RESEARCH AND INNOVATION IN EDUCATION FOR SUSTAINABLE DEVELOPMENT

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ABSTRACT
Schools are essential for the revitalisation of the remote communities since they can build capacity for local sustainable development. If remote schools are to play this strategic role in community development, they need to reconsider their relations to the community and create learning opportunities that contribute to increasing community engagement in finding sustainable solutions. However, teachers seem to be ill prepared for living and teaching in remote communities and for addressing the distinctive educational needs of these settings. Teacher education institutions should introduce innovative approaches that encourage teachers to engage local human and natural resources in their teaching and provide an appropriate pedagogical context to develop school-community collaboration with mutual benefits. Place-based and place-conscious pedagogies provide such an approach. This chapter explores both theoretical and practical aspects of these concepts in the international literature and reflects on relevant practices of the Pedagogical Department of Primary Education at the University of the Aegean in Greece. Several suggestions are provided with regard to teacher education focusing on the curriculum, practicum, networking and the role of ICT.

KEYWORDS
place-based pedagogies, pre-service teacher training, remote communities, sustainable development

INTRODUCTION
All over the world remote communities are beset with serious problems. Demographic and socio-economic issues such as declining population, failing traditional
industries, decreasing incomes and services as well as increasing local unemployment, challenge their sustainability. To address these problems there is a need to undertake common projects where young people, professionals and local authorities share their ideas and know-how to plan and implement sustainable development initiatives.

Many researchers argue that remote schools are essential for the sustainability of local communities, since they can build capacity in these communities, both at a systematic level including economic development, and at the level of personal empowerment (Kilpatrick et al, 2002; White and Reid, 2008; Kinash and Hoffman, 2009; Wildy and Clarke, 2010). Unlike urban schools, a rural or remote school is more “visible” to inhabitants as well as the “backbone” for local life. According to Eppley (2015), in rural areas school-community boundaries function less clearly or differently than in other settings. The school is not only an important part of the community but a social center constitutive of the community. Because such a school is often the only major organization or government service remaining in remote areas, its role in the community needs to be reconsidered. In addition to meeting the educational needs of its students, it should also contribute to a local community development in a more direct way. Remote schools should become “the focal point of external economic and social influences, as well as political requirements for change and renewal” (White and Reid, 2008, p.2). However if remote schools are to play a strategic role in community development, they need to reconsider their relations to the community and build strong linkages for mutual support. They have to restructure elements of schooling to provide educational experiences which serve both educational needs and community sustainable development goals.

This new role for schools in remote areas requires the development of meaningful partnerships and joint projects. Different stakeholders and sectors need to be involved to create collective learning activities that respond to community needs. School and community resources need to be mobilized and teamwork and network building become an essential part of school and community culture. In this way remote schools can act as a catalyst for the development of local communities as learning communities which explicitly use learning for promoting sustainability (Kilpatrick et al, 2003).

Although the importance of school community collaboration has been stressed since the 1990’s (Miller, 1993; 1995), developing such collaboration in remote areas isn’t yet common practice. On the contrary, it seems that collaboration is still a
challenge. The conclusions of a themed issue on rural schools published by the International Journal of Educational Research in 2009, generally suggest that approaches to teaching and learning that include local stakeholders are needed. Tompkins (2008) goes even further and mentions a longstanding mistrust between rural communities and their schools. The reasons for this mistrust are that “schools are perceived by community activists as engines of talent removal or of cultural destruction (e.g., in Native places), and ‘community’ is viewed by school officials as something to liberate children from” (Tompkins, 2008, p. 180). Between the factors that have been identified in the literature to explain this lack of collaboration are the failure to recognize that a serious problem exists in a community, the ongoing professionalisation and centralisation of schools, the rapid turnover of teachers in remote schools, the reluctance of educators to promote schools as a resource for community development efforts, limited time and resources, the fact that this practice isn’t included in the traditional approach of schooling and institutional inertia etc (Miller, 1993; Liarakou et al., 2014).

ARE TEACHERS WELL PREPARED FOR LIVING AND TEACHING IN REMOTE AREAS?
Most of the factors mentioned earlier emphasize that although teachers play a critical role in promoting school-community collaboration they are not well-prepared to address the distinctive educational needs of remote communities. The lack of focus on the specificity of remote schools in teacher preparation has been stressed by many researchers (e.g. Down and Wooltorton, 2004; White and Reid, 2008; Kline et al., 2013). Difficulties are associated not only with professional but also with personal, social and cultural factors. With regard to instructional and logistical issues, deficiencies and concerns about various topics have been reported in the literature, such as specific rural teaching strategies, organization and administration of small schools, multi-grade and multi-age techniques, curriculum planning, access to resources, lack of access to experienced teachers, language, administrative work and extra duties teachers have to carry out (Gibson, 1994; Sharplin, 2002; Kizilaslan 2012). A critical point arising from the findings of the relevant studies is the deficiency of connectedness between teachers and the community. Teachers can hardly become familiar with the way of life in remote settings. According to Gibson (1994) who explored perceptions of newly appointed teachers to rural Queensland schools, pre-service preparation and in-service or induction programs fail to raise awareness of existing community problems and expectations, community involvement strategies etc. Recent studies confirm and enrich the list of these challenges. For example, Sharplin (2002), studying the expectations and concerns held by Australian pre-service teachers about rural and remote teaching, listed among the most critical
ones several social-personal issues, e.g. lack of familiarity with students’ cultural background, uncertainty about the experience of socialization into the community, dislocation from family and friends, developing new support networks, isolation, loss of anonymity in small community. Even in different rural settings, such as in Turkey, similar difficulties have also been reported (Kizilaslan, 2012): concerns about parents’ attitudes and indifference of the rural community to education, teachers’ lack of experience about life in rural areas etc. Without being able to immerse into the place, teachers usually feel they are foreigners, temporary visitors of these communities and are not interested in developing any school community collaboration. Several questions arise about the way teacher education curricula currently prepare teachers for the realities of remote communities. The dominant educational policies focus on standards and testing which result in a classroom-based pedagogy. Furthermore a centralised state educational system that leads to a standardized curriculum for all schools, regardless of their specific characteristics and locations, such as the differences between urban and rural schools. As Gruenewald (2003) notes, current educational discourse aims at standardizing the experience of students from different geographical and cultural places so that they can compete in the global economy.

These tendencies are reflected in pre-service as well as in-service teacher education. Even in countries with many remote areas teacher education curricula rarely include remote educational needs and aren’t effective in building pre-service teachers’ ability to recognize the differences across social, cultural and geographical domains. White and Reid (2008) characterize this dominant teacher education approach as ‘metro-centric’. This view results in teachers who are ill equipped to deal with the challenges of teaching and living in remote communities. The turnover increases and so does the distance between school and community.

PLACE CONSCIOUSNESS: A NEW CHALLENGE FOR FUTURE TEACHER’S EDUCATION
Existing literature acknowledges the need for specialized preparation for pre-service teachers that includes both social and professional aspects of teaching and living in rural contexts (Boylan, 2003; Hudson and Hudson, 2008; Beutel et al., 2011; Eppley, 2015). Teacher education institutions should equip students with the skills and knowledge that would enable them to develop actions towards sustainable development that involve the whole community. This requires an emphasis on both pedagogy and sustainable development. Place-based and place-conscious pedagogies could provide the framework for this innovative approach (Gruenewald, 2003; White and Reid, 2008; Comber et al, 2007; Gruenewald and Smith, 2008).
Place pedagogies highlight the importance of a situated context and emphasize the local and the known. They help teachers develop learning opportunities that are both meaningful and relevant to students because they are connected to their own communities. It is important to note that place-based pedagogy is not limited to outdoor activities. It aims to evaluate the appropriateness of our relationships to a specific socio-ecological place and this is what makes it so vital for community’s sustainable development. As Gruenewald (2003, p. 7) notes “a critical pedagogy of place encourages teachers and students to re-inhabit their places, that is to pursue the kind of social action that improves the social and ecological life of places, near and far, now and in the future”. Place-based and place-conscious pedagogies encourage teachers to engage local human and natural resources in their teaching and provide an appropriate pedagogical context to develop school-community collaboration with mutual benefits.

Such an approach needs considerable changes to the traditional teacher education curriculum. Pre-service training should include subjects and activities that help teachers to link their teaching and learning practices with the social and ecological dimensions of ‘place’ and particularly of remote communities. Initiating student-teachers into multi-grade classrooms and multi-age settings, including adults, would be an important dimension of the teacher education curriculum. Furthermore the teaching focus should move from the classroom-based to a new perspective that places the teacher in the broader community. This means helping teachers to understand the links between the classroom, the school and the community and develop community-oriented teaching and learning. As Halsey (2005) notes, pre-service teachers need the opportunity to contemplate how to participate and respond in terms of pedagogy and as a member of a community. Managing curriculum integration as well as developing teaching approaches and learning opportunities with content relevant to the local needs and interests are fundamental competences for a teacher intending to develop meaningful partnerships between school and community. These educational competences are coupled with research and negotiation skills. The dynamic model of ESD competences, proposed by the ENSI as a result of the CSCT project (Curriculum, Sustainable development, Competences, Teacher training), provides a basis for an innovative curriculum of teacher education for rural and remote settings. The competences proposed cover three levels of teacher’s role; as a guide of learning processes, as a member of the school and the educational community, as a member of the society. This model acknowledges the context dependency of competences given that action takes place in specific and various social and socio-cultural fields (Sleurs, 2008, p. 40).
Recently, a similar model of competences has also been developed by the UNECE (2012). It should be stressed that these kinds of competences are valuable not only for remote schools but also for urban ones. The difference is that in remote settings such competences are crucial for the revitalization and in some cases even for the survival of both remote schools and communities.

**INITIATIVES TO BETTER PREPARE FUTURE TEACHERS FOR REMOTE SETTINGS**

Roberts (2004, p.36) suggests four ways through which initial teacher education institutions can better prepare graduates, both professionally and personally, to teach in rural and remote areas: (a) specific courses relating to working (and living) in rural and remote settings, (b) providing and supporting practicums and internships in rural and remote settings, (c) recruiting trainee teachers from rural and remote settings, and (d) bonded teacher training scholarships. With regard to specific courses, studies from different countries conclude that there is not a “one best” model of teacher education, a generic one-size-fits-all program for every location (Eppley, 2015; Green and Reid, 2004). This is due to the variability of schools and communities characterized as rural and remote. Each one has distinctive geographic, sociocultural and socioeconomic characteristics that largely differ from those of urban and suburban schools and communities (Eppley, 2015). Such variability offers a reasonable explanation of why literature doesn’t provide specific and exemplary curriculum cases from teacher education institutions on remote settings.

On the contrary there are several practicum projects supplementing the preparation of pre-service teachers for rural and remote settings. According to Halsey (2005) practicum placements in remote areas for pre-service teachers offer numerous advantages for students, schools and communities. Practicum provides students with a first-hand experience of the teaching and social conditions that an appointed teacher faces as well as a smooth transition between university and work in a remote school. Halsey (2005) has also emphasized the critical role that partnerships between universities, rural schools and community should play. Indeed, several interesting examples have been reported which are usually organized by teacher education institutions in collaboration with teachers’ authorities and the local communities, e.g.: ‘Remote Rural Practicum’ in Alaska (Munsch and Boylan, 2008; Jones, 2011), the ‘Student Teacher Rural Experience Program’ (STREP – today RTPP - Rural Teaching Practicum Program) in West Australia (Lock, 2008), ‘Beyond the Line’, an award winning program providing pre-service teachers of various universities with first-hand experience in teaching and living in a rural community of NSW, Australia (Gregson et al., 2006; Beutel et al., 2011), the ‘Over the Hill’ in Queensland, Australia
All these university-based initiatives try to foster positive feelings about remote communities especially for city-based future-teachers. White and Reid (2008, p. 6-8) however wonder whether such practicum programs can help student teachers to understand the links between the classroom, the school and the wider rural community since “they don’t prepare them to participate and respond in terms of pedagogy and as a member of a rural community”. They argue that, by working with the notions of place-based and place-conscious pedagogies, a practicum should focus on developing a positive feeling about country life, with both its challenges and its possibilities for a lifelong teaching career. Such rural and remote experience programs help students to understand a particular rural place, in a way that allows them to feel more at home and confident. In this regard they present a practicum program, the ‘Apple’ experience, developed in 2005 and 2006 for future teachers at Deakin University in Australia, through which students developed a sense of place-consciousness. During this project three key issues i.e. funds of knowledge, multiple learning spaces and knowledge production teams were used to support students to relate to a remote community in a sustaining manner. Student teachers worked as co-researchers to document the funds of knowledge, i.e. knowledge and social practices of children’s everyday lives in the small remote community. Student teachers and children became buddies by exchanging letters. Children talked about their families, interests etc. So during their two-days field trip in the village to meet their buddies, student teachers were already familiar with pupils’ lifeworlds. The multiple learning space approach was also used in this program. Student teachers engaged with various learning spaces, such as university lectures, workshops, school classrooms, farms, rural community, on-line forum, e-mail communications with the school students, school’s website to learn about school’s life and infrastructure etc. Thus, during their field trip they had the opportunity to experience what they had already known virtually. Finally this program involved the student teachers working in knowledge producing teams. All participants (student teachers, children, teachers, teacher educators) worked collaboratively in small groups to develop multi-age resources on a theme of mutual interesting, i.e. the environment. These resources were used in multi-age groups during the field trip.

**THE UNIVERSITY OF THE AEGEAN AS A CASE STUDY**
The University of the Aegean is a quite new, public and a medium sized Greek University. Its schools and departments are located on six relatively big islands (area: 80 – 1,600 km², population: 21,000 - 115,000 inhabitants) of the Aegean Sea. The School of Humanities including the Departments of Pre-school and Primary
Education is located in the town of Rhodes, the capital of the island of Rhodes and the Dodecanese, one of the seven groups of islands of the Aegean Sea. The Dodecanese comprises about 160 islands, of which 26 are inhabited. The populations of these islands vary from one family to 115,000 inhabitants. There are about 220 kindergarten and primary schools and 102 secondary schools (High School and Lyceum) distributed on 17 and 15 islands respectively. It should be noted however that the strong majority of these schools (about 90%) are located on six main islands (Rhodes, Kos, Kalymnos, Karpathos, Leros and Patmos). Some schools have extremely small numbers of students and teachers. For example, the secondary school of Olympos on the island of Karpathos has only 15 students. Several schools also experience high teacher turnover.

About 250 undergraduate and 25 postgraduate students register every year at the Pedagogical Department of Primary Education (PDPE). Students come from different regions of Greece such as metropolitan, urban, rural, insular, mountainous, lowland, sparsely and not sparsely populated, bearing various specific cultural characteristics and traditions. It is interesting to note that one fifth of PDPE students come from the Dodecanese islands. Despite its special geographic circumstances and the close proximity to small and isolated islands, the Department doesn’t offer any specialization on teaching and learning in remote communities. However some dimensions of the place-based pedagogy that could produce a sense of remote place-consciousness among student teachers have been integrated in several courses such as environmental, cultural and art studies.

Within environmental studies students are asked to investigate local environmental topics and issues, such as endemic and endangered species, water and waste management systems, energy sources and use and so on. Besides the literature review of the topic students often participate in field studies to collect data, come in contact with local authorities and other professionals involved with the topic to analyse processes and policy priorities, interview local people to reveal their attitudes. Through this process students explore the various socio-political and economic mechanisms that affect the natural environment in the islands. They are encouraged to adopt a critical approach that is to recognize disruption, detect its causes and propose ways to address them. Through this inquiry many students coming from remote communities of the region increase their awareness of their own place and evaluate the appropriateness of local people’s relationships to its socio-ecological dimensions. For instance, students coming from the island of Milos investigated the unsuccessful efforts in 80’s to exploit the geothermal sources of
the island. They found out that local people are still very negative towards geothermal energy and concluded that such attitudes should change by considering the successful use of this renewable energy source in other areas of the world. Other students, and especially those coming from urban settings, come to know a remote community and familiarize themselves with the ecological and social dimensions of this setting. Through such an approach students acknowledge the pedagogical value of becoming involved in local contexts, collaborating with local people and developing a place consciousness.

Students are also involved in developing learning activities based on local environmental issues. They learn to use role playing, ethical dilemmas and other techniques for negotiating local socio-ecological topics. The data, information and material needed to organise these techniques stem from the environmental inquiries mentioned earlier. Furthermore they are initiated into teaching and learning approaches that could help them to build learning opportunities involving the whole community. For instance students learn how to make parish/community maps, a bottom-up initiative encouraging students and local people to map elements (natural or cultural) of the place valued by the community. They also become familiar with the forum theater, a technique that could help people to imagine common responses to community problems. Such approaches could enable future teachers to work with multi-age groups and develop school-community partnerships so that local issues can be addressed and future sustainability plans can be planned in common.

In cultural and art studies students are introduced in the cultural heritage of the region. Using an inquiry-based learning as teaching methodology, students discover the local cultural architecture, realize the value of the conservation of traditional settlements, discover local dialects and register local customs and fairytales. For instance they get familiar with life story interviewing, a qualitative research method for gathering information on the social tacit knowledge in rural and remote settings. Future students gather life stories from elderly persons to highlight various local topics, such as folklore, social practices, local history etc. They also get involved in interdisciplinary projects offering learning opportunities about the community life in rural and remote settings. For example a project named “Scarecrows in the land of Asclepius” was implemented some years ago within the frame of the ‘Art education - sustainability’ course. Asclepio is a picturesque village in the southern part of the island of Rhodes where the various cultural stratigraphy of the island is vigorously alive. Students, primary education pupils, teachers, professors, representatives from the local authorities and people from several communities
participated in this project. Through the lens of this interdisciplinary, experiential, collaborative project, they approached the land of Asclepius in order to learn about its historical and the cultural background and its current financial profile, to locate its problems, advantages and disadvantages and to intervene artistically through a holistic aesthetic proposal (happenings, exhibitions, festival).

Students of PDPE are also introduced in distance learning. Distance learning plays a critical role in remote schools. E-learning can be an important tool to support the learning procedure, to upgrade educational quality, and hence to meet educational as well as social targets. In particular students become familiar with e-learning platforms and tools which can be used in the future to develop learning opportunities both for pupils and people from local communities even the most remote ones. Such tools can also support the communication and collaboration of remote schools and communities. PDPE was partner of ‘NETwork Multigrade Education’ (NEMED) project, a Comenius network of remote schools from ten European countries, aiming at improving multi-grade teaching and learning. NEMED constitutes a virtual community of practice for rural and remote school teachers. Although the project lasted formally until 2007 and continued its activities through the project ‘Rural Wings’ (European Commission, VI Framework Programme) until 2009, it informally continued to bridging teachers during the next years. Within NEMED, an educational platform called Virtual Rural School was created, including training activities and spaces (forums, chats etc.) for exchanging opinions and ideas among students (multigrade teachers), teachers and tutors. The Virtual Rural School helped teachers to design a collaborative telematic project for subsequent creation and application among the schools. According to Barajas et al (2007) this project allowed teachers from different remote communities to know each other, communicate as well as to escape the isolation of the rural environment through the establishment of a large virtual community.

Finally research in PDPE attempts to foster innovative strategies for school-community collaboration in remote islands. That is for instance the case of a Ph.D. focusing on traditional art, as a means to construct sustainable development on a remote island through an intergenerational partnership. In this qualitative study, two theoretical frameworks that of critical place based education (Gruenewald,

2 For more information about the NEMED project, see:
http://www.ub.edu/euelearning/nemed/indexeng.htm
For more information about the ‘Rural Wings’ project, see:
http://www.ruralwings-project.net/RW/index.html
with that of cultural ecology (Dillon, 2012) are merged in order to research how an arts-based partnership, a cultural niche of all stakeholders on the remote rural island of Lipsi, may lead to ‘locative meaning-making’, learning for sustainable development and ultimately sustainable development of both the school and the community.

DISCUSSION
We have already described some approaches and activities through which the PDPE at the University of the Aegean attempts to prepare student teachers with regard to remote communities. These approaches and activities however are mostly developed separately. The dominant disciplinary approach of the Greek University doesn’t encourage the development of an integrated and coherent curriculum under which all these elements could converge towards a common purpose. However, in order for a teacher education institution, in Greece and anywhere, to achieve a place-based pedagogy which favours the preparation of future teachers not only to live and teach in remote schools but also to cultivate collaboration with local communities towards sustainable development, the whole program should focus on multidisciplinary, experiential and intergenerational approaches. Student teachers should become curriculum creators and be able to develop teaching and learning activities specific to particular locales. To create such curricula they should understand the distinctive characteristics of local settings and become researchers in documenting the knowledge and social practices of the community. Smith (2002) offers five approaches to place-based learning that can focus educational research into place-based practices: (a) local cultural studies, (b) local nature studies, (c) community issue-investigation and problem-solving, (d) local internships and entrepreneurial opportunities, and (e) induction into community decision making. A critical aspect that these approaches should also encompass is the inclusion of practices that help student teachers to understand the rationale of school-community collaboration and systematically equip them with strategies and tools to initiate and maintain such collaboration.

In this respect teachers education curricula should further integrate the socio-cultural and environmental aspects of local communities. Given that the Universities are located in different regions each one can take advantage of its surroundings to develop curricula focused on the specific characteristics of these regions. In Greece for instance the University of the Aegean can focus on the insular contexts, including the insular remote areas. In terms of research this (re)orientation asks for more relevant approaches such as field studies. In terms of teaching and learning,
the courses should prepare the students to use techniques and methods that encourage the exploration of locales as well as to provide them with the appropriate competences to develop collaboration with local people and engage the whole community. Although techniques such as those mentioned earlier (e.g. parish mapping, forum theatre) have already been used in some departments, such as the PDPE, they should further be infused in the whole curriculum.

Teaching should also further invest in exploring collaboration dimensions and fostering collaboration competences. If future teachers are to develop school community collaboration especially in remote settings they need to know, for example, how to communicate with locals, cultivate mutual trust, inspire students and citizens, plan collaboration, coordinate such projects and so on. Considering that all these activities (e.g. creating curricula, developing partnerships) are both innovative and open in terms of goals, planning, duration and results, future teachers should take advantage of research methods that will help them to understand and to improve the actions undertaken. For instance action research provides teachers with the tools needed to reflect on learning activities and improve their own practice. The ENSI-CoDeS project has already developed several resources regarding the theoretical framework, tools, good practices etc. for school-community collaboration for sustainability in various settings, including remote communities. The curricula of teacher education institutions may take advantage of these resources to develop new courses or enrich existing ones in order to equip students with knowledge and competences needed to develop school-community collaboration.

The internship program is certainly another useful tool to prepare students for a place based approach. According to Kline et al. (2013) the professional remote-based experience is a critical component for gaining confidence to work in these settings. However incentive schemes that encourage future teachers to work in rural areas are largely unknown or underutilized by the Universities (White and Reid, 2008). The experience of the particular case already analysed above (i.e. the PDPE) confirms this argument. So far the internship program of the PDPE takes place in the urban context of the town of Rhodes. Economic and practical reasons such as the cost of transfer to distant schools and the accommodation as well as the lack of a relevant policy have limited the collaboration with schools being in and around the town of Rhodes. Hence the students don’t have the opportunity to become aware of different school contexts such as those in remote schools either of the island of Rhodes or the neighboring small islands. In order for these students to become familiar with their future work context, the internship program should be extended beyond
the urban zone. It should also take advantage of the opportunities and challenges stemming from remote communities. The student teachers and especially those coming from these islands and are willing to do their internship in this context should be encouraged to do so. In this respect the University should formulate a new internship policy focused on this kind of communities.

However in what ways the University could overcome the economic/practical barriers? Possible solutions may be linked with collaboration with local authorities and local people. By developing such collaboration, the students can ensure lodging by local families and possible financing from local municipalities. Local cooperatives, enterprises and associations might also contribute to such collaboration in different ways. For example a women’s cooperative or a local hotel can provide students with room and board, and local cultural / environmental associations can help them to value local assets. In this way students’ integration in the local community can be easier, while in parallel place consciousness can be cultivated. In addition, such a policy must include mentoring, that is inspiring, preparing and supporting teachers appointed in such communities to become mentors of student teachers. The experience reported in literature regarding practicum in remote areas and especially practicum using a place-based approach (White and Reid, 2008) can inspire practicum planners. Moreover, the ‘Renewing Rural and Regional Teacher Education Curriculum’ (RRRTEC) project, organized by a group of teacher education faculties in Australia, provides a useful tool to support the implementation of the practicum in rural areas (Kline et al, 2012; White, 2011). RRRTEC is based on a website 3 which includes a collection of resources, such as rural education research publications, case studies, DVDs and photos, advices from teachers about their experiences working in rural locations and stories of pre-service teachers who have been placed in such schools. It also includes potential modules for teacher education courses (such as understanding rurality, getting to know rural students’ lives and preparing for rural professional experience). This application constitutes a good practice that could inspire teacher education institutions.

Furthermore, in order to support students and teachers-mentors participating in the internship program as well as the teachers who already work in remote communities networking should be enhanced. Enhanced support networks could lead to the integration of teachers and remote communities and mitigate the impact of geographical isolation. Networking could positively affect different levels. Professi-

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3 For more information about the RRRTEC project, see: www.rrrtec.net.au
onal connectivity is very important for teachers, especially the newly qualified ones who need the support of their experienced colleagues to address the challenges of being a teacher in a remote school and developing initiatives towards sustainable development. Mutual teacher support, mentoring but also peer-networking might be effective strategies for empowering teachers to better plan and implement such projects (Kadji-Beltran et al., 2013). Dissemination of best practice is also vital. Educational institutions and universities should play a key role in collecting and disseminating successful examples of teaching and learning in remote schools and developing networking between teachers and schools, not only from the same area but also from other remote communities of the world.

There is a general consensus in relevant literature that ICT could be very beneficial for remote schools (e.g. Davidson et al., 2007; Wildy and Clarke, 2010; Redding and Walberg, 2012). The use of distance learning technology enables small schools in remote locations to expand and supplement their curriculum while ICT facilitates teachers’ interaction and networking. However, although young people have access to digital technology in their everyday lives, it seems to be still peripheral to the learning process in the classroom in remote areas (Davidson et al., 2007). Certainly there are several European projects that aim at the design and implementation of ICT based distance learning frameworks (e.g. REVIT, 2011) but there is still much to do in this area. In addition teachers might use ICT for social networking but there are not many professional networks for remote teachers that could support them in their everyday work. Building communities of practices within teachers can mutually interact, exchange ideas and create common projects through Web 2.0 tools could be an effective strategy for empowering teachers in remote schools.

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