

## EDUsummIT: A Global Knowledge Building Community for Educational Researchers, Practitioners, and Policy Makers

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### ABSTRACT

The International Summit on Information and Communication Technology (ICT) in Education (EDUsummIT) is a global knowledge building community of researchers, educational practitioners, and policy makers aiming to create and disseminate ideas and knowledge to promote the integration of ICT in education. Four EDUsummITs have been convened in The Hague, Paris, Washington, D.C., and Bangkok resulting in the development of ideas and knowledge useful and useable to ICT in education communities in integrating digital technologies into educational practices worldwide. More than two-dozen presentations by EDUsummIT participants have advocated implementation of recommendations from this knowledge building community via national and international organizations such as UNESCO, IFIP, Kennisnet, ISTE, and SITE. This paper reports findings of an evaluative study conducted at the conclusion of EDUsummIT 2015 to investigate the effectiveness and impact of EDUsummIT. Evaluative findings are proposed by the authors as useful for continuous improvement of future EDUsummITs while also serving as guiding considerations for emerging communities of practice in other fields wishing to develop and disseminate recommendations for research-based best practices at the global level.

### Keywords

Knowledge building community, Research practice relationships, International, EDUsummIT

### Introduction

The International Summit on Information and Communication Technology (ICT) in Education (EDUsummIT) is a global knowledge building community of researchers, educational practitioners, and policy makers, aiming to create and disseminate ideas and knowledge “based on a shared understanding between researchers, policy makers and practitioners...to promote the integration of information and communication technology in education” (Voogt, Knezek, & Pareja Roblin, 2015, p. 620). EDUsummIT was founded in 2009, initially to extend and further develop the work undertaken by the authors of the *International Handbook of Information Technology in Primary and Secondary Education*, edited by Joke Voogt and Gerald Knezek (2008). In the first EDUsummIT the participants were closely related to the *Handbook*, but in the following EDUsummITs new participants who were active researchers, leading policy makers and practitioners of major educational organisations or institutions were invited by the steering committee to participate. In fact, in the most recent EDUsummIT, only about 10% of its participants were *Handbook* authors. Since its inception, EDUsummIT has been held four times, firstly in Hague (2009), then Paris (2011), Washington D.C. (2013), and most recently, in Bangkok (2015). As an invitational meeting, between 70 and 140 participants attended each EDUsummIT meeting.

While EDUsummIT participants meet biennially, thematic working groups (TWG) focusing on pertinent research topics in ICT and education are formed prior to the Summit to conduct research and prepare discussion papers. These papers are further developed during the Summit. The themes of the TWGs are decided by the steering committee and TWG leaders are identified. Once the TWGs are formed, specific topics of study of each TWG are negotiated between its leaders and members. There was a strong continuity of the themes of study, with only one or two themes being added or replaced in each EDUsummIT. For example, in EDUsummIT 2015, there were nine TWGs, and only two were new groups. After each EDUsummIT, TWG findings are published as research papers in international and national journals and presented at major conferences (Lai, 2015, also refer EDUsummIT website, <http://www.curtin.edu.au/edusummit/index.cfm> for further information). Action plans are also published in the EDUsummIT website (<http://www.curtin.edu.au/edusummit/>) to facilitate rapid dissemination of new ideas and knowledge created at the Summit. While EDUsummIT is an independent organisation, in the last several years it has been working closely with major international and national organisations which promote the use of information technology in education, including the Society for Information Technology and Teacher Education (SITE), the

International Society for Technology in Education (ISTE), Kennisnet (Netherlands), the International Federation for Information Processing (IFIP) Working Group 3.3 (Research into Educational Applications of Information Technologies), the Association of Teacher Educators (ATE), the Teacher Development and Higher Education Division at UNESCO, and UNESCO Bangkok. For example, the first and second EDUsummITs were sponsored by Kennisnet of the Netherlands and UNESCO Paris, respectively, and in EDUsummIT 2015 UNESCO Bangkok was a co-host and it involved actively in programme planning. UNESCO Bangkok researchers and policy makers also participated in the TWGs as advisors. Policy papers developed by several TWGs were subsequently published by UNESCO as policy briefs.

EDUsummIT is a unique model of a knowledge building community. It connects researchers with policy makers and practitioners at the international level to co-create knowledge. EDUsummIT is not a conventional conference where the presenters disseminate knowledge and the audiences consume knowledge, but a collaborative community of practice, and so far its knowledge building process has gone through four cycles of development. This article reports findings from an evaluation conducted at the conclusion of EDUsummIT 2015 to investigate the effectiveness of EDUsummIT as a knowledge building community, as well as its impacts on local and international research, policy making, and practitioner communities. In reporting EDUsummIT as a model of how a knowledge building community could be developed and sustained, the findings of this evaluation would provide insights for designing similar knowledge building communities aiming at connecting research and practice in other fields. Theoretical underpinnings guiding the EDUsummIT endeavour will be provided in the next section.

## **Theoretical underpinnings**

Concerns about the use of research generated knowledge for educational practice are not new and are not only voiced by researchers, but also by practitioners and policy makers (e.g., Broekkamp & van Hout Wolters, 2007; Levin, 2004; Vanderlinde & van Braak, 2010). The diversity and complexity of the contexts in which education takes place makes it difficult to make ecological generalizable statements that are only informed by the results of research. Although conferences are often thought to contribute to knowledge sharing and network building between researchers and practitioners, it is clearly shown in the literature that traditional role attitudes of the participants - researchers disseminate research results, which are consumed by intermediaries and practitioners - hinder the exchange of knowledge and experience and discourage co-creation of new knowledge and common agenda setting (De Vries & Pieters, 2007a).

A fundamental problem is that researchers and practitioners are interested in different types of knowledge. Researchers aim at contributing to generalizable statements that contribute to theory building, while knowledge generated by practitioners is often context specific and implicit. These two types of knowledge are referred to as Mode 1 and Mode 2 knowledge (Gibbons, 2000). Mode 1 knowledge is mainly generated by research done in universities or research institutions. Problems that are studied by researchers are derived from theory and accounted for within the research community. The dissemination and use of knowledge is hierarchical and linear. The production of Mode 2 knowledge, however, is not hierarchical, but based on problems defined and solved in the context of practice. This knowledge is practical in nature and context specific (Hiebert, Gallimore, & Stigler, 2002). The dissimilarities between how these two types of knowledge are generated and used lead to different perceptions on the relevance and usefulness of the knowledge that is created respectively in research and practice. As such, researchers need to acknowledge that while educational research can provide relevant knowledge useful in solving educational problems, educational practice cannot be based solely on research findings (Pieters & Jochems, 2003). A mechanistic conception of educational change where innovation is directed from “knowing based on research” to “implementing in practice” has been shown to fail (Burkhardt & Schoenfeld, 2003; Vanderlinde & van Braak, 2010).

To overcome the fundamental difference between researchers and practitioners in conceptualising how knowledge is developed and used, several scholars advocate forms of collaboration based on equivalence of expertise (Pieters & De Vries, 2007). It has been suggested that new forms of collaboration and interaction are needed in knowledge creation, with a shared responsibility between practitioners, policy makers and researchers, and explicit and implicit questions and insights play a role in the process of co-creation of knowledge. For productive forms of knowledge building Scardamalia and Bereiter (2003) used the term *knowledge building community* as “the production and continual improvement of ideas of value to a community, through means that increase the likelihood that what the

community accomplishes will be greater than the sum of individual contributions and parts of broader cultural effort” (p. 1370). Based on De Vries and Peters (2007b), Scardamalia and Bereiter (2003), and Wenger (1998), EDUsummIT as a knowledge building community is framed by the following principles: (a) heterogeneity – the composition of the community is diverse and equivalence of expertise is respected; (b) informality – a shared goal is informally developed and agreed upon; (c) interactivity – members fully engage in dialogues and discussions; and (d) effectiveness – outcomes relevant to all members.

## EDUsummIT 2015 evaluation

In the first three EDUsummITs, while the TWGs were formed prior to the Summit, pre-Summit work was primarily undertaken by TWG leaders. In 2015, however, all TWG leaders and members worked together online to prepare discussion papers and develop resources prior to the physical meeting, and some of the TWG members chose to participate in the virtual pre-Summit discussion only but not attending the meeting in person. Thus, in the 2015 EDUsummIT, there were two types of participants, the attending and non-attending. With a total of 132 participants in EDUsummIT 2015, 89 were attending and 43 were non-attending participants from over 25 countries. As can be seen from Table 1, of those who attended in person, the majority of them (51%) were from Europe and two Pacific nations (Australia and New Zealand), followed by North American (15%), and Asia (13%).

*Table 1. Participants of EDUsummIT 2015 by region*

Region	Attending (%)	Non-attending (%)	Total
Europe	25 (28.4%)	6 (14.0%)	31 (23.7%)
Pacific	20 (22.7%)	9 (20.9%)	29 (22.1%)
North America	13 (14.7%)	6 (14.0%)	19 (14.5%)
Asia	12 (12.4%)	15 (34.9%)	27 (20.5%)
Middle East	3 (3.4%)	2 (4.7%)	5 (3.8%)
South America	3 (3.4%)	1 (2.3%)	4 (3.0%)
Africa	0 (0.0%)	3 (7.0%)	3 (2.3%)
International organisation	12 (13.6%)	1 (2.3%)	13 (9.9%)
Total	89	43	132

Table 2 summarises the distribution of EDUsummIT 2015 participants by profession. It should be noted that the participants only indicated their primary profession in the questionnaire and we acknowledge that some EDUsummIT policy makers and practitioners would also undertake research, and many researchers also practiced as tertiary teachers. As can be seen from Table 2, the vast majority of the participants were researchers, and almost one-third of all the participants were returning participants (having participated in at least one previous EDUsummIT).

*Table 2. EDUsummIT participants by profession*

Profession	Attending (%)	Non-attending (%)	Total (%)	Returning participants (%)
Researcher	68 (77.3%)	39 (90.7%)	107 (81.7%)	37 (34.6%)
Policy maker	14 (15.7%)	2 (4.7%)	16 (12.1%)	3 (18.8%)
Practitioner	4 (4.5%)	2 (4.7%)	6 (4.6%)	2 (33.3%)
Commercial & Consultancy	3 (3.4%)	0 (0.0%)	3 (2.3%)	0 (0.0%)
Total	89	43	132	42 (31.8%)

In EDUsummIT 2015 there were nine thematic working groups:

TWG1: Smart partnerships

TWG2: Advancing mobile learning in formal and informal settings

TWG3: Professional development for policy makers, school leaders and teachers

TWG4: Addressing gaps and promoting educational equity

TWG5: Assessment as, for, and of learning in the 21st century

TWG6: Creativity in a technology enhanced curriculum

TWG7: Indicators of quality technology-enhanced teaching and learning

TWG8: Digital citizenship and cyberwellness

TWG9: Curriculum - advancing understanding of the roles of CS/Informatics in the curriculum

In the previous EDUsummITs, participants were assigned to TWGs but in 2015 they were free to choose which group they would like to belong to. As a result, there was an uneven distribution of group membership, as can be seen from Table 3.

*Table 3. TWG membership*

TWG	Attending	Non-attending	Total
1	8	4	12
2	11	2	13
3	10	3	13
4	7	4	11
5	8	7	15
6	11	4	15
7	14	8	22
8	10	11	21
9	7	0	7
Organisers	3	0	3
Total	89	43	132

### **The online survey**

After the conclusion of EDUsummIT 2015 all the attending and non-attending participants were asked to complete an online questionnaire consisting of open-ended and closed items. The questionnaire was developed by the authors and pilot tested by five researchers. The questionnaire was revised after the pilot study. Sixty-two (62) participants responded to the questionnaire, and 45 of them had attended EDUsummIT 2015 in person, accounting for 51% of all the attending participants. 17 respondents (38%) were leaders. Since several questions in the questionnaire were not relevant to the participants who did not attend EDUsummIT 2015 in person, and therefore there was a large amount of missing data in these items. Thus, the non-attending responses were not included in the analysis. Of the 45 attending respondents, 40% were male, 60% were female. In terms of profession, 70.4% of the respondents were researchers, 4.5% policy makers, 18.2% practitioners, and 6.8% had not specified their professions. The distribution of the attending respondents by profession was similar to the overall EDUsummIT 2015 population (refer Table 2). In the following sections responses to the key questions asked in the questionnaire are synthesised.

### **What motivated people to take part in EDUsummIT 2015?**

While undoubtedly there were multiple reasons for an invitee to decide whether or not they took part in EDUsummIT 2015, nonetheless from the responses three dominant themes have been identified. One theme that stood out was the desire to be part of a knowledge building community, “to contribute to something very worthwhile,” and “to give back to society.” These respondents had a strong desire to work with other experts in the field to initiate change. They were also keen to work together to “renew working relationships,” so as to engage in something which is useful. The following comment is an example from this category of responses.

[My motivation is] the need to be a part of an expert community that exchanges ideas and aims to influence research, practice and policy-making worldwide, as a means of empowering countries as a whole and education systems in a technology-saturated world. In addition, there are joint topics that need further elaboration - this can be done only via an international summit, which combined research agenda with policy, thereby enhancing the practice... (R13, Researcher).

The second theme identified from the responses, which was closely related to the first theme, was the desire for “international networking,” to gain an “international perspective,” and “to meet new people,” in order to enhance personal growth and development, as evident from the following comments:

The most valuable part about EDUsummIT for me is - having the time to work on a specific topic - taking the time to WORK on a specific topic (not listening to presentations but actually work together) - having the opportunity to

discuss and reflect with other policy makers and researchers on the topic and get inspired by this - use this inspiration for my own work... (R30, Policy Maker)

I enjoy working with scholars from other countries to gain a more international perspective. I personally learn a great deal from other group members... (R24, Researcher)

Most participants were motivated to take part in EDUsummIT 2015 for both reasons: contributing their expertise to a worthwhile cause and using EDUsummIT as a professional learning and development opportunity. As explained by the following respondent:

[I see] the needs of UNESCO and those it represents. [EDUsummIT] also has a reputational and stimulating professional development benefit for us all... (R38, Researcher)

The third theme was identified from the responses primarily contributed by returning participants, those who have participated in EDUsummIT previously. Several respondents mentioned that they participated in EDUsummITs in the past and thus had developed a sense of belonging to this community, so they just kept coming back (“the previous one I attended was very enlightening”). The following comment captured the personal and community needs which the returning participants found EDUsummIT could help fulfill:

I started as a participant in Paris...It is a great opportunity to meet like-minded scholars and to produce new knowledge. Just personally this had led to 3 papers that have been published as well as conference presentations and hopefully more of the same from this conference as well (R23, Researcher).

From the questionnaire responses, it is clear that the majority of the respondents had a strong sense of commitment to the EDUsummIT community. When asked whether they would attend the next Summit (to be held in Borovets, Bulgaria, September 18-19, 2017), 84% gave a positive response.

#### *EDUsummIT as a knowledge building community*

In addition to the research papers that the TWGs were charged to develop at EDUsummIT 2015, they also worked closely with UNESCO Bangkok specialists to develop policy briefs to be distributed and used at the Asia Pacific Ministerial Forum of ICT in Education (AMFIE) in 2016. Thus, the theme of EDUsummIT 2015, *Technology Advanced Quality Learning For All*, had a special focus on the integration of digital technologies in education in Asia-Pacific countries. The TWG research briefs include:

- Defining the research, policy, and practice challenges of the theme of study
- Synthesising relevant research
- Discussing and confirming examples of innovative practices, including Asian-Pacific examples
- Discussing implications and recommendations for researchers, practitioners, and policy makers

As mentioned previously, EDUsummIT 2015 was the first Summit where both leaders and members spent a lengthy period of time prior to the Summit to develop their topic of study. It would be interesting to see how this online component would enhance the knowledge building process. One indicator to show whether a community is effective is how active its members are in contributing ideas to the community (Lai, 2015). From the questionnaire responses it was found that participation was less active in the pre-Summit phase than during the Summit phase, with only 44% of the respondents indicated that they had participated very actively or actively during this phase (but 79% during the Summit). However, almost three-quarters (72%) of the respondents considered their TWGs functioned effectively as a knowledge building community prior to the Summit, and the percentage of positive responses increased to 86% during the Summit phase.

In the open-ended responses, the key issue that has been expressed by the respondents during the pre-Summit phase was the lack of active participation in some TWGs (“Members were busy and many were slow to engage in the drafting and discussion process online” (R33, Researcher)) and thus the lack of effective co-operation. However, in other groups, there was “good participation from group members” (R19, Researcher), and “contributions...were very

busy prior to the meeting” (R21, Researcher). The importance of good organisation and preparation by the TWG leaders was a key factor affecting how the pre-Summit discussion worked. As pointed out by a respondent:

[My] TWG functions effectively because the leader gave everybody the opportunity to participate. (R9, Researcher)

The responses on the effectiveness of the TWGs as a knowledge building community during EDUsummIT 2015 were much more positive. There was a general consensus that the two full days were used productively (and a few considered it too short). “The discourse was excellent...and [it] provided new insights...and possible solutions” (R16, Researcher), “the knowledge building and discussion very inspiring and effective” (R18, Practitioner) and by and large the TWGs were run effectively, and the discussions were mostly based on the work the participants did before the Summit. While the online participation has imposed more demand on the participants, some respondents considered it worth the effort:

Working before and during the EDUsummIT is very time consuming, but very effective: it allows you to work on a specific subject for several days with others that are similarly interested in the topic. It gives you “time to think”! (R30, Policy Maker)

While the discussions during EDUsummIT 2015 were intense throughout the two-day period, most TWGs managed to develop a friendly and open atmosphere, as evident from the following comments:

Our group was characterized by a strong feeling that anything you say and any idea you bring to the table is welcome and even desired, As a result, quite open and frank discussions took place, and this was very fruitful and evident in the ideas presented in the plenary session, and before that – in the cross fertilization session. The feeling of unfamiliarity quickly changed in our group to a feeling of comfort and easiness, creating the basis for upgraded outputs based on those prepared before the summit. (R13, Researcher)

In the TWG there was an open and collaborative atmosphere where everybody can comment ideas discussed in the TWG from his/her professional background. All ideas were accepted and developed...Each voice was taken seriously. (R15, Practitioner)

Again, the importance of good organisation and leadership was highlighted:

I think our group in Bangkok was incredibly productive and effective. People came willing to share, discuss and learn. The three leaders had met previously and planned the structure well – AND (most importantly) [they] were flexible in switching plans when needed – depending on input from the other participants. (R23, Researcher)

The participation of the UNESCO specialists was helpful:

Work done prior to [the] event served as [a] very effective platform on which to build experience of two group members of [our group] in Asia Pacific proved useful backdrop to mine... (R6, Practitioner)

Taking both the pre-Summit and Summit phases into account, the following comment reflects accurately the general feeling of the community.

The fact that the participants were mostly new was a barrier to their active participation in most cases; however, those that contributed were not necessarily those that came to the summit. Hence, a real community was developed not based on physical presence, but rather on the feeling of shared interests and a sense of responsibility to the topic of the TWG. The final results of the pre-summit work was quite comprehensive and indicated that although not all group members, for reasons of lack of time or not being familiar with other group members, made their contribution – still, the result was satisfying, as well as the process itself. (R13, Researcher)

Indeed, when asked in the questionnaire whether their expectation was met, 89% of the respondents considered it fully met or almost fully met.

## **Has new knowledge been created?**

There were 40 responses to the question of whether or not new knowledge has been created in EDUsummIT 2015. The majority of these responses (63%) were positive, affirming that new knowledge has been created in their TWGs, as evident from the following two comments:

Yes, I think new knowledge has been created by our group. The expansion of the database of creativity instruments is ongoing. The three papers we seek to write will have insights about teaching and teacher education, assessment and policy. More importantly the meeting has set the foundation for some good work that will emerge over time. (R23, Researcher)

Yes, for sure. We introduced an important concept of “technology discernment” which we think could become the main pillar to ensure effectiveness and sustainability in PD in technology. (R27, profession not specified)

In EDUsummIT 2015 a new TWG with a new theme (Curriculum – advancing understanding of the roles of CS/Informatics in the curriculum) was introduced, as a response to a new development in ICT in education. A member of this TWG confirmed that “regarding TWG 9 I would agree that new knowledge was created, because it was a new theme at EDUsummIT 2015, and just in time for many countries.” (R16, Researcher)

The following comment shows how knowledge has been developed from the online discussion during the pre-Summit phase, and then further developed during the face-to-face meeting.

The contribution of the discussions of the TWG were manifold in the sense of new knowledge creation and integration: - the contribution of the UNESCO representative was a more enhanced focus on policy, especially issues related to the Asia-Pacific area; - discussions assisted in the notion of the need to elaborate a relevant model for our topic, that was developed in the prior summit; - a clearer notion of the connection between research, practice and policy was established; - models for our topic from different countries were presented and we exchanged information and established ideas for a more generic model. (R13, Researcher)

### *What was the impact of EDUsummIT on practice and policy making?*

While in the closed items almost three-quarters of the respondents were positive about the potential impact of EDUsummIT on educational research (73%), policy-making (73%), and educational practice (71%), in the open-ended question when the respondents were asked to elaborate on their responses, only 41% (12 out of 29) of the respondents thought that EDUsummIT 2015 would have an impact on policy making.

Most respondents thought that EDUsummIT 2015 would have an impact on educational research but they were not sure about its impact on policy making, as “this highly depends on the individual participant of EDUsummIT” (R30, Policy Maker). However, since EDUsummIT 2015 worked closely with UNESCO Bangkok, and the policy briefs developed by the TWGs would be distributed during AMFIE that “we have more chance than ever, and that there is more need as well. Collaboration with UNESCO Bangkok will be a key partnership that can make this happen more effectively” (R38, Researcher). The collaboration with UNESCO Bangkok in EDUsummIT assured that there would be impact on the policy side. To increase impact, support from international organisations is essential, as commented by the following respondent:

The EDUsummIT needs to be made more public and well-known, include more participants and work in collaboration with UNESCO and possibly more international organization. Currently, some countries are influenced dramatically by EDUsummIT’s outcomes, and some to a lesser degree – this needs to be re-examined and perhaps studied in a more cultural context (R13, Researcher).

## **Future of EDUsummIT as a knowledge building community**

How EDUsummIT could be further developed and strengthened in order to increase its impact and sustain its development was the major question in the minds of the EDUsummIT participants. From the questionnaire responses

we have identified three ideas which would need consideration. They are the need to: (1) maintain a clear focus; (2) broaden participation; and (3) develop a permanent structure.

### **Maintaining a clear focus**

The importance of maintaining a clear focus for EDUsummIT was raised by several respondents in the evaluation. Participants need to understand clearly the purpose of EDUsummIT, that is, a knowledge creating community aiming to create and recommend solutions to policy makers and educational practitioners of how ICT should be integrated into teaching and learning. To achieve this goal, and to increase EDUsummIT's impact, several respondents expressed the need to consider carefully the composition of the TWGs, in terms of how leaders were selected and members invited. To create knowledge effectively as a community, a strong commitment to the cause of EDUsummIT is essential and participants also need to have a good understanding of the research or practice issues related to their themes of study, as explained by one respondent:

[We need] more commitment from folks who sign up to be part of EDUsummIT...I think it is great to be inclusive but I think it creates difficulty in who is committed and who has enough background and experience to contribute to the EDUsummIT (R24, Researcher).

If commitment is essential, there is a question of whether or not two tiers of participation (attending and non-attending) should be continued in the future. R24 expressed her opinion further:

There were a number of people assigned to the group and it was unclear who intended to participate in EDUsummIT and who did not. I think it should be an exception that people sign up to be in a working group and are not in attendance. It is difficult to communicate with a large number of folks who are unfamiliar and you will never meet (R24, Researcher).

The issue of whether the two tiers of participation should be continued in the future, and if it is continued, how it is managed to benefit both the attending and non-attending participants should be considered carefully. The potential EDUsummIT participants are ICT experts; it is thus natural to engage them in virtual participation and discussions. However, the time and effort required to organise and manage both the online and on-site communities may outweigh its benefits.

### **Broadening participating**

As a knowledge building community, it is important that EDUsummIT participants know each other, and as such there is a need for continuity in TWG leadership and membership in order to facilitate development of ideas. However, new participants should also be recruited to avoid EDUsummIT becoming an insular group, as commented by the following respondent:

I thought [EDUsummIT] was quite insular and could be opened up to more people contributing to initial ideas through the use of technologies and these ideas refined during by the working groups. (R41, profession not specified)

In EDUsummIT 2015, only a small proportion of the participants were policy makers and practitioners. The questionnaire respondents clearly expressed the need for broadening participation, as explained by one respondent:

EDUsummIT needs its own infusion of broad-based support partnerships that bring in the commercial/governmental business elements...UNESCO provided a much needed balance between academics and policy makers but there was still an obvious hole. More educators should be offered the chance to interface with those outside academia if they are going to increasingly be expected to incorporate their needs into research and planning programs. (R8, Practitioner)

Also, as a global community, EDUsummIT should have a more significant representation from less economically advanced countries:



It is important that (1) members of this community origin from all over the world. (2) [in] the community there are experts from different branches related to education. (3) the EDUsummIT community is opened [sic]. These principles would be important to apply also for the future. (R15, Practitioner)

This is challenging, as EDUsummIT has not been able to secure long-term sponsorships to support travel for increasing participation from developing nations.

### *Developing a permanent structure*

Several respondents raised the need to develop a permanent organisational structure for EDUsummIT. As pointed out by a leader respondent, this would increase the impact of EDUsummIT on policy making.

The community is too small with too few high level decision makers and policy leaders involved. It is a diverse and interesting community with many good ideas who enjoy talking and listening to each other. There is no permanent structure for the community, and things are decided on an ad-hoc basis. To have an impact, there needs to be a permanent organizational structure with a transparent decision making body with some sponsorship from prestigious bodies and agencies. The goals and ambitions are great – realizing them even to a small degree remains a serious challenge (R2, Researcher).

With a more permanent structure, it may be easier to get funding support from international organisations, since “expecting so many to come at their own expense is expecting quite a lot...that practice is simply not sustainable” (R2, Researcher), and funding support will also allow participants from economically less advanced countries to participate.

However, some EDUsummIT participants may not welcome such a move, since a loosely structured organisation may be more conducive to creating knowledge, as explained by the following respondent.

It seems clear from the plenary discussions about creating a management structure that currently EDUsummIT is more of a network than a professional organisation. So it operates on shared understandings rather than explicit guidelines. While guidelines might give direction to those responsible for planning TWGs they might also be resisted by those who prefer just to meet and see what emerges when interested professionals work together. (R4, profession not specified)

The following comment seems to provide a good summary of the key issues that EDUsummIT should consider in the future:

A careful nomination process for invitations for the EDUsummIT. Putting in an effort to get more representatives from developing countries. A good balance between veterans and newcomers. Having good TWG leaders that preferably attended earlier EDUsummITs. Making sure that we address new topics; leave room for innovations in the topics we address. Be action/output oriented (R16, Researcher).

## **Discussion and conclusion**

Integrating knowledge generated from researchers and practitioners is a demanding task and EDUsummIT was established to tackle the task of developing understanding of how research and practice knowledge could be integrated in the field of ICT in education. In this section we use the four principles for developing effective knowledge building communities as discussed in the “theoretical underpinnings” section to discuss the implications of our findings (Wenger, 1998; De Vries & Pieters, 2007b). First, this study showed that EDUsummIT was highly interactive. EDUsummIT was a community where knowledge was created through an open and ongoing dialogue among researchers, policy makers and practitioners. Knowledge creation happened both during the online discussions and in the face-to-face meeting where participants discussed problems and offered solutions of what they experienced in the implementation of information and communication technology in practice. This discourse reflected Mode 2 knowledge more than Mode 1 knowledge (Gibbons, 2000). Second, the findings of the study showed that participants had three major reasons for participating in EDUsummIT. They wanted to be part of a collaborative effort to help change education given the

technological developments that impacted on our society. They wanted to be involved in an international network, and for returning participants, they appreciated being part of the community as such. These reasons pointed to the informally shared and agreed upon goals of EDUsummIT, which can even be strengthened in the future by keeping a clear focus on the purpose of EDUsummIT. The researchers, policy makers, and practitioners wanted to be equal partners in this unique knowledge building community. Third, although EDUsummIT intends to be heterogeneous, our findings showed that this was a potential threat to the effectiveness of the EDUsummIT, as researchers participating in EDUsummIT 2015 outnumbered practitioners and policy makers. To realize a more balanced distribution of membership should therefore be a major concern of the EDUsummIT organisers. From the evaluation reported in this paper, it is clear that to sustain and further develop EDUsummIT, there is a need to broaden its participation to involve more educational policy makers and practitioners, and develop a more permanent structure in order to increase its impact. As well, whether virtual participation should be restricted to eliminate distraction should be considered carefully. Fourth, participants of the EDUsummIT community had ownership of the outcomes of the EDUsummIT. By inviting key stakeholders in the field of ICT in education, i.e., policy makers, researchers and practitioners, it is assumed that EDUsummIT outcomes would have impact in the communities in which these stakeholders are active. Thus, in addition to the scholarly papers and policy briefs EDUsummIT produced, the impact needs also to be visible in the key stakeholders' own local communities. Although participants were rather positive about the impact of the EDUsummIT on research, policy and practice, the findings of this study did not provide us with clear evidence of the extent of the impact. Thus further research on how the EDUsummIT community impacts the networks and communities of its participants is needed to fully understand the impact of EDUsummIT outcomes.

This evaluation study showed that EDUsummIT could be used as a model for developing and sustaining knowledge building communities aiming to create and disseminate knowledge through close collaboration of researchers, policy makers and practitioners. To design and develop a similar knowledge building community in other fields, it is recommended that attention should be put to the following elements:

- Shared goal - participants need to commit to a shared goal developed by the community.
- Agency - there needs to be a strong voice of the practitioners, and thus it is important to maintain a more balanced distribution of researchers, policy makers, and practitioners.
- Discourse – provide ample opportunities for online and face-to-face dialogues and discussions.
- Dissemination – ideas and knowledge produced have to be disseminated rapidly.
- Structure – a permanent structure is needed to sustain the development of the community.

In conclusion, this study clearly showed that EDUsummIT was successful in networking global policy makers, researchers, and practitioners to support knowledge creation, and knowledge created in the last seven years had been used in a number of local, regional and international institutions and organisations. In fact, more than two-dozen presentations by EDUsummIT participants since 2009 have advocated implementation of recommendations from this knowledge building community via national and international organizations such as UNESCO, IFIP, Kennisnet, ISTE, and SITE. Evaluative findings are proposed in this paper as useful for continuous improvement of future EDUsummITs while also serving as guiding considerations for emerging communities of practice wishing to develop and disseminate recommendations for research-based best practices at the global level.

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