a normal distribu-tion, so the hypothesis was tested by nonparametric statistics (Wasserman, 2007). Mann-Whitney U Test and Kruskal Wallis Test were used to examine whether any differences existed between the beginning teachers of various per-sonal characteristics and their school assignment.

Findings

1. Current competencies and needs of beginning teachers in remote rural schools

The first research question of the study was formed as follows: *"What are the current competencies and needs of beginning teachers in remote rural schools?"* To respond to this question the descriptive statistics, namely means and standard deviation of the teachers' current competencies and perceived needs. were calculated. The results of the analysis are presented in Table 1.

Table 1.
Means and Standard Deviation of the Teachers' Current Competencies, Perceived Needs and Priority Needs Index

	Com-petency (D) Mean	Needs (I) (SD)	(I-D) Mean	(SD)	PNI= (I-D)*I	
1. Planning for family finance and accounting	3.52	(0.84)	3.68	(1.47)	0.16	0.55
2. Enhancing health skills in self-care and students	3.68	(0.74)	3.67	(1.45)	-0.01	-0.04
3. Developing computer skills for teaching and performance	3.39	(0.88)	3.90	(1.47)	0.51	1.98
4. Using information technology for teaching and self development	3.76	(0.76)	3.88	(1.49)	0.12	0.47
5. Improving English proficiency	2.60	(0.94)	3.91	(1.40)	1.31	5.12
6. Compliance with teachers' ethics	4.23	(0.77)	3.70	(1.59)	-0.53	-1.96
7. Performing other duties in schools	3.28	(0.92)	3.79	(1.48)	0.51	1.93
8. Being able to follow rules for work-ing in schools	4.00	(0.85)	3.71	(1.53)	-0.29	-1.07
9. Engaging in school-communities' cooperation	4.06	(0.79)	3.65	(1.52)	-0.41	-1.49
10. Sharing information of students with their parents	3.99	(0.73)	3.67	(1.47)	-0.32	-1.17
11. Communicating effectively and listening to others	3.93	(0.76)	3.70	(1.50)	-0.23	-0.85
12. Participating in school management process	4.22	(0.59)	3.42	(1.58)	-0.76	-2.59
13. Mastering the characteristics of students and challenge their learning	3.44	(0.72)	3.93	(1.43)	0.49	1.92
14. Conducting proper teaching and learning activities	3.68	(0.74)	3.95	(1.45)	0.27	1.06
15. Mastering knowledge content in-depth	3.82	(0.65)	3.94	(1.39)	0.12	0.47
16. Designing and evaluating school-based curriculum	3.17	(0.79)	3.84	(1.40)	0.68	2.61
17. Practicing occupational skills for students that are suitable for the com-munity context	3.37	(0.84)	3.76	(1.40)	0.39	1.46
18. Doing classroom action research to encourage students' learning	3.43	(0.79)	3.87	(1.38)	0.44	1.70
19. Using materials, innovation, and technology in teaching	3.66	(0.75)	3.99	(1.38)	0.33	1.31

20. Enhancing ability to teach multi-grade for small schools	3.57	(0.89)	3.79	(1.41)	0.22	0.83
21. Enhancing ability to encourage Inclusive learning for students with disabilities	3.38	(0.94)	3.93	(1.35)	0.55	2.16
22. Applying positive psychology in teaching, class management, and counseling for students	3.68	(0.78)	3.86	(1.43)	0.19	0.73
23. Conducting assessment and evaluation of the process and result of learning	3.54	(0.75)	3.96	(1.40)	0.42	1.66
24. Improving quality in classroom practices according to professional development	3.76	(0.72)	3.93	(1.42)	0.17	0.66

The overall mean scores and standard deviation of the beginning teachers' rating of their current competencies and corresponding needs are presented in Table 1. An examination of the mean scores showed that for all the items, the mean scores for need were high (Ms>3.50), except item12, which is partici-pating in school management process. However, for the current competencies, although most of the mean scores were high, 8 out of the 24 items were aver-age (2.51-3.50). Thus, the beginning teachers did not develop themselves in (3) developing computer skills for teaching and performing, (5) improving English proficiency, (7) performing other duties in schools, (13) mastering the charac-teristics of students and challenging their learning, (16) designing and evaluating school-based curriculum, (17) practicing occupational skills for students that are suitable for the community context, (18) doing classroom action research to encourage students' learning, and (21) enhancing capability to encourage inclu-sive learning for students with disabilities.

2. The gaps between current competencies and perceived needs of begin-ning teachers in the remote rural schools

The second research question of the study was formed as *"What are the gaps between current competencies and perceived needs of beginning teachers in the remote rural schools?"* To respond to this question "priority needs index" were calculated. The results of the analysis are presented in Table 1.

Table 1 shows also the priority needs index (PNI>0) of the beginning teach-ers. The data show that for item1, item3, item4, item5, item7, item13, item14, item15, item16, item17, item18, item19, item20, item21, item22, item23, and 24 (17 out of 24), there was need for support to develop themselves.

3.The differences between perceived needs of beginning teachers accord-ing to variables

The third research question of the study was formed as *"Are there any dif-ferences between perceived needs of beginning teachers according to (A) sex, (B) major course studied, (C) years of teaching, (D) level of teaching, (E) type of teaching, (F) subject to teach, and (G) number of teaching hours?"* To an-swer this question "Mann-Whitney U Test and Kruskal Wallis Test analysis for difference between the means of teachers' perceived needs according to char-acteristic and school assignment variables" were calculated. The results of the analysis are presented in Table 2 and 3.

Table 2.

Mann-Whitney U Test Analysis for Difference Between the Means of Teachers' Perceived Needs According to Characteristic Variables

Compo-nents	Per-sonal	Social	Profes-sional		Total			
Groups*	1	2	1	2	1	2	1	1
Sex (N)	26	76	26	76	26	76	26	76
Mean Rank	54.73	50.39	56.15	49.91	53.15	50.93	55.06	50.28
Sum of Ranks	1423.00	3830.00	1460.00	3793.00	1382.00	3871.00	1431.50	3821.50
Mann-W hitney U	904.00	867.00	945.00	895.00				
Sig.	0.517	0.351	0.740	0.477				
Graduat-ed ma-jor(N)	26	76	26	76	26	76	26	76
Mean Rank	50.94	51.69	52.12	51.29	50.21	51.94	50.50	51.84
Sum of Ranks	1324.50	3928.50	1355.00	3898.00	1305.50	3947.50	1313.00	5940.00
Mann-W hitney U	973.50	972.00	954.50					962.00
Sig.	0.911	0.902	0.796					0.842

'Sex: 1=male 2=female

Major course studied: 1=sciences major and 2=social sciences

Table 2 illustrates Mann-Whitney U Test results that there are no statistically significant differences in the mean responses of the sample based on sex and major course studied variables.

Table 3.
Kruskal Wallis Test Analysis for Difference Between the Means of the Teachers' Perceived Needs According to Their School Assignment Variables

Components	Person-al	Social	Profes-sional	Total								
Groups*	1	2	3	1	2	3	1	2	3	1	1	3
Years o teaching (N)	57	14	31	57	14	31	57	14	31	57	14	31
Mean Rank	49.6	49.6	55.6	49.4	47.9	56.9	49.1	49.5	56.6	49.5	47.0	57.1
Chi-square	0.902	1.526	1.382	1.724								
df	2	2	2	2								
Sig.	0.637	0.466	0.501	0.422								
Level of teaching N	37	44	21	37	44	21	37	44	21	37	44	21
Mean Rank	50.86	55.99	43.21	53.9	53.2	43.4	49.8	56.6	43.5	51.7	55.9	41.7
Chi-square	2.697	1.995	3.002	3.276								
df	2	2	2	2								
Sig.	0.260	0.369	0.223	0.194								
Type of teaching N	38	47	17	38	47	17	38	47	17	38	47	17
Mean Rank	50.51	52.91	49.79	53.1	50.6	50.2	50.7	52.1	51.4	51.2	51.9	50.8
Chi-square	0.208	0.189	0.045	0.019								
df	2	2	2	2								
Sig.	0.901	0.910	0.978	0.991								
Subject to teach N	41	11	50	41	11	50	41	11	50	41	11	50
Mean Rank	48.39	59.77	52.23	50.1	51.5	52.6	51.6	49.4	51.8	49.9	52.2	52.5
Chi-square	1.354	0.156	0.060	0.181								
df	2	2	2	2								
Sig.	0.508	0.925	0.970	0.914								
Number of teaching N	44	44	14	44	44	14	44	44	14	44	44	14
hours Mean Rank	50.90	54.68	43.39	52.2	53.5	42.7	51.4	52.6	48.2	51.1	53.9	45
Chi-square	1.590	1.467	0.232	0.958								
df	2	2	2	2								
Sig.	0.452	0.480	0.890	0.619								

*Years of teaching: 1year, 2 years, and 3 years
Type of school: 1= primary, 2=primary and intermediate school and 3=secondary school
Type of teaching: 1=class teaching, 2=subject teaching, and 3=multi-grade teaching
Subject to teach: 1=compatible with major course studied, 2=not compatible with graduated major, and 3=compatible with graduated major but add other subjects
Number of teaching hours: 1= less than 15 Hrs./week, 2= 15-20 Hrs./week, and 3=more than 20 Hrs./week

Table 3 illustrates Kruskal Wallis Test results that there are no statistically significant differences in the mean responses of the sample according to years of teaching experience, level of teaching, type of teaching, subject to teach, and number of teaching hours variables.

Discussion

This study aims to measure the current competencies and needs of begin-ning teachers, analyze the gap between the current competencies and perceived needs of beginning teachers, and examine any differences between the per-ceived needs of beginning teachers according to (A) sex, (B) major course studied, (C) years of teaching experience, (D) level of teaching, (E) type of teaching, (F) subject to teach, and (G) number of teaching hours.

The results of studying needs in personal components of the beginning teacher show that the beginning teachers did not develop themselves at improv-ing English proficiency and developing computer skills for teaching and per-formance. Also, the results of needs in social components show that they did not develop themselves to perform other duties in schools. This may imply that the beginning teachers are much in need of assistance in terms of performing their jobs particularly in integrating English proficiency and technology skills into instruction and in obtaining instructional suggestions; and they would like to get some help from the principal or senior teachers on how to deliver instruction effectively and perform other school duties. The finding supports the view of Faltado and Faltado (2014), who explained that teacher education does not end when teacher candidates complete their bachelor of education degrees.

Setting aside professional development, which will occur throughout a teacher's career, initial teacher education continues, often implicitly, through the first few years of teaching. Graves (2002) supported this point, stating that the transition from the beginning years of teaching to becoming an experienced teacher was a time of chaos with very little support available. Computer skills and Information and communication technologies (ICT) are very important for beginning teachers teaching in remote rural schools. Computer and ICT are fa-cilitators of the learning process and a useful teaching tool. By creating new types of learning environments and opening a wealth of new educational re-sources, ICT can be used in facilitating teachers' training programs. It can support training programs by helping beginning teachers to enhance their basic skills, develop curriculum and assessment resources, increase access to infor-mation, and learn about new approaches to instruction (Moeini, 2008).

The results of the needs in the professional components show that beginning teachers in rural schools need to develop themselves in the following skills: mastering the characteristics of students and challenging their learning; designing and evaluating school-based curricula; practising occupational skills for students that are suitable for the community; doing classroom action research to encour-age students' learning, and enhancing capability to encourage inclusive learning for students with disabilities. The finding supports the view of professional de-velopment as continuous interactive learning through actions in the classroom. Developing mastery in teaching is a learning process, and as such it requires the coupling of practice and feedback (Ambrose, et al., 2010). Yuke (2004) sug-gested that professional development needs of begin-

ning teachers must be given important consideration to improve the teaching-learning process. Tendero (2002) points out that teachers have to draw on a body of systematic knowledge that requires personal and professional development initiatives to acquire a more comprehensive and reflective understanding of practice.

Regarding the differences between the perceived needs of the beginning teachers, it was found that there was no significant difference in terms of needs based on sex, major course studied, years of teaching experience, level of teaching, type of teaching, subject to teach, and number of teaching hours. This finding implies that the beginning teachers in rural schools have no difference in needs of assistance in terms of their performance and teaching. This, in turn, indicates that the needs of beginning teachers' attrition and retention are similar in each group. The findings coincide with that of Meister and Melnick (2003) who conducted a study on forty-two first and second year beginning teachers. They reported the following difficulties as primary concerns: dealing with be-haviour issues and diverse needs of students, time constraints, immense work-load, lack of communication skills when dealing with parents in difficult situations. Moreover, for the issue of years of teaching experience, Watzke (2007) studied the developmental change in a panel of beginning teachers for two years. The results confirm the findings of similar longitudinal studies, indicating teachers' concerns for impact consistently rank highest across time. Additional-ly, the ranking of concerns categories was not affected by the contextual varia-bles. Two aspects of impact, one academic in orientation and the second con-sisting of personal and individual concerns for students, emerged as distinct dimensions across time.

Although the beginning teachers in remote rural schools learned without professional development, there are many advantages. Boylan, et al. (1993) reported the long-term intentions of rural teachers to stay in rural schools. They noted that it was due to many reasons: the teachers' commitment to teaching, their perceptions that rural environments are healthy, safe, and clean places, have less crime, and provide the opportunity to bring up their families well. In fact, Sharplin (2002)'s study of pre-service teachers showed that because rural schools are small, teachers have more chances to be close with each other, their students, and the community.

In designing teachers' preparation programs, Jenkins et al. (2011) found that pre-service teachers should also be shown the positive aspects of teaching in rural areas, perhaps via the experience of a rural practicum. Teacher education providers can potentially play an important role in supporting their pre-service teachers to develop unbiased notions about rural teaching via modules or units of work that focus on effective rural teaching practice and the real experiences of rural teachers. Ultimately, the aim of such efforts would be to develop a more positive perception about rural teaching. Kline et al. (2013) studied the rural practicum for preparing a quality teacher workforce for rural and regional Australia. They found that support from both local communities and universities contributed to pre-service teachers' intent to apply for a rural post-

ing. The rural practicum provided realistic experiences for pre-service teachers and helped them overcome the preconceptions of rural work and life. Based on their findings, partnerships between teacher educators and community stakeholders have the potential to sustain pre-service teachers on rural and regional professional experience. Evidence also suggests that successful experience in rural settings is linked in turn to positive attitudes toward rural teaching appointments (Hudson & Hudson, 2008).

Conclusion

Many of the challenge needs reported by the beginning teachers in this study are beyond the reach of the pre-service classroom and preparation pro-gram in universities. According to the findings of this study, there are many un-foreseen realities in the needs of the beginning teachers. These include the per-sonal and social demands of improving English proficiency, developing com-puter skills for teaching and performance, and performing other duties in schools. Compounding these demands is the need to deal with professional de-velopment in the area of teaching-leaning, managing classroom, doing classroom action research to encourage students' learning, and enhancing the capability to encourage inclusive learning for students with disabilities. They also need to deal with a lack of financial recognition, planning, assessing, reporting, meeting expectations, communicating with parents, and emotionally charged situations in the classroom.

For the designing of induction programs, the current findings related to needs suggest that there should be continuous support of beginning teachers in remote rural schools, and if resources are available, they should be expanded. The induction program, which is the output of this study, may be customized and implemented. Beginning teachers should take it as a priority to attend semi-nars, training activities, or workshops as they are in much need of more knowledge and skills.

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