Gross National Happiness in the Context of Networked Learning

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Abstract

Gross National Happiness (GNH) has attained considerable interest as an alternative to the prevalent profitdriven global economy. It is a general prescriptive theory of development, putting happiness at the center rather than economic growth. This theory is originating from Bhutan, but can be applied in any society or area of society; in business, in government, etc. Education is seen as instrumental in implementing a GNH society. With the intent to infuse GNH in the Bhutanese education system all school principals, district education officers, heads of the Royal University of Bhutan (RUB) colleges, and selected academics from RUB colleges were trained to infuse GNH in the country's education system in 2010. How to implement it is a exhilarating challenge, where some educational efforts will be addressed without technology playing a key role, whereas other will utilize networked technologies.

In this paper, we theorize outline what GNH may mean in a networked learning context, and as concretization, how networked learning can support infusion of GNH in education. The unfolding of the possibilities are based on conceptual analysis and existing literature, and illustrated by empirical data from the country where GNH is supposedly most devotedly pursued in Bhutan. For example all developmental activities plans and proposals are screened through GNH lens administered by the GNH Commission before approval for implementation by the agencies and organizations. We structure our finding through three relevant areas of ICT support of GNH; Outcome, message and medium. GNH as outcome concerns learning outcomes, GNH as message is when GNH is included in learning materials and curricula, and GNH as medium regards the learning environment designed according to a certain set of principles.

While all areas are somewhat evocative, we find ICT-support for the medium the most promising for further research in networked learning. GNH consists of a number of domains, which can be seen as describing an environment, such as cultural diversity, conscious time use, and organic learning materials and buildings. This can be built into online and blended learning environments, and be followed by investigations on what kind of learning that unfolds in them. By exploring the three areas, we sketch a possible research program of GNH. We find GNH a promising agenda that deserves further design-based inquiry.

Keywords

Gross National Happiness; GNH; GNH pedagogy.

Introduction

Gross National Happiness (GNH) was coined in 1972 by the 4th king of Bhutan, Jigme Singye Wangchuck. It is a reaction towards the one-sided focus on development as measured in terms of economy only, when instead the happiness of the people is what is important. Bhutan has managed to pursue a very focused effort in pursuing this alternative doctrine further, philosophically, in implementation, and in spreading it to the rest of the world. Recently, the United Nations has also shown considerable interest in it, with a Happiness resolution and several large conferences. In all, GNH is generally understood in Bhutan as a critical alternative to one-sided focus on material progress (economical), especially unsustainable material progress that pays insufficient attention to environmental and societal questions. What GNH can contribute with is a general macro-theory of what

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constitutes development, just in the way that the neoliberal logics that reduce any initiative to costs and return on investment is a general macro-theory that frames most IT initiatives.

When used as a guideline for designing Learning, GNH is highly abstract, which makes it difficult to give concrete definitions of its functional scope. The research question is: What GNH may mean in a networked learning context and how can Networked Learning support and enhance infusion of GNH in education? This includes ways networked learning can be used to fulfil the objectives of GNH education. GNH can also be integrated into teaching practice in ways that are tangential to networked learning. For instance, highly individual face-to-face trainings may be congruent with the GNH approach, but this is outside our scope.

Only a few attempts have been made in so far to analyze ICT's potential for GNH, and none within technologyenhanced learning, e-learning, let alone networked learning. Heeks (2012) has surveyed the relationship between ICT and GNH, and found two main topics; Jobs and social relationships. Kezang & Whalley (2008) focus on the digital divide (in the sense of the digital haves and haves-not), and point to the importance of ICT to overcome Bhutan's geographical terrains which are obstacles to communications. In particular, they argue against IT parks, unregulated liberalization, and highlight various scenarios where the mobile net will render unequal ICT access opportunities across the country. We will argue that there is room for more theorization and concentrate on networked learning. A bit of conceptual work is warranted in order to establish the potential ways to analyze it. The analysis concentrates on higher education, but will probably largely hold true for primary, secondary and workplace learning as well.

We will start by providing a short outline of how we understand GNH generally. We take the perspective that ICT is a tool (Ehn & Kyng, 1986) and any analysis of how a tool can be helpful requires as its prerequisite that the purpose, object/outcome and who is using it is understood (Bødker & Klokmose, 2011; Leontiev, 1978). We will establish this understanding by outlining three ways (or research programs) to understand GNH in education. For each research program, we will sketch out how ICT can support the activity. We will end with some conclusions on some advantages with especially one of the research programs. It should be understood that our intention is not to criticize the current implementation process of GNH into education, but rather an opening up of new fields of GNH inquiry.

Related Work

Networked learning

In many publications and international conferences the concept of "networked learning" has been elaborated (Beaty & Howard, 2010; Dirckinck-Holmfeld, Jones, & Lindström, 2009; Goodyear et al., 2005). Space (and knowledgeability of the intended readership) restricts elaboration on our version of networked learning in general. We are below treating it as an approach driven by academics and professionals centered around the Networked Learning conference, and use the body of literature around this academic community to articulate the meaning of GNH in a networked learning context.

What is GNH?

GNH as a general philosophy holds that the supreme criterion for development of a collective is the gross happiness of its members. GNH is not binary, an individual has more or less of happiness, just like income. It has been loosely embodied in what today is known as Bhutan at least since 1729: "*If Government cannot create happiness (dekid) for its people, there is no purpose for the Government to exist*" (from the 1729 Legal Code in Ura, 2009, p. 6). Bhutan is predominately Buddhist, and the pursuit of happiness for oneself and others is a key theme of Buddhism, which gives GNH a slightly Buddhist overtone. At the same time, the national research institute of GNH studies of Bhutan is founded as explicitly secular (Kabat-Zinn, 2003; Zangpo, 2013) and it is understood that if GNH is to be adopted on the global scale, it must be flexible so that it permits other religious or secular systems of thought and practice. Although Bhutan is systematically pursuing a governmental structure for happiness, this intellectual enterprise is not unique to Bhutan. There is a long tradition in the West focusing on happiness. From the hedonism of Epicurus in ancient Greece, to the rise of Utilitarianism in the 18th and 19th century, and to contemporary, more empirically oriented investigations of happiness (Trungpa, 2003).

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In 2005 Bhutan made the decision to develop GNH indicators in order to make the philosophy of GNH from academic discourse to a measurable one (Centre for Bhutan Studies & GNH Research, 2010). The GNH commission uses screening tool to assess/review all government developmental draft policies, programs, and projects through GNH lens. GNH lens ensures all relevant dimensions of GNH being considered in a systematic way. It consists of 22 GNH variables representing the 9 domains (GNH Centre Bhutan, n.d.). These 9 domains are comprised of: 1) Psychological well-being 2) Health 3) Time use 4) Education 5) Cultural diversity and resilience 6) Good Governance 7) Community Vitality 8) Ecological Diversity and 9) Living standards. Some of these domains are easy to understand at a general level. It is interesting to note that both subjective well-being is emphasized as well as material development, and also in combination with community and ecological concerns. The time-use measure the ratio between activities that are considered important to well-being, such as work and sleep. To take the concept of GNH into the Bhutanese education system, the Ministry of Education (MoE) launched a program in 2010 under the banner 'educating for GNH', where all school principals and important stake holders in the education system were trained to infuse the education system with GNH. According to Sherab, Maxwell, & Cooksey it was envisioned that principals and teachers would become assertive, motivated, and confident in successfully implementing GNH in education (2014, p. 1).). It also has the prime ministerial support. Thinley, 2010, p. 13 declared that "education is the key and glue that holds the whole [GNH] enterprise together".

GNH is a general prescriptive theory of development, which can be applied in any area of society; in business, in government, etc. Above, we have described GNH at large as its doctrine is formulated in policies. However, there is little written on the impact of such polices in the developmental activities. This is a limitation of this research area which we do not solve here. Instead, we theorize and outline how networked learning relates to GNH, and as concretization, how networked learning can support GNH in education. The unfolding of the possibilities are based on conceptual analysis and existing literature, and are illustrated by empirical data. Through the analysis we find three areas of networked learning support of GNH; Outcome, message and medium, and while all are useful, we find networked learning support for the medium the most promising for further research. We find GNH a promising agenda that deserves further design-based inquiry.

Method

The analysis of the role for networked learning in GNH context is driven by a mainly conceptual analysis. Furthermore, its practice in Bhutan is illustrated in the end of each section, with indications of its prevalence where necessary. Some empirical data precisely for this purpose was constructed through semi-structured interviews (N= 12 of circa 20-30 minutes duration), done for this study (see also Choeda et al). The point of the illustration is not to derive the categories of research programs in some inductive way, rather to illustrate how they currently play out in Bhutanese education praxis.

Analysis of GNH in a Networked Learning Context

We can analytically divide GNH in education in three ways, or research programs:

(A) GNH as the Outcome

GNH in education is sometimes conceived as a consequent of "good teaching". The MoE in Bhutan states:

"The Educating for GNH programme is an approach adopted to ensure the integration of the desired qualities into the Education System so as to produce GNH graduates. In order to achieve the desired goals of education, the quality of teaching learning in our schools and the supporting environment for that to happen are of paramount importance" (Ministry of Education, 2012).

This in itself is hard to argue against. The question then becomes what is an adequate learning outcome. This take on GNH can also come in the form of analysis of pre-GNH theories, which now are enlisted as GNH, for instance UNESCO, which defines what it considers as quality education, which resonate with an education

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based on GNH, and some examples of quality in this context are: "...views the learner as an individual, a family member, community member, and a global citizen" and education should be "locally relevant and culturally appropriate" (Hayward, et al, 2009b). It is apt to follow this road as a political goal. *However, as a research topic, it is hardly path-breaking*. The reason is that what leads to learning outcomes is already so well-researched, that it almost equates the field of pedagogy, but under another name. GNH deserves better than that. Hayward et al claims that:

"While individual schools in different parts of the world have attempted to transform their curricula along holistic lines, and to incorporate deep critical thinking, indigenous knowledge, local wisdom, contemplative education, sustainability education and eco-literacy into their teaching, no country has ever attempted to do so on a national scale." (Hayward et al, 2009a, p. 21)

While this might be true at the national level, several universities around the world try to cultivate these practices. Project-based and project-oriented learning at Danish Aalborg University or Roskilde University is a case in point, where critical thinking is systematically and institutionally practiced through finding a societal problem, "problematize it", and then engaging in its solution (Krogh & Aarup, 2013), often through building networks between industry, government and the university. As Hayward et al argues, sustainability education has been implemented in many curricula (Hayward et al, 2009), and eco-literacy is largely a part of the larger sustainability discourse. They are right in that no country has enforced this on a national scale. The point is that when looking at GNH at the micro level, the discourse transmutes into the perennial question of what constitutes good teaching. In sum, researching GNH at the micro outcome level suddenly becomes identical with mainstream research, and rather uninteresting. However, let us now move over to how this may unfold in ICT.

Networked Learning for GNH Outcomes

Most of the interviewed lecturers contended that the use of virtual learning environment (VLE) makes learning more easy for the students as the reading materials and visual content can be provided before the lesson. The use of learning materials provides visual stimuli which contribute to psychological wellbeing through variation of content delivery. It also enables shy students to take part in the online discussions. This freedom, given by the VLE, contributes to happiness (and by and large thus also GNH) among the student population. When understanding GNH as a consequent of good use of ICT in teaching, the problem is the same as above. There is a large body of research in how to use ICT in teaching - if GNH is perceived as a consequent of this; we have only equated GNH to an existing research field. A whole lot of the pillars of GNH were already recognized as desirable outcomes within the pedagogy tradition - before GNH was devised. There are many ways to use ICT for the creation of good learning outcomes and hundreds of article on the subject in the database ERIC - but the GNH concept is not needed to research them.

An interviewed lecturer expressed the student preference of virtual learning environments over traditional way of teaching. He says that students feel happy when lecturers use ICT tools in classroom teaching. He further adds that students prefer submitting assignment online rather that in hard copy [R2]. A specific form of GNH as an outcome is the Development of "qualities" of the GNH school graduate. The MoE has created a set of qualities that all graduates should possess (e.g. positive thinking, efficient time management, offer help to others, practicing and promoting *Tha-Damtse* and *Ley-Jumdre*, love and care for friends, family and environment, time conscious, patriotic and concerned about the world as a global village [sic!]) (MoE, 2011).

(B) GNH in the Message

Perhaps the most common way of including GNH is by standardization of literature, lecture plans and exercises to mention GNH, and therefore it deserves attention to in this paper. A GNH-infused curriculum has been investigated since 2011 by the MoE but only at the primary and secondary level. According to Young who have done a study in 2012 at RUB Colleges, "Self-initiated motivation of the lecturers to develop change and move towards a GNH classroom practice and pedagogy is low" (2012, p. 14). However, the accessibility to ICT has the possibility to enhance the infusion of GNH into curriculum (ibid). In principle, curriculum ought not be

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infused without emphasizing learning outcomes, but a in fact a lot of the policy speaks about the content, and "articulated values in curriculum" (Royal Education Council, 2012).

Any networked learning technology can support creation of GNH-contained messages. The prime example is faculty being capable to create and alter learning material, and publish in a VLE. Further examples range from students being able to find material in libraries and on the internet, to creating presentation material. But there is an important caveat there. It is that while ICT is very important for creating GNH-infused content/messages, it is quite varying. To design for teaching the importance of electricity awareness through ICT is quite different from learning design of GNH in economics. It should also be noted that whereas content devising, selection and identification were very important in educational design, networked learning has made it more feasible with flexible approaches, where students find content on their own, find tasks on their own, and even influence how they are assessed (Luckin et al 2005). The opening up of the participation, bringing in other learners or resource persons, with the ambition of strengthening the learning, and creating networked learning has also increased the flexibility of content (Jones, Dirckinck-Holmfeld, & Lindström, 2006). At the same time, it is important that these opportunities of more self-paced learning does not tip over and makes the students socially isolated.

This is evident from interview of a lecturer who says:

"I use email to partner students of Samtse College of Education (SCE) and Paro College of Education (PCE). The students then discuss on the questions provided through email correspondences with their partner which they bring in the classroom. They then discuss on the questions and responses and analyze the matters." [R9]

So although curriculum is still important, it is important to realize that it is one strategic tool out of many, and the rational practitioner should have a clear idea on why he or she invests limited resources on curriculum rather than its alternatives. One potential strategy for RUB would be to let GNH be infused in messages decentralized, where each university teacher is free to fill it GNH content at their own discretion instead of define a central curriculum. A lecturer says:

"If you show a realistic video of farmer cultivating or working in paddy field. I think our student will value how paddy is cultivated because most of our students are not from the agriculture background. In that way the value and essence of rural life we can show to the students" [R6].

In this way, the lectures show the cultural and traditional aspect of our country through the use of video lessons to show the farming techniques used by the Bhutanese forefathers and compare it with the modern technique of farming. The difference between supporting the message and the outcome is that in the former, the focus is on having explicit GNH components, but it is arbitrary what skills it leads to.

(C) GNH as Medium, Especially Through Mindfulness

We will here argue for a more specific and original research problem with regards to technology-enhanced learning environments. One type of teaching activity is to create an atmosphere of a certain kind, e.g. a "GNH-ful" environment (one of cultural diversity, time use, ecology, mindfulness, etc.). Or differently, a learning environment and didactics were students and faculty are happy, at least when at the place. Rather than infusing the curriculum with GNH, the infusion of GNH into the learning activity is here the focus. The difference by Category A and this Category C is that in the former, the subject have desirable learning outcomes, defined as GNH, whereas the latter GNH serves as a structure around the students. In this category, research questions like - "What constitutes a GNH environment?" and "what happens when learners learn in this way?" are asked. Given the premise that GNH also springs from the local Bhutanese culture, every educational institution in Bhutan is a potential living laboratory for this research program. The assumption here is that there still is an environmental threshold level of GNH-pervasiveness, where learners' behavior change. In the environment can also be included learner states of that lead to low happiness, e.g. their health.

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Networked Learning as GNH-pervasive Medium

The work reviewed in the start of the paper addresses networked learning and GNH as outcome and message, but not as medium. Furthermore, what is studied is how to pursue it, but what we want to turn attention to is the process of living in an environment that is pursuing GNH, and how ICT can support that. Sometimes it is useful to bracket out the outcome in order not to be too preoccupied with it. Now, the reader may object that there is already a literature on ICT for creating GNH-pervasive environments. For instance, there is a literature on how to persuade people to be more environmentally conscious (De Kort et al, 2008), time management (Dugan et al, 2012), etc (the list could be made as long as the domains of GNH). But what is not studied *is what happens when all these values are strived for in concert*, because that is (at least in the opinion of these authors) one of the main contributions of GNH as a research program.

Present networked learning practices and conditions are not perfect. The use of the internet makes mindless copying and pasting possible for students, which becomes a problematic learning strategy, also in Bhutan (Dorji et al, 2013). In our interviews, a lecturer remarked that the students become lazy since the lecture notes are made easily available in Virtual Learning Environment (VLE) where students depend on them rather than creating their own notes ultimately affecting their writing skills [R12]. Further work can survey this empirically: What are the use of common social technologies and tools, e.g. Facebook resulting in, with regards to create/destroy a GNH-context? It seems that an environment can be more networked, but afford less mindfulness, e.g. when Facebook is used excessively for chatting instead of academic purposes.

The nine pillars of GNH can be seen as describing an environment, (e.g. cultural diversity, conscious time use, organic learning materials and buildings, et cetera). This can form the design parameters for a networked learning environment. It allows for an interesting question; what kind of learning takes place in an environment that is GNH-bringing? Also, we can ask: 1) what kind of networked learning takes place in a mental state of mindfulness?

Discussion

The division into three categories of Outcome, Message and Medium is only an analytical abstraction. In practice, education that leads to GNH will feed back to the environment of the educational system (Ura, 2009). GNH is indeed managed in such a systemic way already in primary and secondary education - see for instance the "GNH progress wheel" (Ministry of Education, 2012d:17), which measures assessment (outcome), School-community relations, teaching practices and co-curricular activities (Medium) and the message in the form of rewriting of school books (Ura, 2009). Consider systems monitoring GNH, e.g. measuring stress-levels, and offloading some individual responsibility for stress-regulating action. Learning analytics could capture GNH and feed back into the system, although this is futuristic, it is conceptually possible. That would require measuring the GNH as outcome (A), but also feed back to the medium (C). Furthermore, what we provide here is rather a description of a design space, consisting of three dimensions. A concrete design solution for learning can in principle contain GNH outcomes, have GNH as its medium, and provide GNH as part of its message. Still it is a good analytical abstraction, because it allows us to focus on one question, the role of networked learning within the role of Gross National Happiness.

Some readers may object that GNH and this analysis is unscientific, breaking some secular credo of critical inquiry to theorize networked learning activity based on a spiritual-cultural framework, such as GNH. Such an objection is important to address, especially given Networked Learning's tradition, closely aligned with a critical perspective such as Freire (1968/2000) and Negt (1977). However, the objections against spiritual affiliations are unwarranted. Firstly, all design implicates human values (Friedman & Kahn, 2002; Zander, 2005). GNH has the advantage that it has explicated what it values. Happiness is also a construct that can be measured, and therefore the GNH is potentially open to revision if it turns out that a given domain is less important than anticipated for happiness. Hence, the original specifications of happiness can in principle be redefined. Enhancing such critical self-reflexivity would increase the credibility of GNH and ease its diffusion in higher education. Secondly, being spiritually guided is not alien to critical thought. Freire was led by his

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spirituality in defining the vision of human progress, and his resilience in working as a change agent for that vision arguably also drew strongly from the same source (Boyd, 2012).

Conclusion

We have disentangled various ways of supporting GNH through networked learning; as outcome, as message, and as medium. Networked learning has important roles to play in all these fields. Of these three, the role of medium is the least researched and quite stimulating. We have largely illustrated educational GNH in a Bhutan context and think it would be interesting to apply it in non-Bhutanese higher education, but an aspect of researching what unfolds in a GNH medium is that it allows for linking Bhutan with the outside world. What happens when GNH-pervasive online environments gets implemented outside Bhutan?

It is important to note that GNH is not necessarily practiced just because you enter Bhutan. Its higher education system is diverse, and not everyone has appropriated the concepts of GNH. Even in a small country that probably has a culture that is relatively aligned to the concept of GNH it takes several years to fully apply GNH in a comprehensive, non-superficial manner. Furthermore, although we are optimistic that GNH can create a richer society, it is important to proceed in a precarious manner. When specifying the future paths of GNH development, it is important to be aware also of the critical literature on GNH (Bothe, 2011). E.g. Bothe sees GNH from the perspective that it is a tool for governing the citizens of Bhutan and forming their subjectivity in ways that is not necessarily in the citizen's own interest, and to remove possibilities for alternative modes of being in Bhutan. We hold that GNH does not inherently have to be a manipulative strategy which limit human subjectivity, but it is important to develop it in a way so that it can be acquitted such hegemonic accusations. Surely networked learning through its possibilities for grassroot communications will have a role to play in this.

References

- Beaty, L., & Howard, J. (2010). Re-Conceptualising the Boundaries of Networked Learning: The shifting relationship between learners and teachers. *In Proceedings of the 7th International Conference on Networked Learning*, (pp. 602-609). Lancaster.
- Bødker, S., & Klokmose, C. N. (2011). The human artifact model: An activity theoretical approach to artifact Ecologies. *Human-Computer Interaction*, 26(4), 315-371.
- Bothe, W. (2011). Forming local citizens in Bhutan: The traditionalization of participation-empowerment, domination or subjugation? Institut for Statskundskab.
- Boyd, D. (2012). The Critical spirituality of Paulo Freire. *International Journal of Lifelong Education*, 31(6), 759-778.
- Choeda, Dupka, D., & Zander, P.-O. (In review). Impacts of changing pedagogy using ICT in the colleges of Royal University of Bhutan : A thematic analysis. International Journal of Education and ICT in Developing Countries.
- De Kort, Y. A., McCalley, L. T., & Midden, C. J. (2008). Persuasive trash cans: Activation of littering norms by design. *Environment and Behavior*, 1-22.
- Dirckinck-Holmfeld, L., Jones, C., & Lindström, B. (2009). Analysing networked learning practices in higher education and continuing professional development. London: Sense Publishers.
- Dorji, P., Phuntsho, N., & Nima. (2013). Exploring University students' Plagiarism Experiences: A Phenomenological Study. In *Bhutan Journal of Research and Development*, 43-53.
- Ehn, P., & Kyng, M. (1986). A tool perspective on design of interactive computer support for skilled workers. Aarhus: DAIMI Report Series.
- Freire, P. (1968/2000). Pedagogy of the oppressed. New York, US: Continuum. Retrieved from http://edrev.asu.edu/reviews/rev146.htm
- Friedman, B., & Kahn, P. H. (2002). Human values, ethics, and design. In the human-computer interaction handbook, 1177-1201.
- GNH Centre Bhutan. (n.d.). A Policy Screening Tool. Retrieved 9 20, 2015, from GNH Centre Bhutan: Gross National Happiness in Action: http://www.gnhcentrebhutan.org/what-is-gnh/gnh-today/a-policy-screening-tool/

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Proceedings of the 10th International Conference on Networked Learning 2016, Edited by: Cranmer S, Dohn NB, de Laat M, Ryberg T & Sime JA.

- GNH Research, (2010). Results of the second nationwide 2010 survey on gross national happiness.. Retrieved 9 15, 2015, from Gross National Happiness: http://www.grossnationalhappiness.com/surveyresults/index/
- Goodyear, P., Jones, C., Asensio, M., Hodgson, V., & Steeples, C. (2005). Networked learning in higher education: students' expectations and experiences. *Higher Education*, 50(3), 473-508.
- Hayward, K, Pannazo, L., & Colman, R. (2009a). Education for gross national happiness in Bhutan developing curricula and indicators for an educated populace a literature review vol 1. GPI Atlantic.
- Hayward, K., Pannozzo, L., & Colman, R. (2009b). Educating for Gross National Happiness in Bhutan: Developing Curricula and Indicators for an Educated Populace: a Literature Review. *Document 2, Parts IV-VI*. Canada: GPI Atlantic.
- Heeks, R. (2012). Information Technology and Gross National Happiness: Connecting digital technologies and happiness. *Communications of the ACM*, 55(2), 24-26.
- Jones, C., Dirckinck-Holmfeld, L., & Lindström, B. (2006). A relational, indirect, meso-level approach to CSCL design in the next decade. *International Journal of Computer-Supported Collaborative Learning*, 1(1), 35-56.
- Kabat-Zinn, J. (2003). Mindfulness-based interventions in context: past, present, and future. *Clinical* psychology: Science and practice, 10(2), 144-156.
- Kezang, K., & Whalley, J. (2008). Do Information and Communication Technologies Further or Hinder Gross National Happiness? Practice and Measurement. *The proceedings of the Fourth International Conference on Gross National Happiness*, (pp. 368-390). Thimphu, Bhutan.
- Krogh, L., & Aarup, J. A. (2013). Visions, challenges and strategies: PBL principles and methodologies in a Danish and global perspective. Aalborg: Aalborg University Press.
- Leont'ev, A. N. (1978). Activity, consciousness, and personality. Englewood Cliffs: Prentice-Hall.
- Luckin, R., du Boulay, B., Smith, H., Underwood, J., Fitzpatrick, G., & Holmberg, J. (2005). Using mobile technology to create flexible learning contexts. *Journal of Interactive Media in Education, Special Issue on Portable Learning*.
- Ministry of Education. (2012). Education Policy 2012. Thimphu: Ministry of Education.
- Negt, O. (1977). Sociologisk fantasi og eksemplarisk indlæring: til teori og praksis i arbejderuddannelsen. Roskilde: Roskilde Universitetscenter.
- Royal Education Council. (2012). The National Education Framework. . Thimphu: Royal Education Council.
- Sherab, K., Maxwell, T. W., & Cooksey, R. W. (2014). Implementation of Gross National Happiness Education in Bhutan: The case of an efficacious 'Zhabdrung' Primary School. In Bhutan Journal of Research & Development, 3(1), 1-15.
- Thinley, J. Y. (2010). His Excellency Honourable Prime Minister Lyonchhen Jigmi Yoser Thinley. In Ministry of Education, *Proceeding Educating for Gross National Happiness Workshop* 7–12 December 2009 (pp. 12-19). Thimphu: Ministry of Education.
- Trungpa, C. (2003). The collected works of Chögyam Trungpa. Boston: Shambhala.
- Ura, K. (2009). A value proposal for value education in schools. Thimphu: Centre for Bhutan Studies.
- Young, D. G. (2012). The Role of Critical Pedagogy in Enhancing the Values and Principles of Gross National Happiness in the Royal University of Bhutan. In J. W. Schofield, *Happiness (GnH) in Bhutan Janet Ward Schofield 1 the Role of Critical Pedagogy in enhancing the Values and Principles of Gross National Happiness in the Royal University of Bhutan (pp. 13-22).* Thimphu: Royal University of Bhutan.
- Zander, P.-O. (2005). Investigating values in CSCL Design. In D. Khakhar, J. Hedman, T. Kalling, & O. Steen (Eds.), Lund on Informatics (pp. 196–218). Malmö: Liber.
- Zangpo, N. (2013, 8 4). *Institute of GNH Studies holds inaugural seminar*. Retrieved 6 30, 2015, from Bhutan Observer:http://bhutanobserver.bt/7582-bo-news-about institute_of_gnh_studies_holds_inaugural_seminar.aspx

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