



Principals' Survey Results on Educating for GNH, Bhutan 2010

**Survey administered at workshops conducted for all
Bhutan's school principals by the Ministry of Education
at Paro College of Education
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How might a GNH-educated graduate manifest in practice? At the end of our week together, it still feels somewhat easier to describe what such a graduate is not. We know that what we want to see is very different from the economic animal that conventional educational systems so often seem to nurture, where success is measured by money, career, acquisition, fame, power, and self-aggrandizement.

Knowing how different our vision and goals are, we know with certainty that what we want to see is nothing less than transformative—graduates who are genuine human beings, realizing their full and true potential, caring for others, including other species; ecologically literate, contemplative as well as analytical in their understanding of the world, free of greed and without excessive desires; knowing, understanding, and appreciating completely that they are not separate from the natural world and from others—in sum manifesting their humanity fully.

I suppose the ultimate test is that a GNH-inspired education graduate will sleep soundly and happily at the end of each day knowing that she or he has given all: to their families, to their communities, and to the world. If we and our young do not have this firm commitment, there is literally no future. In the end, a GNH-educated graduate will have no doubt that his or her happiness derives only from contributing to the happiness of others.

Honourable Prime Minister Lyonchhen Jigmi Y. Thinley
Closing speech, *Educating for GNH* educators' workshop,
Thimphu, 12 December 2009

Educating for Gross National Happiness is essentially an invitation to education, to all of us educators, to look for and to discover the soul behind our role. We are returning to the original and the authentic purpose of education—a process that gently draws the human mind to look for and to love what is true and good and beautiful and useful—values inherent in the goal of education. We are, in effect, returning to the root of education—educare—meaning to draw out. ... GNH as the sublime goal for our country provides an ideal vision for Education to give it meaning and purpose. Let us hitch our wagon to the sun.

Honourable Minister of Education Lyonpo Thakur S. Powdyel
Educating for GNH principals' workshop,
Paro, January 2010

Funding and Acknowledgements

On behalf of all partners in the *Educating for Gross National Happiness* (GNH) initiative—and particularly the Royal Government of Bhutan and Ministry of Education which launched and are implementing the initiative—GPI Atlantic wishes to express its deep appreciation to UNICEF Bhutan and the International Development Research Centre in Canada for providing funding to make the Bhutan Principals' Survey and its analysis possible. Without the support of these two bodies, this vital step in collecting baseline data just prior to implementation of *Educating for GNH* in schools would not have been possible.

From a global perspective, the importance of this support cannot be over-emphasized. Proper documentation and monitoring may not be particularly crucial for Bhutan itself, where on-the-ground experience will produce its own natural adaptations, changes, and evolution in the *Educating for GNH* initiative according to what is working best and what is not. However, the seminal international *Educating for GNH* workshop, held in Thimphu in December 2009, made clear that an initiative like this is also urgently needed globally, where current, conventional educational systems have failed to impart values, principles, and practices urgently needed for ecosystem and cultural survival and diversity.

Only by properly documenting, monitoring, and evaluating Bhutan's ground-breaking initiative can its value and lessons be demonstrated to other nations, educators, and organizations world-wide. Such documentation and monitoring will be the key communication tool for this initiative beyond the borders of Bhutan. From that perspective, appreciation and gratitude for the funding provided by UNICEF and IDRC should be expressed on behalf of all those internationally who will benefit from Bhutan's bold initiative once progress measures based on these initial results are disseminated beyond Bhutan's borders.

The report authors also wish to extend their appreciation to the many players whose hard work, and sage advice and recommendations were essential prerequisites to the production of this report on the results of the Bhutan Principals' Survey. Thus, we are deeply grateful to all the Bhutanese educators and officials who provided such important input into the survey design and construction, and to all Bhutan's school principals who so patiently and diligently took the considerable time required to complete this very long survey.

The authors also wish to express their gratitude to the hard-working and industrious staff of Source for Change and Shrot Katewa, particularly for their careful and fastidious data entry and cleaning.

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Executive Summary

The Kingdom of Bhutan is in the process of transforming its entire educational system to reflect profound ecological and human values, principles, and practices in an initiative that is clearly ground-breaking and unprecedented globally. While individual schools with these objectives have been established in many countries, no country has ever undertaken such an endeavour nationally. The Honourable Prime Minister of Bhutan Lyonchhen Jigmi Y. Thinley and the Ministry of Education initiated the *Educating for Gross National Happiness* (GNH) initiative first at an international educators' conference in Thimphu in December, 2009, and then in a series of three workshops for all of Bhutan's school principals held in Paro in January and February 2010.

On the first day of each principals' workshop, the Ministry of Education surveyed Bhutan's school principals. The purpose of the survey was to collect initial baseline data that could subsequently be used to assess change and progress over time *within* Bhutan's schools as a result of the innovations being introduced. In addition, the survey performs a very important educational function by listing, describing, and making explicit the kind of knowledge, attitudinal, and behavioural changes that are being sought in the country's schools. In other words, the survey itself represents a form of communication, learning, and even check-list of what a GNH-based school might be like.

The large number of questions in the survey was divided into two parts: Part 1 (15 pages of questions — questions 1–12 + 3 demographic questions) represents a kind of “core” survey with all questions considered directly related to GNH principles, values, and practices. The more extensive Part 2 (40 pages of questions — questions 12–95, plus a time use diary that was recommended by Dasho Karma Ura, president, Centre for Bhutan Studies) contains questions directly related to the present situation in Bhutan's primary and secondary schools. GPI Atlantic has completed separate detailed reports on selected results of each part of the survey. This report includes the complete Part 1 report and highlights of the much more extensive Part 2 report. In addition, an appendix that includes charts and tables for the results of all of the survey questions is available in a separate document. These more detailed documents may be requested from the Ministry of Education.

The principals' survey provides indications of how the education system might potentially be transformed to further reflect profound GNH ecological and human values, principles, and practices. Part 1 surveys principals on their perceptions of the quality of education related to 70 GNH-based learning objectives, multiple GNH-related values in education, and potential challenges and barriers to realizing a GNH-infused educational system that presently manifest in Bhutan's schools and homes. Part 2 looks at many of the areas deep within the educational system from where this change of consciousness must come including the principals' perception of leadership and management practices; the school's physical and psycho-social ambience, which includes the cultivation of values, meditation practice, and critical thinking; the curriculum and how it is taught; co-curricular activities; student assessment; and the school's relationship with and service to local communities.

The results of the principals' survey indicate that there are major strengths in all areas of the education system. In fact, Bhutan's education system appears to be quite healthy in many key respects, and is already contributing in several ways to nurturing students infused with GNH principles and values.

However, the survey also points to particular areas where there appear to be challenges and room for genuine improvement and progress in this regard. Especially when principals' responses to various questions and issues are examined in relation to each other, rather than separately, *relative* strengths and weaknesses are illuminated. Such relative analysis is particularly important to obviate any potential bias in absolute results that may occur (despite guaranteed respondent confidentiality) due to principals hesitating to express problems in their schools and wishing to show they are already doing a good job in these areas.

In Part 1 of the survey the principals reported that they were largely satisfied that students were well trained or informed about 20 of 70 learning objectives, such as a number of basic social behaviours like following rules, getting along with other children, and respect for elders; key cultural norms like knowing the significance of National Day and traditional festivals; and the key educational objective of basic literacy. The high satisfaction list also included learning objectives pertaining to public health and wellbeing, such as cleanliness, how to take good care of themselves, health benefits of physical activity, the health risks of smoking, alcohol abuse, and illegal drug use, and knowledge of HIV/AIDs transmission.

However, fewer than half of Bhutan's school principals were satisfied with the extent of student knowledge of 17 GNH-related learning objectives. These learning objectives included: contemplative knowledge, which is gained from mindfulness and meditation training, critical thinking, and independent learning; emotional issues, such as dealing with traumatic events, frustration, anger, and interpersonal conflict; money management and vocational planning; news and current events both internationally and within Bhutan; lozey and traditional crafts; and some environmental issues.

The vast majority of environmental and governance issues—two of the four key pillars of GNH, however, fall into an intermediate satisfaction area. Indeed, it is noteworthy that not a single one of the 17 environmental or governance issues was among those 20 learning objectives where at least 75% of principals were satisfied that students are well-trained or informed. This is in sharp contrast to the fact that 8 of the 13 health and wellbeing objectives fell into that top satisfaction category.

As well, all three vocational and career objectives, along with “managing money”—all related to the economic pillar of GNH—received exceptionally low satisfaction rankings (all less than 50% of principals).

Principals were asked to indicate the priority they gave to the promotion of a variety of values in their schools. The analysis of the responses revealed that values related to individual and personal achievement—like creativity and originality, independence, competitiveness and winning, economic security, and financial success—tended to be rated as lower priorities than relational, societal, and community-oriented values.

In particular, values related to career and money—economic security and financial success—were rated lower, with financial success the lowest rated among all 30 listed values. By contrast, values related to group solidarity—such as respecting and caring for others, including family members, parents, and elders, and friendship, cooperation, and obedience to authority—were all rated much higher than values related to individual and personal achievement.

The contrast in those responses might be interpreted as support for the cultural pillar of GNH, which certainly reflects relational, societal, and community-oriented rather than individualist values. However, such a conclusion must be qualified by the fact that the high priority principals gave to caring appeared to be personally focused on family and friends. More generalized and broad-based community and societal values—such as service to the community, helping others, generosity, kindness and compassion—were somewhat lower on the ranking list than more personalized caring for family and friends.

Issues related to students' home environment—such as poverty in student homes (cited by 55% of principals), parental alcohol abuse (44%), and broken homes (40%)—were frequently referenced by principals as very or quite serious problems in schools. This indicates that movement towards a GNH-based education system cannot take place within schools alone, but must be part of a much broader societal initiative.

While the seriousness of other problems was rated considerably lower than home-related problems, it is notable that nearly one-third of Bhutanese school principals classify student littering as a very or quite serious problem in their schools, one-quarter identify plagiarism as a serious problem, and nearly one-fifth point to student alcohol or illegal drug use as a very or quite serious problem. Hopefully the new “green schools” initiative that emerged from the 2010 Paro principals' workshops will sharply reduce the littering problem. But the survey results are useful in identifying other key barriers and challenges that must be overcome in the effort to create a GNH-based education system.

Results from Part 2 of the survey reveal key GNH-related strengths in the educational system as indicated, for example, by the high percentage of principals who promote values such as caring, kindness and hard work in the schools, and who are satisfied with the levels of student knowledge on issues related to social behaviours, cultural norms, and health and wellbeing. Between 94% and 95% of the principals report that their school very much or somewhat promotes respect for cultural customs and traditions, and love for King, country, and people. Also noteworthy is the extent to which principals report that their schools contribute towards their communities in a myriad of ways.

About 79% of principals rated support to them from the Ministry of Education relatively highly—between 6 and 10 on a 10-point scale (with 10 being very supportive). But only 22% of principals rated the Ministry of Education's relations with themselves as being *very* supportive with a 9 or 10 on the scale. The highest levels of Ministry support were felt among primary school principals, of whom 28% responded with either 9 or 10 on the scale, compared to only 14% of higher secondary school principals.

Weaknesses or challenges in the education system revealed in Part 2 responses include a low level of student knowledge of meditation (which will hopefully change with the introduction of meditation into the schools), and a low level of student knowledge of environmental, governance, and financial management issues. The vast majority of principals do not give a high rating to the quality of their students' food and nourishment. Roughly 73% of principals rated students' food and nourishment in the moderate range, only 16% rated students' food and nourishment in the high range, and 11% reported that it was inadequate.

Infrastructure issues such as the state and adequacy of toilets and safe drinking water in some schools stand out as being of particular importance. A majority of principals (53%) reported student toilets as being either in need of repair (39%) or broken altogether (14%). Roughly 26% of principals report that their school does not have adequate safe drinking water.

An overwhelming percentage of principals responded that having more teachers (87% of principals), better-trained teachers (92%), and more inspired teachers (96%) was very important. In fact, principals expressed that teacher shortage was their biggest challenge after infrastructure issues. Also the vast majority of principals (87%) said that having better textbooks was very important—and over half of the principals rated this as being extremely important (10 on a 10-point scale where 10 is extremely important). Principals also expressed a need for more sports facilities and equipment.

Between about 30% and 40% of principals in each school level reported the presence of corporal punishment in their schools, with the highest level among higher secondary school principals (43%) and the lowest among community school principals (29%).

Only about 5% of principals thought that marks and grades very accurately reflect educational achievement, and more than a quarter of higher secondary principals indicated that they did not think that exams encourage learning.

Finally, about two-thirds of the principals acknowledged that they had only a moderate or weak understanding of GNH, but this will almost certainly change as the *Educating for GNH* initiative is introduced and takes hold in schools. As well, it must be recalled that this survey was administered on the first day of the principals' workshops. It is most likely that by the end of the *Educating for GNH* workshops themselves, most principals had a considerably better understanding of GNH than they had at the beginning.

Thus, even before the availability of a time series that will in future enable trends over time to be assessed, these few sample results point to the considerable utility of this preliminary baseline data analysis of the first Bhutan *Educating for GNH* Principals' Survey in revealing key GNH-related strengths and weaknesses in Bhutan's present educational system. Therefore the results that follow reveal areas that can be further strengthened and developed, and key barriers and challenges that can be addressed and overcome—as perceived by all of the country's school principals. In that regard, this survey analysis can

already be used for policy and planning purposes in implementing the *Educating for GNH* initiative.

In doing so, it must be emphasized that seemingly adverse results should by no means be interpreted negatively or defensively. On the contrary, as GNH principles, values, and practices take root in schools, such results can certainly be expected to improve over time. In fact, if there were no such areas for improvement, the purpose of the *Educating for GNH* initiative would already have been achieved and there would be no need to implement the initiative! It is precisely to seek such improvements that the initiative exists.

As emphasized by the Honourable Minister of Education, rather than representing a fixed “program” that can be rigidly implemented, monitored, and evaluated according to set criteria, Bhutan’s bold *Educating for GNH* initiative—unprecedented globally—should be seen as a dynamic and fluid experiment that is a continuing learning experience evolving over time. From that perspective, this principals’ survey itself and the results presented here may be seen not only as baseline data for monitoring and evaluation purposes, but also as one of several attempts to identify and delineate the *Educating for GNH* initiative’s objectives and the kinds of changes and transformation envisioned.

In the view of the authors of this study, the Kingdom of Bhutan’s *Educating for GNH* initiative is so bold, innovative, significant, and far-reaching, with implications and importance stretching far beyond Bhutan’s own borders, that it merits nothing less than the most extensive documentation, monitoring, and evaluation, which in turn is necessary to further the initiative’s application and adaptation outside Bhutan. Thus, this principals’ survey report is offered as a modest initial contribution to that documentation effort. Ideally, and so long as the report is used with caution—for example in focusing on relative rather than absolute results for the reasons noted above—at least some results presented here can point to areas where existing strengths can be nurtured and where steps might be taken to deepen the infusion of GNH principles, values and practices in the educational system.

Introduction

The effort by the Kingdom of Bhutan to transform its entire educational system to reflect profound ecological and human values, principles, and practices is clearly ground-breaking and unprecedented globally. While individual schools in different parts of the world have been established on these principles, no country has ever tried to transform its entire national educational system along these lines.

The depth of change envisioned by the Honourable Prime Minister of Bhutan in the *Educating for Gross National Happiness* (GNH) initiative—which should be seen as a dynamic and fluid learning experience that is evolving over time—raises challenging questions of how that change is to be monitored and evaluated:

- What are the markers of success in Bhutan’s bold experiment?
- How will we know if the required changes of consciousness, values, action, and behaviour have begun to occur and how far they have progressed?
- How can we assess whether the schools are becoming true GNH schools, and the students real GNH graduates in the sense described by the Honourable Prime Minister (summarized in the epigraph of this report)?

As a first step in the monitoring and evaluating process, in January–February 2010 the Ministry of Education surveyed all of Bhutan’s school principals, who were gathered in Paro for workshops on educating for GNH. The purpose of the survey was to collect initial baseline data that could subsequently be used to assess change and progress over time *within* Bhutan’s schools as a result of the innovations being introduced. In addition, the survey performs a very important educational function by listing, describing, and making explicit the kind of attitudinal and behavioural changes that are being sought in the country’s schools. In other words, the survey itself represents a form of communication, learning, and even check-list of what a GNH-based school might be like.

The purpose of this present report is to present a preliminary analysis of the results of the Bhutan Principals’ Survey. While this report make no claim to answer the questions posed above—that assessment will take many years and will require development of a time-series for trend analysis—it does attempt at least to begin to ask the kind of questions that may be needed for such long-term monitoring and evaluation. While this survey sought to address within-school issues with which principals can be expected to be familiar, there will clearly be a separate and broader need to assess the degree to which *Educating for GNH* initiative is creating positive societal changes in helping forge a genuine GNH-based society in Bhutan. Such an assessment will clearly require responses from a far broader social sample than school principals alone.

Principals’ Survey and Questionnaire Development

In December 2009 and January 2010, extensive meetings and consultations were held, both in person and in electronic correspondence, to develop the questionnaire that was administered to all Bhutan’s school principals in January and February 2010. Key officials

taking part in these consultations included those from the Ministry of Education—including the Minister and Secretary of Education and members of the Ministry's Evaluation, Monitoring and Support Services Division (EMSSD) and curriculum design unit (CAPSD); the Royal University of Bhutan—including its Vice-Chancellor and Centre for Educational Research and Development; the Royal Education Council; the Centre for Bhutan Studies; and international participants in the December *Educating for GNH* workshop, which took place in Thimphu; and GPI Atlantic.

The preliminary survey was pre-tested with 14 school principals and some teachers college lecturers, who then recommended revisions to the questionnaire. Results of this pre-test were also analysed by the chief UNICEF representative in Bhutan and other key UNICEF Bhutan staff who reviewed all survey questions and provided their own input and recommendations. Some of those recommendations were in line with key UNICEF priorities like gender equality and improvement of physical conditions in schools, and several questions were added to the questionnaire to address these priorities.

Based on the detailed input, advice, and recommendations of the Bhutanese educators and others noted above, a Canadian research team, headed by GPI Atlantic, added and revised questions, converted new materials and general recommendations to specific survey questions, and attempted to organize the growing survey into clearly defined categories. In addition, the Canadian team devoted considerable time to coding response categories, expanding the level of response possibilities, considering the appropriate order of questions, and resolving other methodological issues involved in survey design.

By far the biggest challenge—and perhaps the main survey flaw—became the *survey length*. So many new questions were requested and recommended by the Bhutanese educators that the survey massively expanded in length through the 2009-10 consultation process. Time did not allow a compression of the survey to be undertaken with sufficient certainty that we were not losing important questions that would provide useful information on trends in the longer term. The GPI Atlantic survey design team simply had no way of knowing at this early stage which questions were more important and which results would be most meaningful in the long term. Reducing the survey length effectively would therefore have required considerable further pre-testing and analysis of sample results—which time did not allow prior to the Paro principal' workshops. At later stages, prior to re-administration of the survey perhaps three to five years from now to assess trends over time, the evidence can be carefully examined to assess which questions and results proved most meaningful and significant in this first round. Then, based on that analysis, the survey can and should accordingly be sharply reduced in size.

Looking forward to this proposed follow-up survey, the funders of this report asked the authors to provide both their evidence-based views on what worked or didn't work in the present survey and general guidelines that might help “jump-start” an actual survey revision process in the future. Thus, the conclusion of this report consists of two lists that: first, document the key challenges, caveats, ambiguities in the present survey, and items that need to be revisited and perhaps approached differently in the follow-up survey; and second, provide initial recommendations on what might be added, kept, or dropped from the future

update survey. The intention of these lists is not to undertake a detailed analysis of this first survey instrument, which can be done at a later time when follow-up surveys are designed. Rather, the intention of the conclusion of this report is to provide examples and general recommendations that might assist in the next phase of the ongoing survey revision process.

Despite the many caveats that will be listed, it is important to add here that we are satisfied that the final *Educating for GNH* survey as administered to Bhutan's school principals in January-February 2010 does genuinely reflect the views, understanding, knowledge, and experience of many of the leading educators and education officials in the Kingdom of Bhutan and of principals themselves. Hopefully the results that follow will give both education officials and principals direct experience of the utility and meaningfulness of the survey in implementing and refining the *Educating for GNH* initiative.

Survey Design and Caveats

The large number of questions in the survey was divided into two parts: Part 1 (15 pages of questions—questions 1–12 + 3 demographic questions) represents a kind of "core" survey with all questions considered directly related to GNH principles, values, and practices. The more extensive Part 2 (40 pages of questions—questions 12–95, plus a time use diary) contains questions directly related to the present situation in Bhutan's primary and secondary schools. GPI Atlantic has reported the results of each part of the survey separately, with this report consisting of the preliminary analysis of Part 1 and an analysis of highlights of the much more extensive Part 2 report.

The two reports are necessarily selective and cannot possibly report fully on all aspects of the very extensive principals' survey. To cite just one example among the many results not reported here, the time use survey at the conclusion of the questionnaire was recommended by The Centre for Bhutan Studies in light of its own experience of the value of such time use analysis in its national GNH survey. GPI Atlantic can confirm the extraordinary value of time use analysis as a window on quality of life, since it reveals, like no other tool, how respondents balance competing demands on their time. In the school setting, for example, a principal overwhelmed by administrative demands may be unable to devote the time and resources necessary to GNH-based school governance, participatory processes, and community service.

Despite its importance, GPI Atlantic was simply unable—due to time and resource constraints—to analyse the results of the time use survey (and other key survey components) as part of these reports. We therefore see this initial survey report (as well as the expanded Part 2 report that is available from the Ministry of Education) as just the first step in reporting particular key baseline data and results, and we look forward to other leading research bodies, like The Centre for Bhutan Studies for example, doing further analytical work and reporting on other survey components (particularly those they themselves recommended for inclusion) as resources become available.

Beyond survey questions that remain unanalysed and not reported, there is also great scope for further work in cross tabulating results according to a wide range of different criteria,

such as rural-urban distinctions, training and length of service, value prioritization, time use, and much more. The survey data are therefore available to other interested bodies, research groups, or analysts particularly interested in analysing questions not included in the final GPI Atlantic reports. To that end, a comprehensive set of data and frequencies from this survey have been provided to the Ministry of Education for use by other researchers..

We have hesitated to draw too many general conclusions or specific recommendations from the results, as that process is better left to education planners in Bhutan. However, where strengths and weaknesses of the current education system were clearly apparent, we have noted these with minimal commentary. Also, as mentioned above, in the conclusion of this report we have listed the key challenges and caveats that are currently scattered throughout the report and we have offered recommendations on what might be kept and dropped from future update surveys.

One major caveat to the results below should be mentioned here—namely that they should be understood in relative rather than absolute terms. This is for two reasons: (1) There is likely to be a strong positive response bias due to principals wishing to demonstrate good GNH-conducive conditions in their own schools, and (2) some questions apply more to secondary than primary schools—which may lead to a negative response bias in cases where primary school principals answered questions inapplicable to younger children. We have not been able to undertake a sensitivity analysis to determine the degree to which these two factors may cancel out the resultant biases.

Although respondents were advised to answer questions applicable to their own schools, the judgment on what was and was not applicable was left to individual principals, and individual questions were not flagged as applicable only to secondary schools. Thus, for example, some primary school principals responded to questions on whether their students were knowledgeable about world events, political news, Bhutan’s constitution, and HIV/AIDs transmission, even though primary school children are much less likely to have such knowledge than secondary school students. Therefore, to partially correct for this potential negative response bias, we have broken down some of the results to identify the percentages of primary and secondary school principals who responded to the question. However, more work can be done in this regard.

Despite these caveats that affect some absolute numbers, the survey results are still meaningful at a relative level. To give just one example, it is noteworthy that 91% of principals expressed satisfaction with their students’ knowledge of traditional festivals, while only 38% were satisfied with student knowledge of traditional crafts like painting and weaving.

Most importantly, it must be recalled that this survey was designed to collect *baseline* data *prior* to implementation of the *Educating for GNH* initiative. Therefore, adverse results should by no means be interpreted negatively. On the contrary, poor satisfaction ratings related to student mindfulness or knowledge on economic, environmental, and governance issues, for example, can certainly be expected to improve over time as meditation practice takes root in schools and as new GNH-based curricular supplements are developed.

Similarly, challenges and barriers identified by principals will likely be overcome gradually as the *Educating for GNH* initiative is implemented. For example, as noted, nearly one-third of Bhutan's school principals identified student littering as a serious problem in their schools. But the new "Green Schools for a Green Bhutan" project, which emerged from the Paro *Educating for GNH* principals' workshops in January and February 2010, can be expected to reduce the severity of this problem very quickly.

Those, at least, are the hoped-for trends. In order to assess such changes and trends over time, it is strongly recommended that a shortened version of this survey be administered at least once every three to five years.

Principals' Survey: Part 1 Results

Part 1 of the *Educating for GNH* principals' survey consists of 15 pages of questions—questions 1–12 plus 3 demographic questions—that are considered directly related to GNH principles, values, and practices. The reporting of Part 1 results is necessarily selective since present resources do not allow a full analysis of all aspects of the survey. As such, the following analysis reviews the results of questions 1–8, which were considered to produce the more meaningful and useful results. In addition, cross tabulations of the results for questions 1.1–1.8 and 2 by primary and secondary school levels are included for comparison purposes.

Part 1 results are presented in four categories:

1. Quality of Education
2. Values in Education
3. Challenges and Barriers
4. GNH Principles in Education

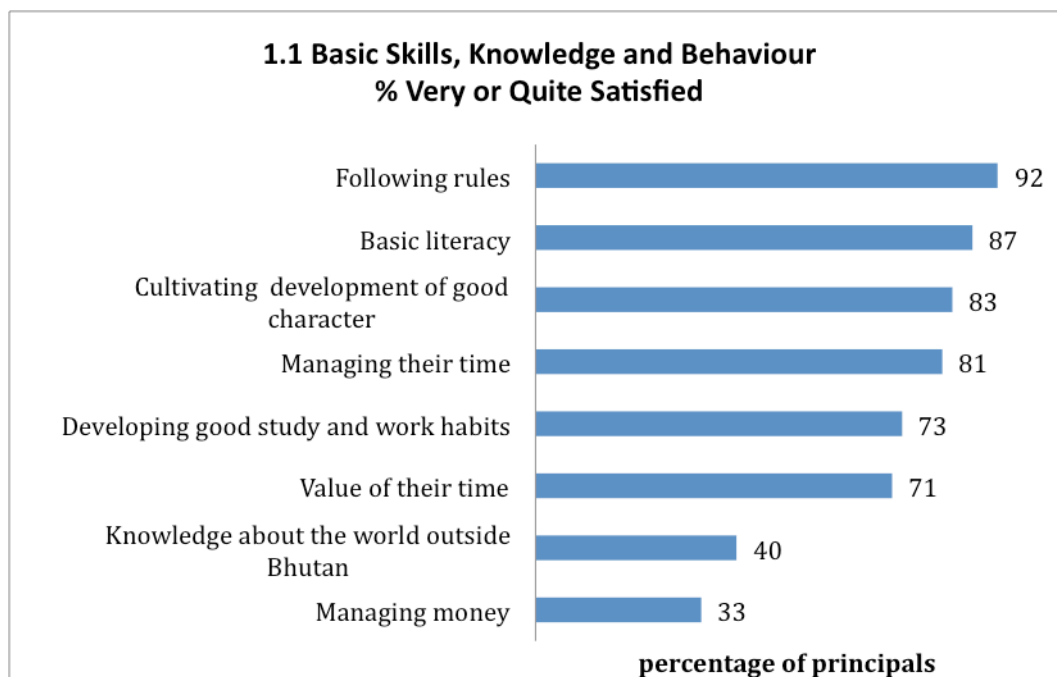
1. QUALITY OF EDUCATION

The principals were asked to rate their level of satisfaction with the quality of education in achieving a number of different objectives. Those objectives were considered by Bhutanese educators who provided input in constructing the survey to cover both key components of basic knowledge and behaviour (like literacy and time management) as well as important direct contributors to Gross National Happiness (like mindfulness and culture).

The specific question was: “How satisfied are you that students in your school are well trained or informed about the following issues?” The principals' responses to the listed issues were rated on a five-point scale ranging from very satisfied to very dissatisfied. The results in this section are discussed in terms of the percentage of principals who indicated that they were “very satisfied” or “quite satisfied.”

Please note: In all of the figures below, the numerals before the titles (e.g. 1.1 in Figures 1 and 2 below) refer to the actual question number in the Bhutan Principals' Survey questionnaire.

Figure 1. Students' basic skills, knowledge, and behaviour



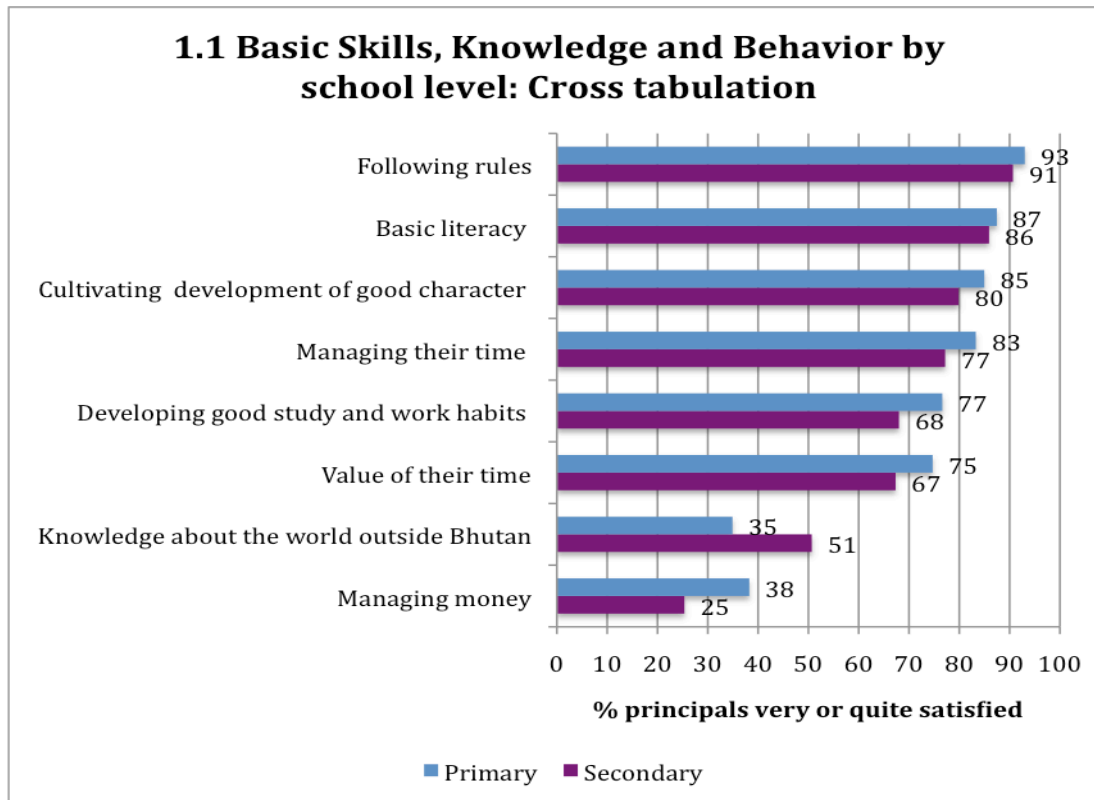
Educating for GNH Principals' Survey, 2010. Note: % of principals very or quite satisfied.

The results pertaining to some key elements of basic skills, knowledge, and behaviour were relatively positive, with high levels of satisfaction recorded for following rules (92%), cultivating basic literacy (87%), cultivating good character (83%), and time management (81%) (Figure 1 above). The last result was somewhat surprising in light of the Honourable Prime Minister's remark on the occasion of the principals' workshops that—in his observation—Bhutanese are not very good at managing time and that he would like to see improvement in this area. This result might therefore be tested by more detailed future questions that break down the concept of 'time management' into component parts.

Two basic skills and knowledge areas stood out as recording low levels of satisfaction. Only one-third of Bhutan's school principals expressed satisfaction that their students knew how to manage money, and only four in ten were satisfied with their students' knowledge about the world outside of Bhutan.

The first of the low levels of satisfaction results—concerning inability to manage money—clearly points to a global problem, as evidenced by the key role of consumer debt and inability to make debt payments in triggering the recent global financial collapse of 2008–09. This result also reinforces the January–February 2010 Paro principals' workshop program recommendation on use of a household budgeting approach to teaching math, as demonstrated to the assembled principals. As demonstrated to the principals, this approach can teach the important life skill of managing money while at the same time teaching all key elements of the mathematics curriculum, and GNH-based values like distinguishing 'wants' from 'needs'. Curriculum development work in this important area is clearly needed.

Figure 2. Students' basic skills, knowledge, and behaviour by school level: Cross tabulation



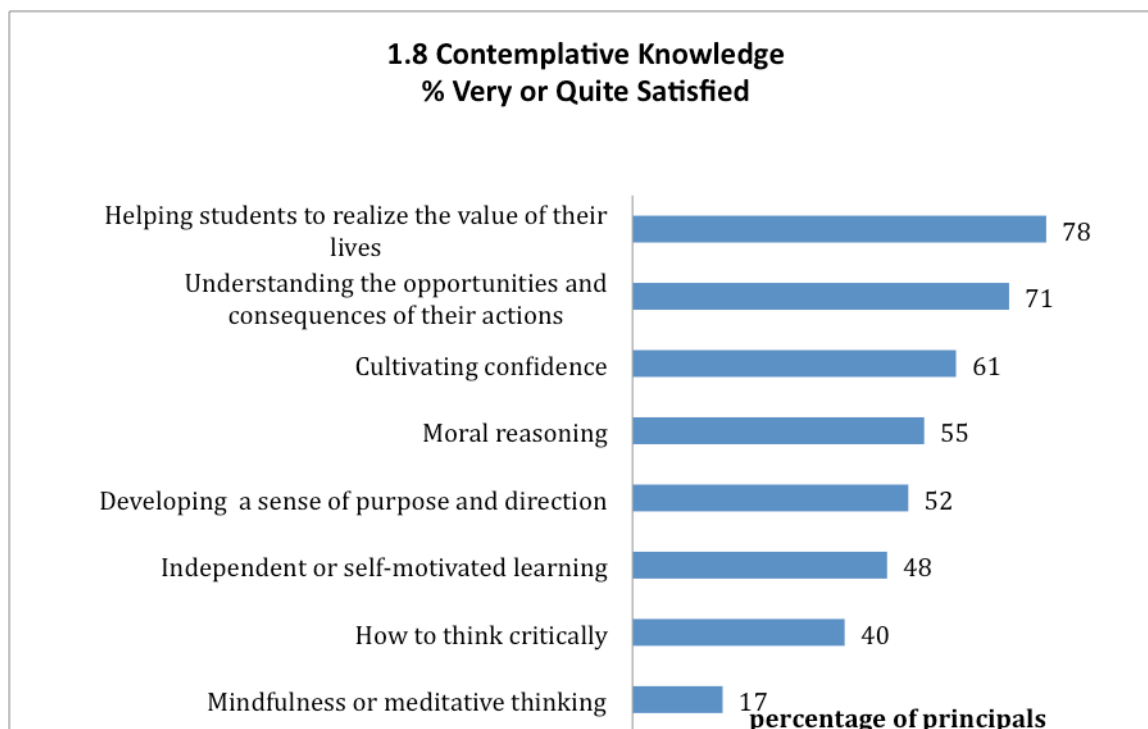
Educating for GNH Principals' Survey, 2010

When levels of principals' satisfaction with students' training in basic skills, knowledge and behaviour of key issues were cross tabulated by school level—primary schools (including primary and community schools) and secondary schools (including lower, middle, and higher secondary)—some differences among responses are apparent. For every issue except one, a higher percentage of primary principals were very or quite satisfied than were secondary school principals (Figure 2 above).

The exception is knowledge about the world outside Bhutan—where secondary students would obviously have more knowledge, and where more than half of secondary principals (51%) were very/ quite satisfied compared with only 35% of primary principals.

Also notable is that while 33% of all the principals were very/ quite satisfied with their students' ability to manage their money, 38% of primary principals, compared with only 25% of secondary school principals, were very/ quite satisfied with their students' ability to manage their money—a 13-percentage point difference. The decline in satisfaction between primary and secondary levels on this variable as well as on character development, time management, study and work habits, and appreciating the value of their time may point to a need to nurture and cultivate these qualities more effectively in the school system.

Figure 3. Students' contemplative knowledge



Educating for GNH Principals' Survey, 2010

Note: Percentage of principals very or quite satisfied with students' knowledge in these areas..

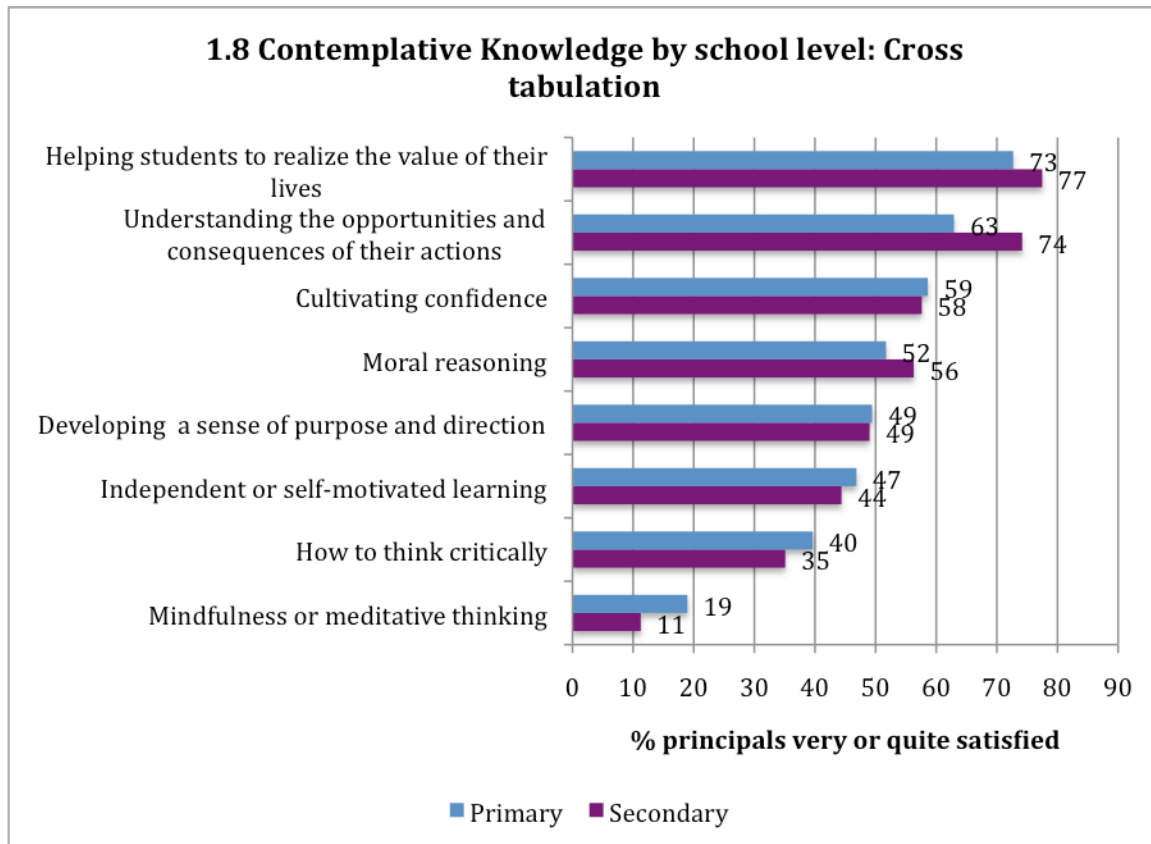
Overall, the results pertaining to contemplative knowledge were considerably less positive, particularly with respect to mindfulness or meditative thinking, where only 17% of principals were very or quite satisfied with students' training (Figure 3 above).

This result again reinforces a key track of the January–February Paro principals' workshop program, which emphasized the importance of training in the discipline of mindfulness meditation. At these workshops, all Bhutanese principals were provided with a concise meditation manual for use in their schools. Proper implementation of this discipline will require ongoing instruction and monitoring in the country's schools by qualified instructors. If effectively implemented, Bhutan will be the first country in the world to introduce meditation and mindfulness practices into all its schools.

Relatively low levels of satisfaction were also recorded for critical thinking skills (40%) and independent or self-motivated learning (48%). There were also only moderate levels of satisfaction for moral reasoning (55%) and developing a sense of purpose and direction (52%).

The principals gave higher levels of satisfaction to helping students to realize the value of their lives (78%), and understanding the opportunities and consequences of their actions (71%).

Figure 4. Students' contemplative knowledge by school level: Cross tabulation

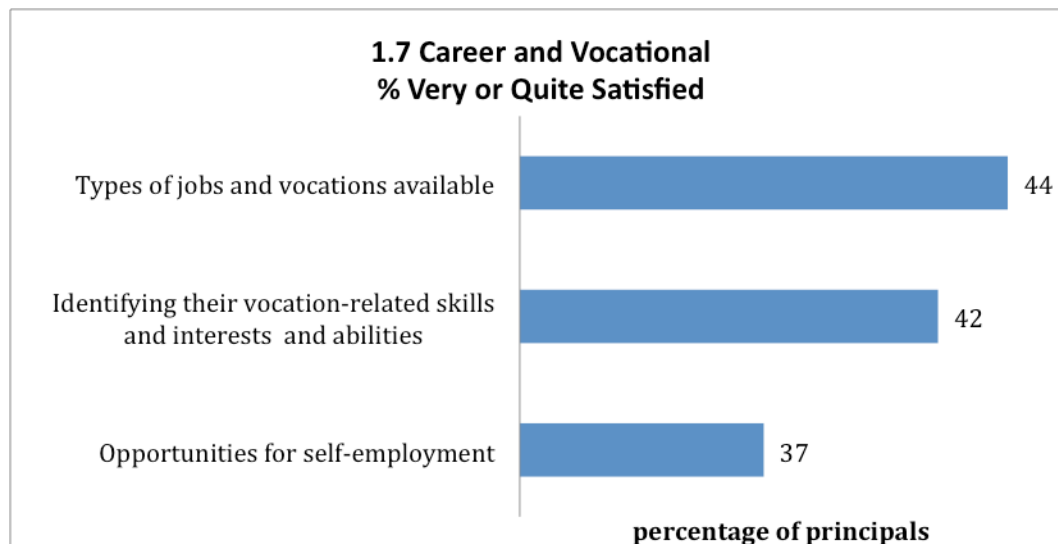


Educating for GNH Principals' Survey, 2010

When the percentage of principals who were very/ quite satisfied with their students' level of contemplative knowledge was cross tabulated by school level, a higher percentage of lower, middle, and higher secondary school principals than primary (including community school) principals were satisfied with students' realization of the value of their lives, understanding the consequences of their actions, and moral reasoning. In fact, 74% of secondary school principals, compared with 63% of primary principals were satisfied with students' understanding of the opportunities and consequences of their actions.

A higher percentage of primary principals than secondary principals were satisfied with student attainment on the other issues. While only 17% of all of the principals overall were satisfied with student training in mindfulness or meditative thinking, 19% of primary principals, compared with only 11% of secondary principals, were satisfied. As well—although discernment should grow over time—only 35% of secondary principals compared with 40% of primary principals expressed satisfaction with students' critical thinking skills (Figure 4 above). The rather poor result for secondary students in this area also reinforces the principal's workshop emphasis on cultivating critical thinking through a general process-based approach to learning as well as critical analysis of media articles at the secondary level.

Figure 5. Students' career and vocational preparedness



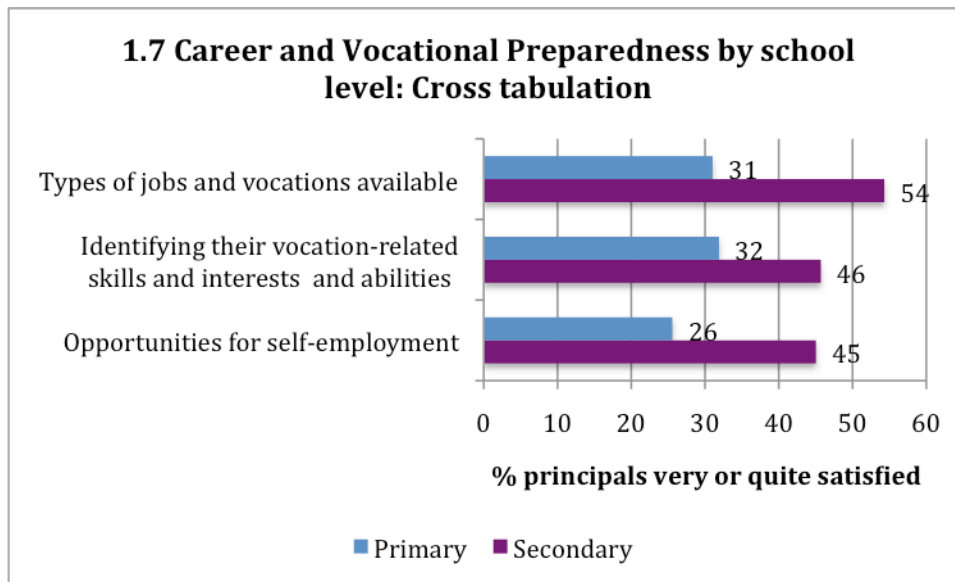
Educating for GNH Principals' Survey, 2010

Note: Percentage of principals very or quite satisfied with students' career and vocational preparedness..

There were also relatively low levels of satisfaction for the primary dimensions of career and vocational preparation, with less than four in ten school principals satisfied that their students are well informed about opportunities for self-employment and just over four in ten satisfied that their students are well informed about the types of jobs available to them, and capable of identifying their own vocation-related skills and abilities (Figure 5 above).

Clearly, career and vocational preparedness should increase with age when prospective employment becomes much more pressing than at the primary level. In fact, results for this question are really only meaningful at the secondary level, and primary school principals might have been expected to skip this question in light of the general survey instruction only to respond to questions relevant to their school level. In fact, this question is an example of questions in future surveys that should be explicitly flagged as applicable only to secondary school principals. When primary principals answer questions that are clearly not relevant to primary school students, the overall results are skewed, and the data cease to have meaning.

Figure 6. Students' career and vocational preparedness by school level: Cross tabulation



Educating for GNH Principals' Survey, 2010

As expected, the cross tabulation by school level of results for career and vocational preparedness reveals that a much higher percentage of secondary than primary school principals were very or quite satisfied with their students' level of knowledge on the issues (Figure 6 above). As noted, this is not at all surprising since it is unlikely that primary school students would or should have this kind of career and vocational preparedness.

Yet, even when results are broken down by school level, it is noteworthy that fewer than half of secondary school principals were satisfied with their students' knowledge of self-employment opportunities or with their capacity to identify their own vocation-related skills, interests, and abilities. This result may well point to an over-dependence among secondary school students on generalized (rather than job-specific) civil service employment and a residual weakness in the private and civil society sectors of the Bhutanese economy and society.

Thus, only 54% of secondary school principals were satisfied with their students' knowledge of the types of jobs and vocations available to them. Only 46% were satisfied that their students could identify their own vocation-related skills, interests and abilities, and only 45% thought their students knew of opportunities for self employment.

Figure 7. Students' knowledge of their culture

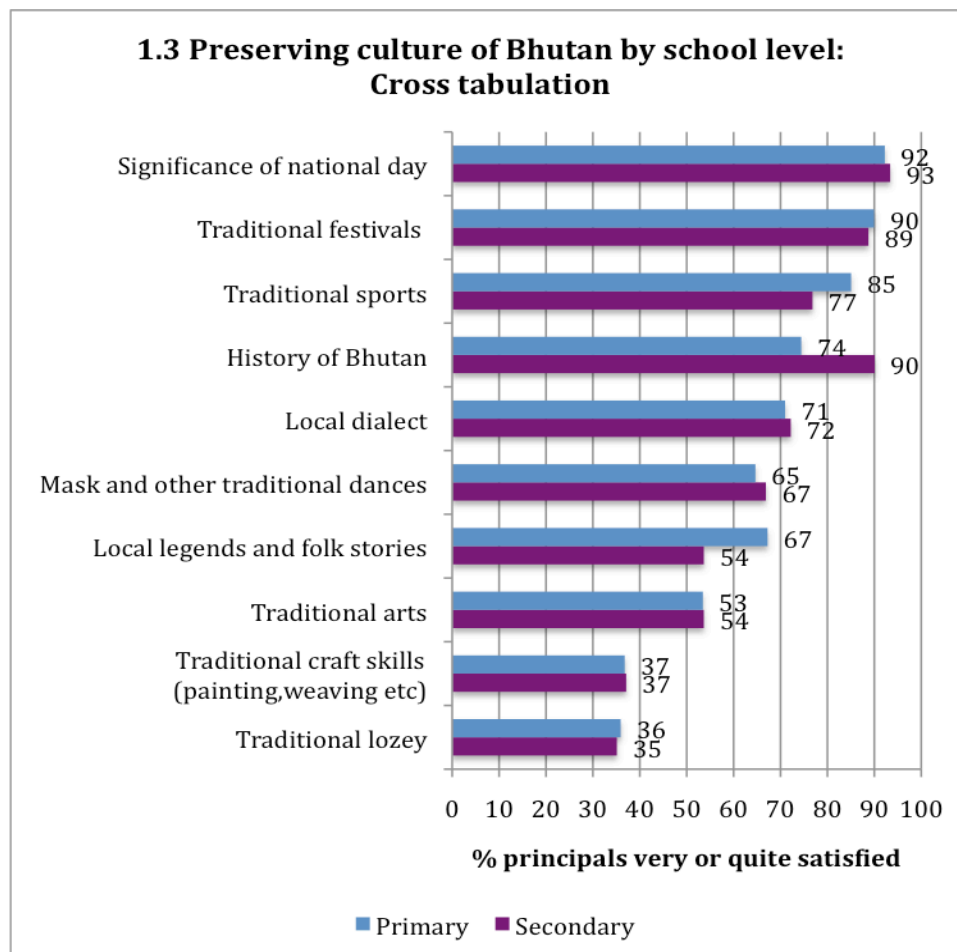


Educating for GNH Principals' Survey, 2010

Note: Percentage of principals very or quite satisfied with student knowledge of their culture.

In the area of cultural preservation, results were mixed. High levels of satisfaction were recorded for students' knowledge of the significance of national day (93%), traditional festivals (91%), traditional sports (85%), and the history of Bhutan (80%). By contrast, relatively low levels of satisfaction were reported for knowledge of traditional lozey (36%) and traditional craft skills like painting and weaving (38%). About two-thirds of principals were satisfied with their students' knowledge of traditional dances (67%), and local folk legends and stories (64%) (Figure 7 above).

Figure 8. Students' knowledge of their culture by school level: Cross tabulation



Educating for GNH Principals' Survey, 2010

In seven out of ten areas of cultural knowledge, school level cross tabulations indicated a close similarity in the percentage of primary and secondary school principals who were very or quite satisfied with student knowledge (Figure 8 above). Of the remaining three areas, the notable school-level differences in two cultural knowledge fields, point to what may be a disturbing erosion of the cultural pillar of GNH, as indicated below.

For both primary and secondary schools, very high levels of satisfaction were indicated for students' knowledge of the significance of national day and traditional festivals; moderate levels of satisfaction were indicated for students' knowledge of their local dialect, traditional dances, and traditional arts; and relatively low levels of satisfaction were indicated for knowledge of traditional lozey and traditional craft skills like painting and weaving. Each of these seven cultural areas had only a 0-2-percentage point difference in the proportions of primary and secondary principals reporting satisfaction with student cultural knowledge.

However, there were relatively large differences—ranging between 8 and 16 percentage points—in the proportions of primary and secondary school principals reporting satisfaction in three of the cultural areas. Primary school principals were considerably more satisfied than secondary school principals with student knowledge of traditional sports and local legends and folk stories, while secondary school principals were more satisfied with student knowledge of the history of Bhutan than were primary principals.

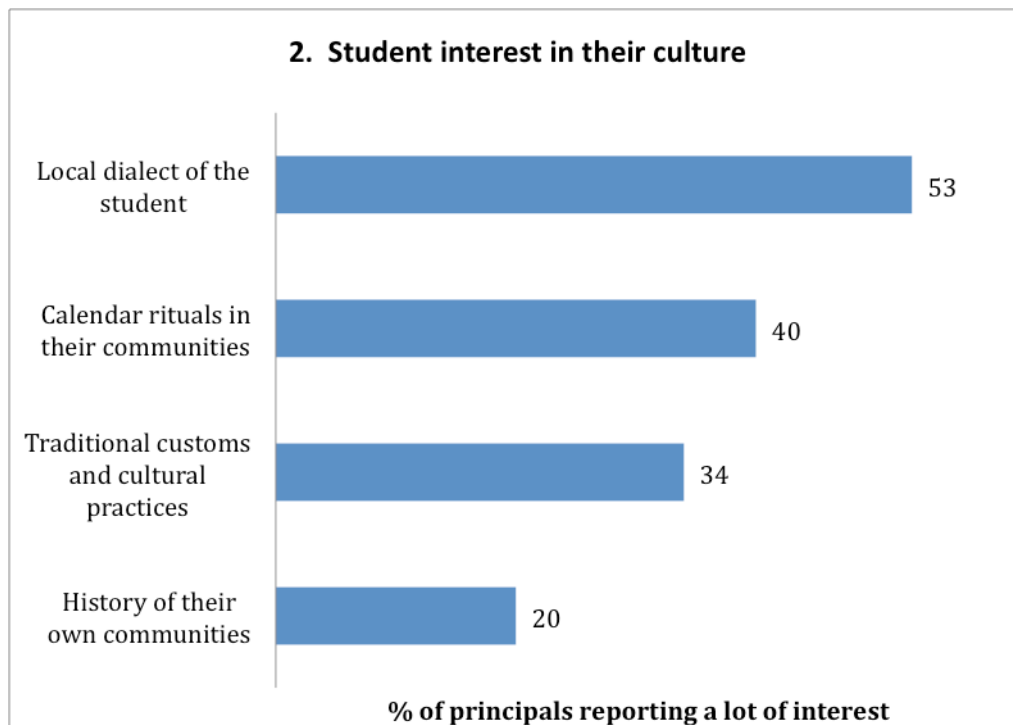
While an increase in cognitive historical knowledge is certainly expected with age and school level, the decline in familiarity with local legends, folk stories, and traditional sports is by no means a necessary concomitant of age, and could well be strengthened and reinforced rather than eroded by school education. The rather disturbing results indicated here therefore point to very specific ways in which the cultural pillar of GNH might be strengthened.

Thus, 85% of primary principals but only 77% of secondary school principals were satisfied that students are well trained or informed about traditional sports, while 67% of primary principals but only 54% of secondary principals were satisfied with their students' knowledge of local legends and folk stories. It might be hoped and expected both that this gap will narrow and overall levels of satisfaction in these areas increase with implementation of the *Educating for GNH* initiative.

While 74% of primary school principals and 90% of secondary school principals were very or quite satisfied with student knowledge about the history of Bhutan, this difference in cognitive knowledge is more attributable simply to age and school level, and therefore less surprising.

Perhaps a key conclusion from survey questions on students' cultural knowledge is that principals' generally low levels of satisfaction with student knowledge of traditional lozey, craft skills like painting and weaving, and traditional arts, and the declining levels by school level of knowledge of traditional sports and of local legends and folk stories point to very specific areas that might be given attention in curricular and co-curricular innovations introduced through the *Educating for GNH* initiative. These results also point to specific indicators that may be used in the future to assess the success of the *Educating for GNH* initiative in strengthening the cultural pillar of GNH.

Figure 9. Student interest in their culture



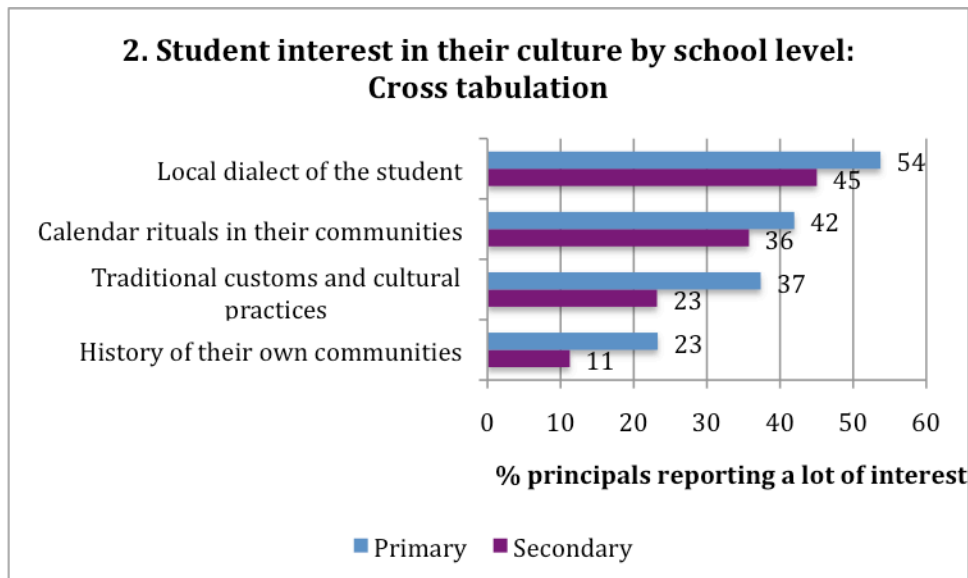
Educating for GNH Principals' Survey, 2010

In addition to asking principals their level of satisfaction with student knowledge of the culture of Bhutan, the survey also asked how much interest students have in four cultural areas.

Just over half of the principals (53%) reported a lot of interest among students in their local dialect, but only 40% reported a lot of student interest in calendar rituals in their community, 34% reported a lot of student interest in traditional customs and cultural practices, and 20% reported a lot of student interest in the history of their own communities (Figure 9 above). These relatively low percentages of principals reporting “a lot of interest” in traditional culture seem to correspond to relatively low percentages of principals expressing satisfaction with student knowledge in these areas—with perhaps the exception of student knowledge of traditional festivals (Figure 7 above).

Only a relatively small percentage of the principals reported that student interest in the four cultural areas had increased during the past year: 34% of principals reported that student interest in traditional customs and cultural practices had increased, as did 27% for interest in calendar rituals in their communities, 23% for interest in students’ local dialects, and 20% for interest in the history of their own communities.

Figure 10. Student interest in their culture by school level: Cross tabulation



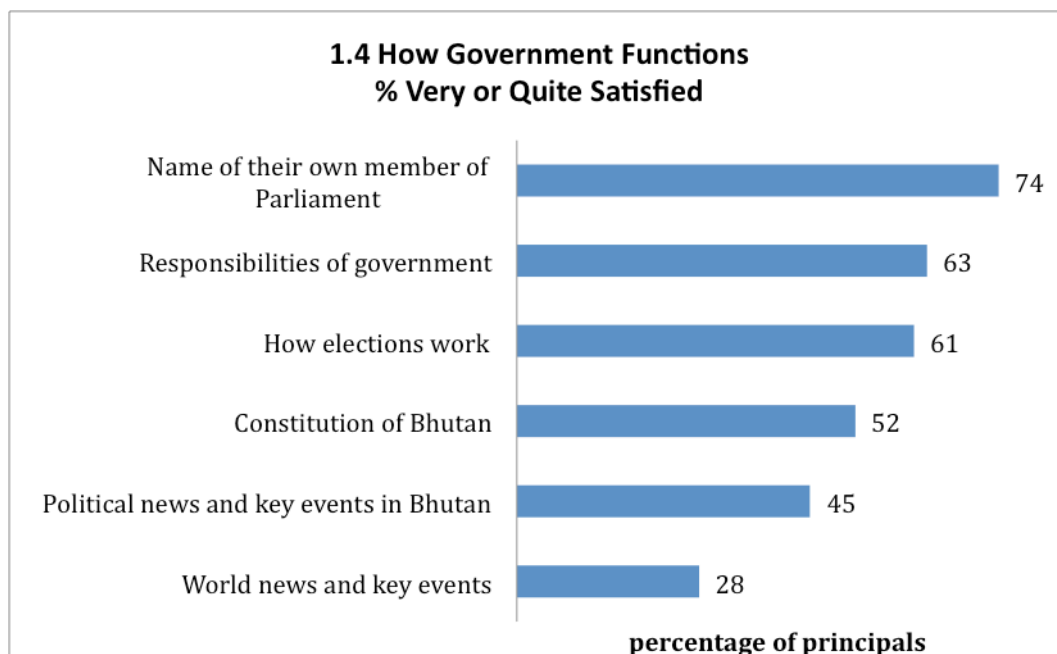
Educating for GNH Principals' Survey, 2010

Cross tabulations of student interest in their culture by school level indicate that in every area a considerably higher percentage of primary than secondary school principals report a lot of student interest. However, the percentages of principals in both school levels reporting a lot of student interest are low for all four areas, with only one area—student interest in their local dialects—showing more than half of primary principals (54%) reporting a lot of interest (Figure 10 above).

Reinforcing the disturbing decline in knowledge of local legends, folk stories, and traditional sports noted in Figure 8 above, the difference between primary and secondary school principals reporting a lot of interest is relatively high—ranging from a 6 percentage point difference for student interest in calendar rituals in their communities to a 14 percentage point difference for interest in traditional customs and cultural practices.

The international *Educating for GNH* workshop held in Thimphu in December 2009 pointed to a number of well-tested activities, methods, and pedagogical techniques that have been used globally to increase student interest in and knowledge of their indigenous cultures, as indicated by the contributions of participants like Professor Gregory Cajete of the University of New Mexico, who has written five books on the subject. Clearly, strengthening student interest in and knowledge of the traditional cultural practices and history of Bhutan and of students' local communities through dedicated curricular and co-curricular school reforms can greatly strengthen the cultural pillar of GNH in general.

Figure 11. Students' knowledge of how government functions



Educating for GNH Principals' Survey, 2010

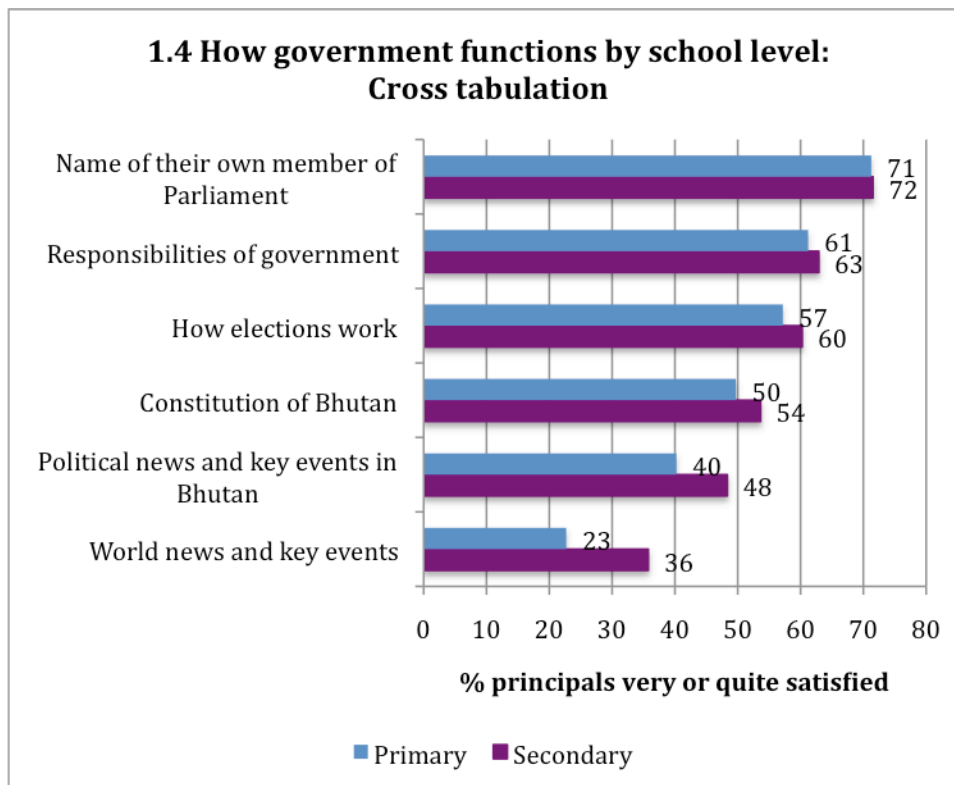
Note: Percentage of principals very or quite satisfied with student knowledge in these areas..

Satisfaction with students' knowledge of governance issues was in the moderate to low range, with only 28% of principals reporting satisfaction with students' knowledge of world news and key events and only 45% satisfied with their knowledge of Bhutanese news and events. This again confirms another key focus of the January–February 2010 Paro principals' workshop—namely the importance of enhancing media literacy in schools.

Only a slight majority of principals (52%) were satisfied with their students' knowledge about the Constitution of Bhutan, 61% were satisfied with their students' knowledge of how elections work, and 74% were satisfied that their students could name their own Member of Parliament (Figure 11 above).

As in other cases noted above, however, the large number of primary school principals responding to these questions undoubtedly may skew results, as primary school students are much less likely to be aware of political issues or of domestic and world news. The results for secondary school students that follow are therefore much more indicative of actual knowledge in these areas.

Figure 12. Students' knowledge of how government functions by school level



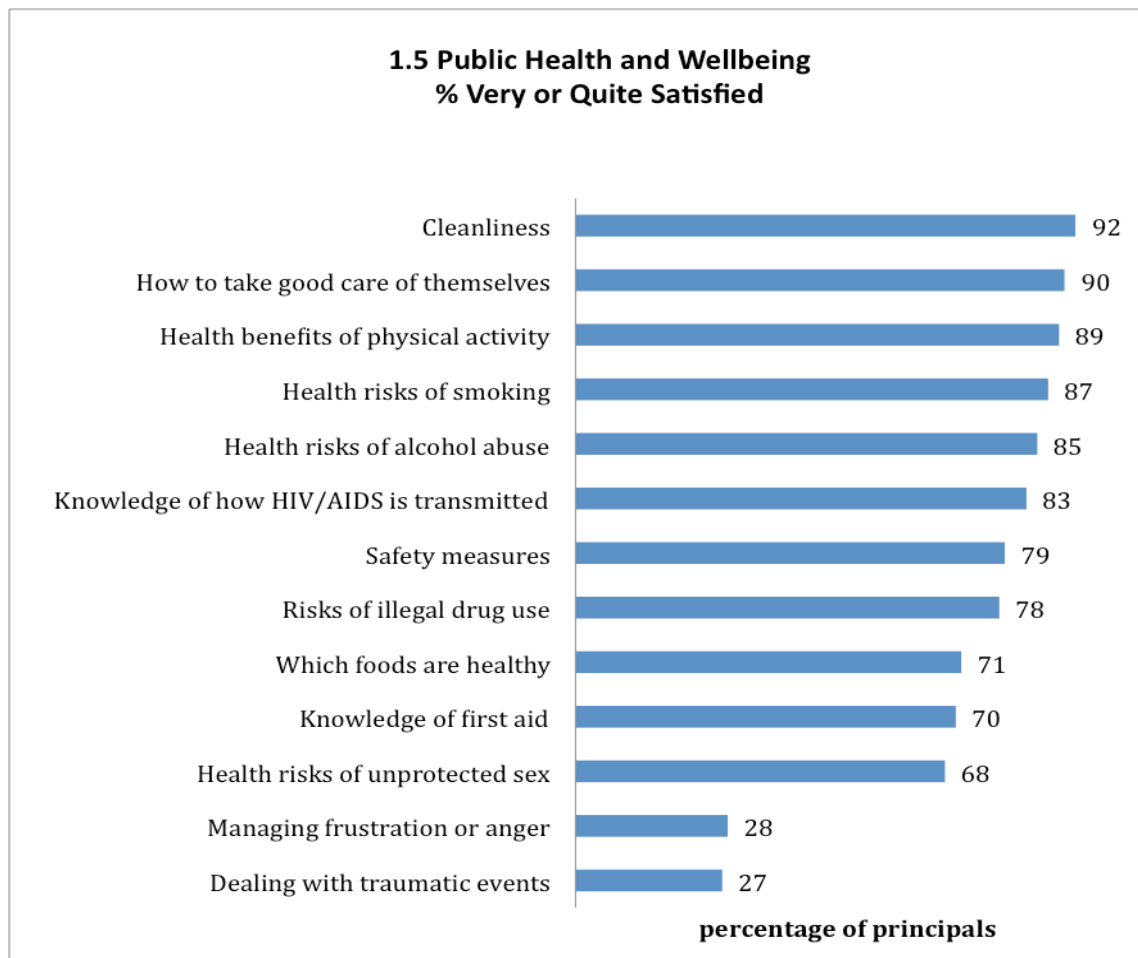
Educating for GNH Principals' Survey, 2010

It might be expected that secondary school principals would be more satisfied with student knowledge of how government functions than would primary school principals, since students study this topic more in secondary school, and since cognitive knowledge supposedly increases with age and school level. Surprisingly, however, there was generally very little difference between primary and secondary principals' levels of satisfaction with student knowledge in this area, with marked differences only on the news awareness questions. All responses remained in the low to moderate range. (Figure 12 above)

There was indeed an expected wide gap in levels of satisfaction with student knowledge of world news with 23% of primary principals and 36% of secondary principals saying they were "quite" or "very" satisfied. The gap was narrower on principals' satisfaction with student knowledge of Bhutan news and events, with 40% of primary and 48% of secondary school principals reporting satisfaction in this area. On the other four questions (knowledge about Bhutan's Constitution, elections, government responsibilities, and their MP), there was surprisingly little difference in primary and secondary school principals' satisfaction levels.

Since effective democracy requires a well-informed and responsible citizenry, it seems essential to improve knowledge of governance issues particularly among secondary school students, and thereby to strengthen the governance pillar of GNH. Effective implementation of the *Educating for GNH* initiative can be expected to improve the results reported here.

Figure 13. Students' knowledge of health and wellbeing

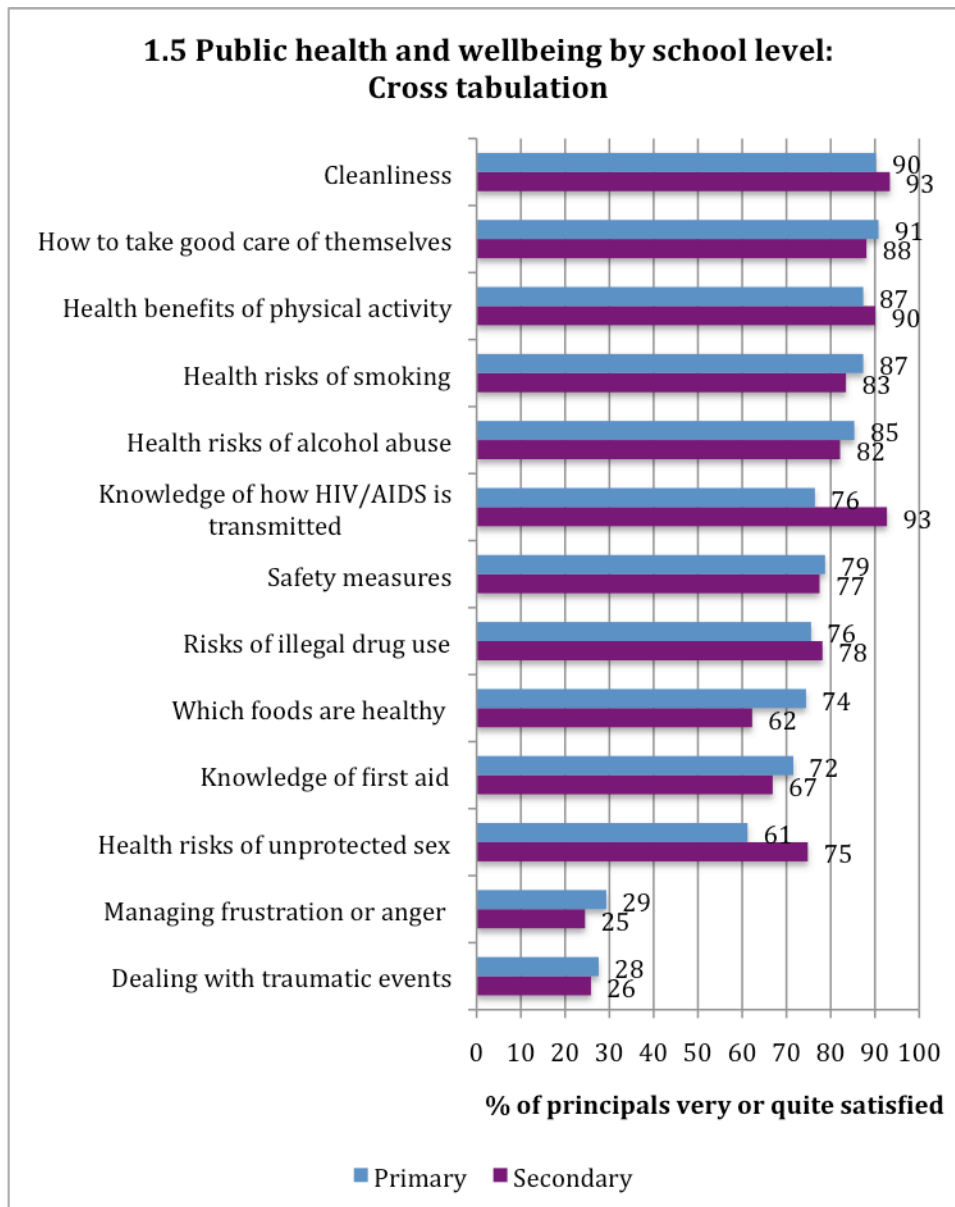


Educating for GNH Principals' Survey, 2010. Note: Percentage of principals very or quite satisfied with student knowledge of health and wellbeing issues

Relatively high levels of satisfaction were generally reported for students' knowledge of health and wellbeing issues, with 92% and 89% of principals respectively reporting satisfaction with their students' knowledge of the importance of cleanliness and physical activity. The vast majority was also satisfied with their students' knowledge about key risk factors like smoking (87%), alcohol abuse (85%), HIV/AIDS (83%), illegal drug use (78%), and unprotected sex (68%) (Figure 13 above).

However, there were two notable exceptions to the generally positive results on students' knowledge about health and wellbeing—both, significantly, in the realm of mental health. Thus, only 27-28% of principals expressed satisfaction with students' capacity to deal with traumatic events and to manage frustration and anger. It is noteworthy that, at the *Paro Educating for GNH* principals' workshops in January–February 2010, the Honourable Prime Minister showed videos of a Japanese teacher effectively working with his students in precisely these emotional and affective areas. The Prime Minister expressed admiration for such work, which he saw this as essential to nurturing GNH values among students.

Figure 14. Students' knowledge of health and wellbeing by school level: Cross tabulation



Educating for GNH Principals' Survey, 2010

As in the results for all principals noted in Figure 13 above, the vast majority of both primary and secondary school principals were satisfied with student knowledge in 11 of the 13 health and wellbeing issues listed in the survey, with dissatisfaction among both groups again confined to the mental health issues—dealing with frustration, anger, and trauma (Figure 14 above).

With three notable exceptions, primary and secondary school principals expressed similar levels of satisfaction with student knowledge on health and wellbeing (Figure 14 above). Thus, there was only a 2-5 percentage point difference between primary and secondary school principal responses on ten of the 13 health and wellbeing issues listed.

As is certainly to be expected, secondary school principals were considerably more satisfied than primary school principals with student knowledge of sexual health issues. Thus 93% of secondary school principals and 76% of primary school principals expressed satisfaction with student knowledge of how HIV/AIDs is transmitted, while 75% of secondary school principals and 61% of primary school principals were very or quite satisfied with their students' knowledge of the health risks of unprotected sex.

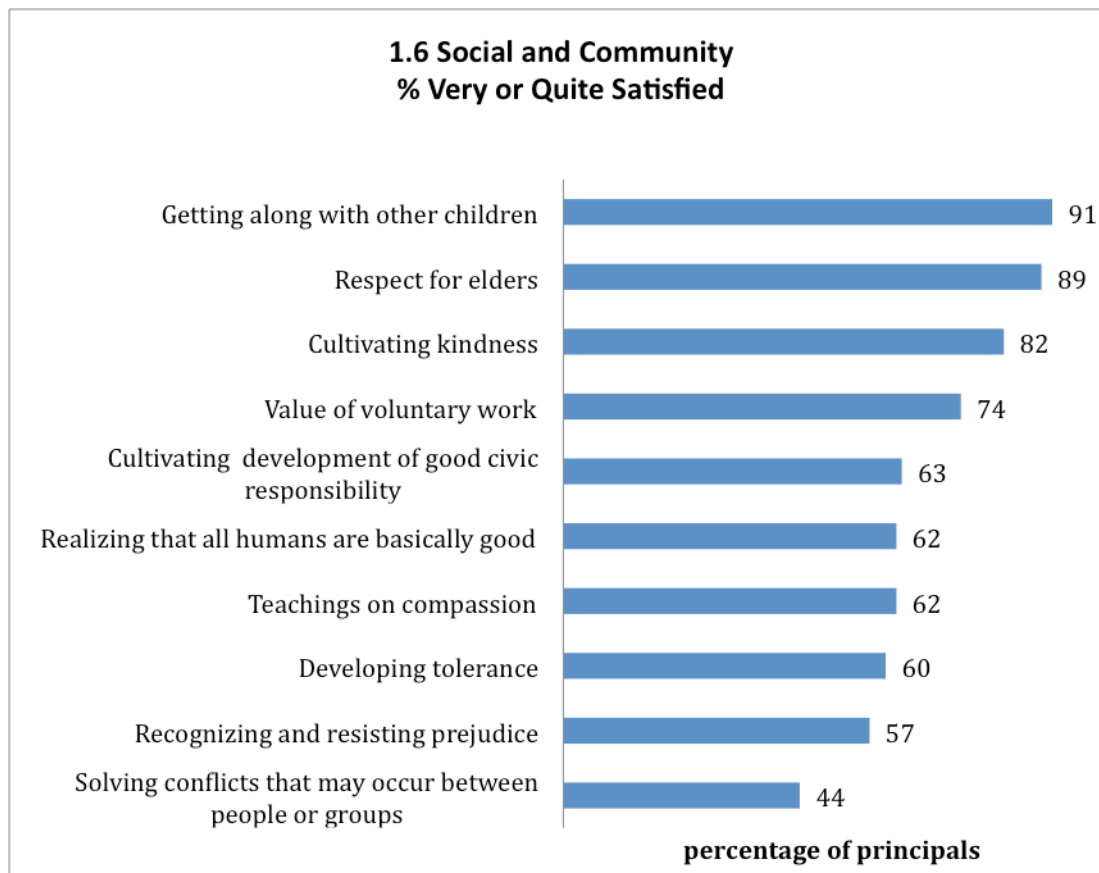
In sharp contrast, 74% of primary school principals but only 62% of secondary principals were quite or very satisfied with their students' knowledge about which foods are healthy. In light of apparently rising levels of junk food availability and consumption in Bhutan, and warnings that the global obesity epidemic with its attendant sharp increase in diabetes 2 prevalence and other ill-health effects may spread to this country, this declining level of knowledge on healthy foods by school level is disturbing.

As noted earlier, this present survey can be considered highly useful if it points both to existing strengths that can be nurtured and also to areas for improvement in which education efforts to improve knowledge and understanding can be stimulated. Since health is one of the nine key domains of the Centre for Bhutan Studies' GNH index, efforts to improve student health and wellbeing can certainly be considered to contribute to the realization of GNH in practice.

In that regard, the results above seem to indicate that Bhutan's education system is generally doing a good job in fostering student awareness of health and wellbeing issues, with particular success in making students aware of the health benefits of cleanliness and physical activity. There are also moderate to high levels of satisfaction expressed at both the primary and secondary levels with student knowledge of major health risks. However, two areas stand out in these results as requiring particular attention and improvement—education on healthy foods, particularly among secondary students, and effectively addressing mental health issues.

It is noteworthy that only a quarter of secondary school principals and fewer than one in three primary school principals are very or quite satisfied that their students can deal effectively with frustration, anger, and trauma. This sensitive area will likely require special teacher training and the addition of dedicated courses in teachers' college curricula. However, there is great potential for improvement in these mental health results as a direct result of the introduction of meditation into schools, since the shine or shamatha meditation taught at the 2010 Paro *Educating for GNH* principals' workshops has been proven to calm the mind and improve capacity to handle and ameliorate afflictive emotions.

Figure 15. Students' training in social and community issues



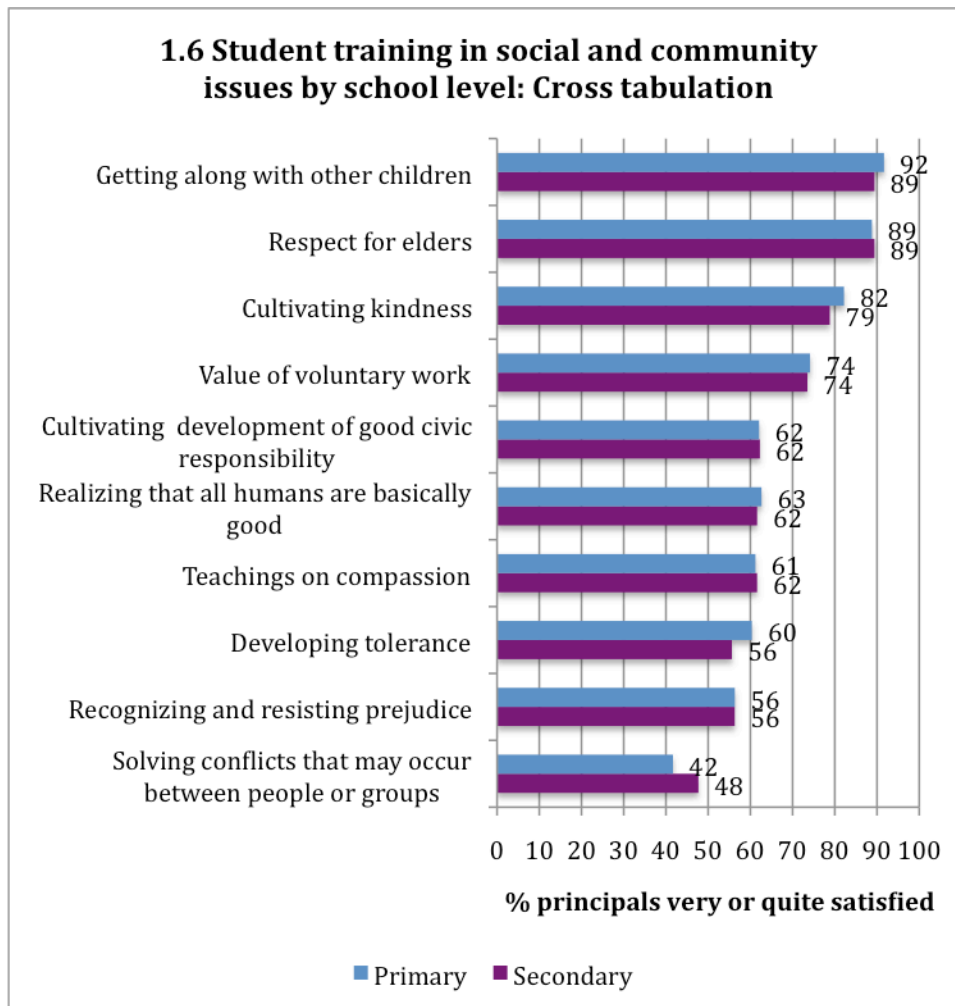
Educating for GNH Principals' Survey, 2010

Note: Percentage of principals very or quite satisfied.

In terms of training in key social and community values and principles, the survey results showed high levels of satisfaction for a number of positive relationship issues—getting along with other children (91%), respect for elders (89%), and cultivating kindness (82%) (Figure 15 above).

But only a minority of respondents (44%) were satisfied with their students' ability to resolve conflicts, and only moderate levels of satisfaction were recorded for important dimensions of social and community relations like resisting prejudice (57%), developing tolerance (60%), understanding compassion (62%), realizing that all humans are basically good (62%), civic responsibility (63%), and the value of voluntary work (74%).

Figure 16. Students' training in social and community issues by school level: Cross tabulation



Educating for GNH Principals' Survey, 2010

The percentages of primary and secondary school principals who were very or quite satisfied with student training in ten social and community values and principles generally followed the patterns for all principals indicated in the previous Figure 15 above. In fact, there were few significant differences between primary and secondary school principal responses on this variable—with high levels of satisfaction expressed for getting along with other children, respect for elders, and cultivating kindness; low levels for solving conflicts; and moderate levels for the other issues (Figure 16 above).

For four of the indicators, there was no difference at all between the percentages of primary and secondary school principals who were satisfied—respect for elders, value of voluntary work, civic responsibility, and recognizing and resisting prejudice. For two values—compassion and realizing that all humans are basically good—there was only a 1 percentage

point difference. For cultivating kindness there was a 3 percentage point difference, and for developing tolerance there was a 4 percentage point difference, with primary school principals slightly more satisfied than secondary school principals with student training in both these values.

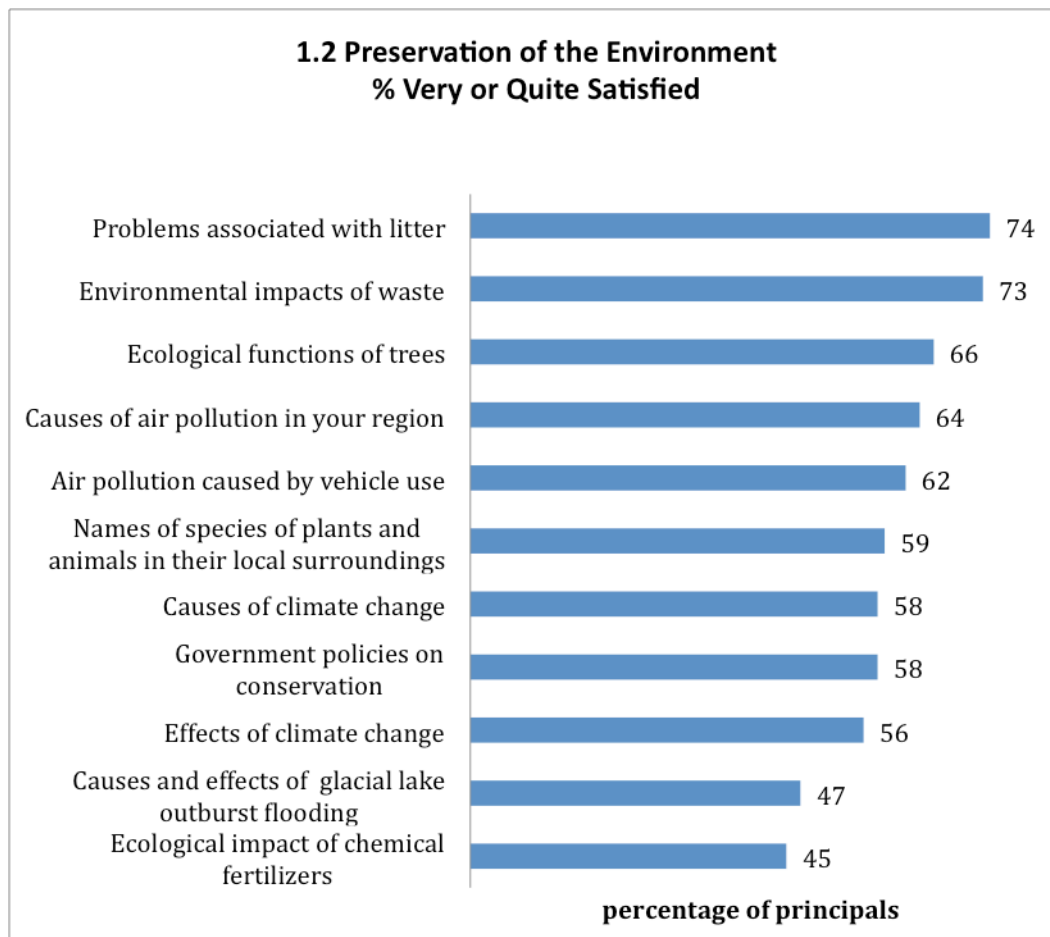
The widest gap (only 6 percentage points) between primary and secondary principal responses (42% and 48% respectively) was in satisfaction with their students's ability to resolve conflicts. The gap is not surprising since this capacity is much more likely to develop at older ages. Nevertheless, the low overall values assigned by both primary and secondary school principals to this ability indicates that simple but proven methods of training in mediation and conflict resolution might productively be introduced into Bhutanese classrooms as part of the *Educating for GNH* initiative.

Since a key dimension of the *Educating for GNH* initiative is community service, all these results (including those presently registering only moderate levels of satisfaction) can certainly be expected to improve over time as the initiative is implemented. In fact, community service was one of five key dimensions of *Educating for GNH* presented at the Paro principals' workshops, and occupied almost a full day's discussions and presentations at each of those workshops. In his addresses to the principals, the Honourable Prime Minister stressed the importance and value of schools seeing themselves not as isolated bubbles but rather as integral parts of the communities in which they are located, giving to their communities in a wide range of ways that he outlined in some detail.

The Paro principals' workshops emphasized that school-community relations are a two-way stream in which schools should also actively draw on community resources in classroom and co-curricular education in ways that will draw on and deepen respect for ancient local wisdom in farming, crafts, and other activities. In these and other ways, school-community relations were presented as strengthening the cultural pillar of GNH.

In sum, as with other results presented in this report, it must always be recalled that this present survey was administered on the first day of the Paro *Educating for GNH* principals' workshops and prior to principals being initiated into the new pedagogical approaches. As *Educating for GNH* is effectively implemented over time in the country's schools, and as community service by students expands and deepens, the baseline data presented here should certainly show improvements in the indicators presented. Hopefully the coming years will also produce a lively and fruitful discussion on the value of the particular progress indicators used in this report, and will see constructive revisions of those indicators based on actual experience in implementing the *Educating for GNH* initiative.

Figure 17. Students' knowledge of environmental issues



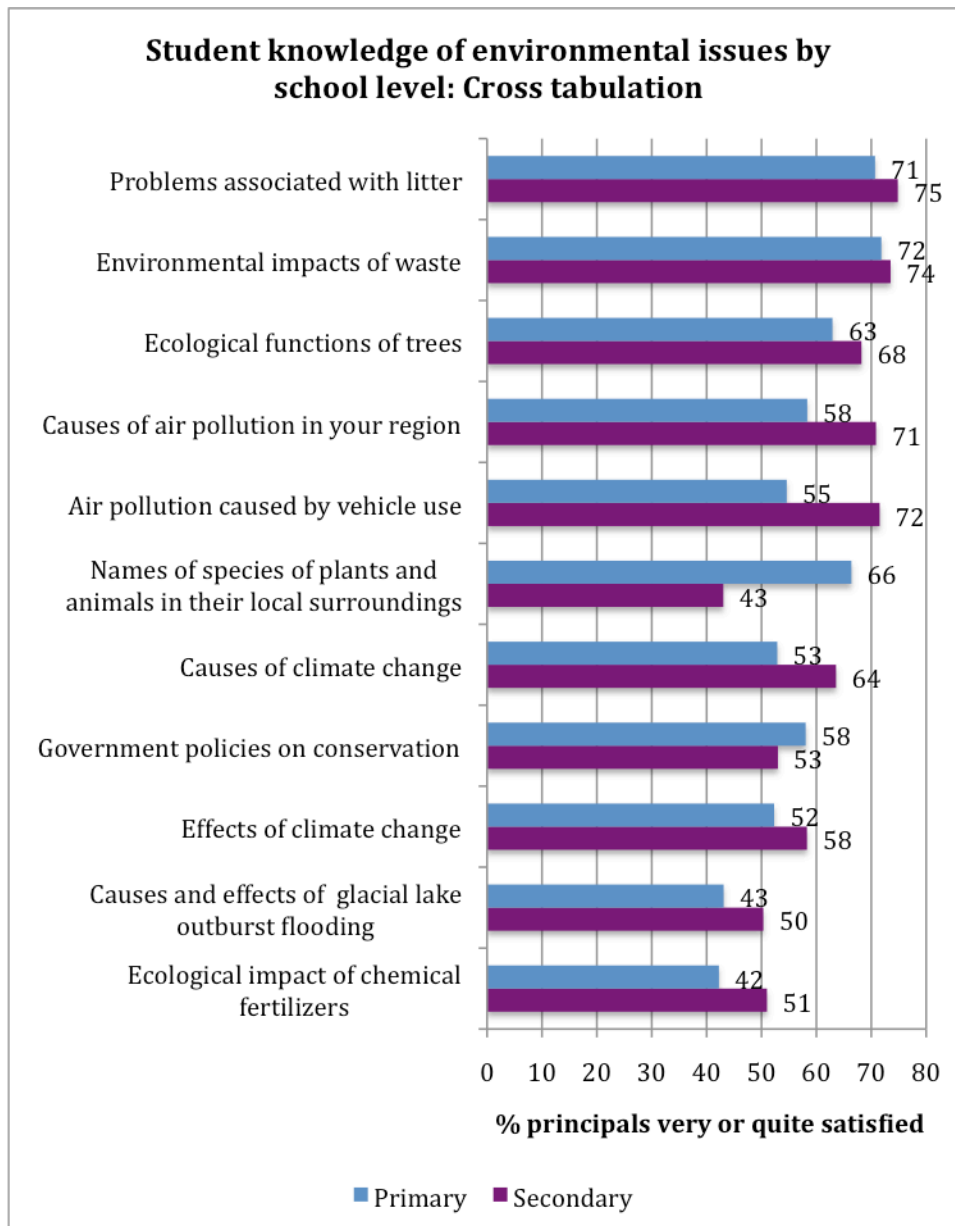
Educating for GNH Principals' Survey, 2010

Note: Percentage of principals very or quite satisfied with student knowledge of environmental issues.

For students' knowledge of environmental issues, satisfaction ratings were in the mid-range with higher levels of satisfaction recorded for knowledge about waste and litter problems (73–74%) and considerably lower levels for students' knowledge about the environmental impact of chemical fertilizers (45%) and about glacial lake outburst flooding (47%), even though the latter issue is particularly dangerous for Bhutan (Figure 17 above).

Principals' levels of satisfaction on their students' knowledge of most other environmental issues examined were in the 56–66% mid-range, which might be considered inadequate in light of environmental conservation being one of the four key pillars of GNH. Given the crucial global and national importance of climate change, it is also perhaps disturbing that only 56% of Bhutan's school principals were very or quite satisfied with their students' knowledge about climate change effects, and only 58% were satisfied with their knowledge of the causes of climate change.

Figure 18. Students' knowledge of environmental issues by school level: Cross tabulation



Educating for GNH Principals' Survey, 2010

When satisfaction with student knowledge of environmental issues was cross tabulated by school level, the results showed the same general pattern as previously indicated in Figure 17 above—with both primary and secondary principal responses generally in the mid-range, and with higher levels of satisfaction recorded for knowledge about waste and litter problems; lower levels recorded for glacial lake outburst flooding and the ecological impact of chemical fertilizers; and moderate levels recorded for the other issues (Figure 18 above).

When the gap between primary and secondary principal responses is examined, one result stands out quite dramatically as worthy of particular attention. In all but two categories, a higher proportion of secondary than primary school principals said they were very or quite satisfied with student knowledge of these environmental issues. This is to be expected, since cognitive understanding on many complex environmental issues like the causes and effects of climate change, air pollution, and chemical fertilizer use is acquired at higher school levels, particularly in science courses. Not surprisingly, therefore, secondary school principals were considerably more satisfied than primary school principals with student knowledge of those issues.

But the most notable exception to this pattern of greater secondary school satisfaction is in student knowledge of the names of species of plants and animals in their local surroundings—where 66% of the primary school principals compared with only 43% of the secondary school principals were very or quite satisfied—a very significant 23-percentage point difference. In fact, this environmental issue was the only one where fewer than half of the secondary school principals were satisfied.

This dramatic difference between primary and secondary principal responses may indicate an erosion with age of local and personal environmental awareness and connectedness. In his remarks to principals at the Paro *Educating for GNH* workshops, the Honourable Prime Minister stressed the importance of a personal relationship with nature as the key to cultivating ecological awareness and genuine care for the natural world and other species. If that relationship is diminishing with age among Bhutanese youth, as this result may indicate, then it may signify a longer-term danger to the environmental conservation pillar of GNH.

Once again, it must be emphasized that there is no ‘bad news’ in any of these results. Rather, the results, and the indicators themselves, point to how GNH principles, values, and practices may be constructively and productively strengthened in Bhutan through educational reform. In this case, a useful model might be the one-week Youth Development Fund camps for secondary school students that include daily nature walks in which qualified teachers help students collect and identify local plant species, including medicinal herbs. This activity is not only highly popular among the students, but naturally leads them to appreciate the richness and diversity of their country’s natural wealth. Again, effective implementation of the *Educating for GNH* initiative might be expected to rapidly reduce the present sharp primary-secondary gap on this particular indicator.

Above, we have broken down a range of GNH-related learning objectives by subject area—in part corresponding to key pillars and domains of Gross National Happiness, and in part related to generally accepted educational outcomes. Below, we combine the above results in order to identify key GNH-related strengths and weaknesses in Bhutan’s present educational system, as perceived by the country’s school principals.

This kind of analysis is important, as a key goal of this survey is precisely (a) to identify existing strengths in the education system on which the country can build (and to ensure such strengths are fully appreciated and not taken for granted), and (b) to identify existing weaknesses where more effort and work might be needed in order to yield the kind of GNH graduate of which the Honourable Prime Minister and Education Minister spoke (as cited at the beginning of this report.) Aside from the specific curriculum-related topics cited above, the following composite analysis is also useful to identify key groupings that indicate subject areas where schools are largely achieving GNH-related goals, and subject areas where they are not.

To that end, Table 1 below lists—in order of satisfaction—those GNH-related learning objectives where more than 75% of Bhutan’s school principals reported that they were very or quite satisfied that their students are well trained or informed. By contrast, Table 2 below lists—in order of dissatisfaction—those learning objectives where fewer than 50% of Bhutan’s school principals reported that they were very or quite satisfied that their students are well trained or informed.

The following analysis does not consider the results disaggregated by school level. However—although the percentages of primary and secondary school principals who responded to each question may differ—the basic patterns of their responses are, for the most part, similar to those for the percentages of all principals. Thus, as seen above, both primary and secondary school principals tend to give higher satisfaction ratings to the same indicators, and they tend to agree on the areas in which student attainment is lower. The following tables are therefore best interpreted relatively to identify comparative overall GNH-related strengths and weaknesses in the present national educational system.

Table 1. Learning objectives for which more than 75% of principals are very or quite satisfied with students' training and knowledge

Learning objectives	% of principals very or quite satisfied
Significance of National Day	93
Cleanliness	92
Following rules	92
Traditional festivals	91
Getting along with other children	91
How to take good care of themselves	90
Respect for elders	89
Health benefits of physical activity	89
Basic literacy	87
Health risks of smoking	87
Health risks of alcohol abuse	85
Traditional sports	85
Knowledge of how HIV/AIDs is transmitted	83
Cultivating development of good character	83
Cultivating kindness	82
Managing their time	81
History of Bhutan	80
Safety measures	79
Risks of illegal drug use	78
Helping students to realize the value of their lives	78

Table 1 above indicates that Bhutan's school principals are largely satisfied with 20 of the 70 learning objectives listed in the question "How satisfied are you that students in your school are well trained or informed about the following issues?" Near the top of the satisfaction list are a number of basic social behaviours like following rules (92% of principals) getting along with other children (91%), and respect for elders (89%); key cultural norms like knowing the significance of National Day (93%) and traditional festivals (91%); and the key educational objective of basic literacy (87%).

Interestingly, the high satisfaction list also included eight of the thirteen learning objectives pertaining to public health and wellbeing—cleanliness (92% of principals); students knowing how to take good care of themselves (90%); health benefits of physical activity (89%); health risks of smoking (87%), alcohol abuse (85%), and illegal drug use (78%); knowledge of HIV/AIDS transmission (83%); and safety measures (79%).

Table 2. Learning objectives for which fewer than 50% of principals are very or quite satisfied with students’ training and knowledge

Learning objectives	% of principals very or quite satisfied
Mindfulness or meditative thinking	17
Dealing with traumatic events	27
Managing frustration or anger	28
World news and key events	28
Managing money	33
Traditional lozey	36
Opportunities for self-employment	37
Traditional craft skills (painting, weaving, etc.)	38
Knowledge about the world outside Bhutan	40
How to think critically	40
Identifying their vocation-related skills and interests and abilities	42
Types of jobs and vocations available	44
Solving conflicts that may occur between people or groups	44
Political news and key events in Bhutan	45
Ecological impact of chemical fertilizers	45
Causes and effects of glacial lake outburst flooding	47
Independent or self-motivated learning	48

As seen in Table 2 above, at the lowest end of the satisfaction spectrum, fewer than half of Bhutan’s school principals are satisfied with the extent to which 17 GNH-related learning objectives are currently addressed in the present educational system. Having identified these through this survey, educational authorities might now wish to consider how training and knowledge in these particular areas may effectively be improved.

Most of the learning objectives that received poor satisfaction ratings from the country's school principals fell into six broad groups:

1. Contemplative knowledge, which is gained from mindfulness and meditation training, critical thinking, and independent learning.
2. Emotional issues, such as dealing with traumatic events, frustration, anger, and interpersonal conflict. (Interestingly, evidence shows that capacity to deal effectively with these emotional upheavals is also enhanced through meditation practice.)
3. Money management and vocational planning.
4. News and current events both internationally and within Bhutan.
5. Lozey and traditional crafts.
6. Environmental issues.

It is particularly noteworthy that—out of 70 listed learning objectives—training in meditation was ranked at the very bottom of the list by a substantial margin—fully ten-percentage points below the next lowest (69th ranked) issue. While meditation was grouped in the “contemplative knowledge” category in the survey, it can be argued that it could also be grouped in the “culture” category, since meditation training, discipline, and related knowledge has been passed down in an unbroken lineage in Bhutan for more than a thousand years and thus constitutes a core component of the country's ancient culture.

By training all of Bhutan's school principals in meditation methods and giving them a practical manual for use in their schools, the 2010 *Educating for GNH* principals' workshops may have begun to address this key gap in the present educational system. As noted earlier, successful transmission of these methods and teachings to students will require ongoing instruction and monitoring in schools.

While Tables 1 and 2 above respectively list the highest (75% of principals and above) and lowest (50% and below) areas of satisfaction identified by Bhutan's school principals, it should be noted that we have not listed here those learning objectives falling into the intermediate satisfaction area (50–75%). The vast majority of environmental and governance issues fall into that intermediate ranking. Indeed, it is noteworthy that not a single one of the 17 environmental or governance issues was among those 20 learning objectives where at least 75% of principals were satisfied with the level of student knowledge. This is in sharp contrast to the fact that 8 of the 13 health and wellbeing objectives fell into that top satisfaction category.

This analysis indicates that educators in Bhutan might wish to devote greater attention to environmental and governance issues—two of the four key pillars of Gross National Happiness—as they strive to align the educational system with GNH values and principles. As well, the fact that all three vocational and career objectives, along with “managing money,” received exceptionally low satisfaction ratings (all less than 50% of principals),

indicates that the economic pillar of GNH may also require further integration into the educational system.

Through such observations, GNH-based curriculum designers may find useful information in these survey results. Clearly this analysis must be considered very preliminary, but it is hopefully sufficiently provocative to provide useful information to educators seeking to gear the educational system ever further to GNH values, principles, and practices.

2. VALUES IN EDUCATION

To examine the extent to which GNH values are incorporated into existing educational programs, the principals were asked to indicate the priority they gave to the promotion of a variety of values in their schools. The ratings were done on a ten-point scale where 1 = extremely low priority and 10 = extremely high priority. Table 3 below lists the median level (i.e., the midpoint of the frequency distribution) of the principals' responses. In other words, if a value has a median of 9, this means that fifty percent of the principals rated the priority of this value as 9 or 10 (very important indeed). Likewise, if a value has a median of 5, this means that fifty percent of the principals rated the priority of this value as 5.

All of the values except one (financial success) had a median rating of seven or more. However, the results should be read and interpreted in relative rather than absolute terms, in large part because—despite confidentiality assurances given to survey respondents—there may well be an inherent positive response bias resulting from principals having a vested interest in depicting their schools in positive light and feeling that they are indeed effectively promoting all of these values. Interpreting the results in relative terms largely corrects for this response bias and allows valuable analysis.

From that relative or comparative perspective, Table 3 below therefore ranks GNH-related values by the level of priority assigned to each value by Bhutan's school principals. Thus, 11 of the 30 listed values have a median of 9. A preliminary analysis of these results from such a relative or comparative perspective follows presentation of the table below.

Table 3. Priority principals give to the promotion of different values in their schools

GNH-related values	Median rating (out of 10)
Respecting and caring for others	9
Friendship and cooperation	9
Sincerity and honesty	9
Respect for traditional customs/traditions	9
Obedience to authority	9
Caring for the natural environment	9
Caring for family members and relatives	9
Hard work	9
Discipline	9
Respect for parents	9
Respect for elders	9
Service to community	8
Time management	8
Independent/self-motivated learning	8
Diligence and persistence	8
Spirituality	8
Contentment	8
Individual achievement	8
Gender equality and diversity	8
Helping others	8
Tolerance for others	8
Kindness and compassion	8
Personal responsibility	8
Calmness	7
Creativity and originality	7
Economic security	7
Independence	7
Competitiveness and winning	7
Generosity	7
Financial success	5

Note: A rating of 1 = extremely low priority and of 10 = extremely high priority.

This comparative ranking of results suggests a few seemingly significant patterns:

1. Values related to individual and personal achievement—like creativity and originality, independence, competitiveness and winning, economic security, and financial success—tended to be rated as lower priorities than relational, societal, and community-oriented values.
2. By contrast, values related to group solidarity—such as respecting and caring for others including family members, parents, and elders; and friendship, cooperation, and obedience to authority—were all rated much higher than values related to individualism.
3. However, the high priority given to caring appeared to be personally focused on family and friends. More generalized and broad-based community and societal values—such as service to the community, helping others, kindness and compassion, and generosity—were somewhat lower on the ranking list than more personalized caring for family and friends.
4. On the other hand, values related to caring for the natural environment, respect for traditional customs and traditions, hard work, and discipline, were all rated as highly as caring for family and friends.
5. Values related to career and money—economic security and financial success—were rated lower, with financial success the lowest rated among all 30 listed values.
6. Values related to diversity—gender equality and diversity and tolerance for others—were in the mid range of rankings.

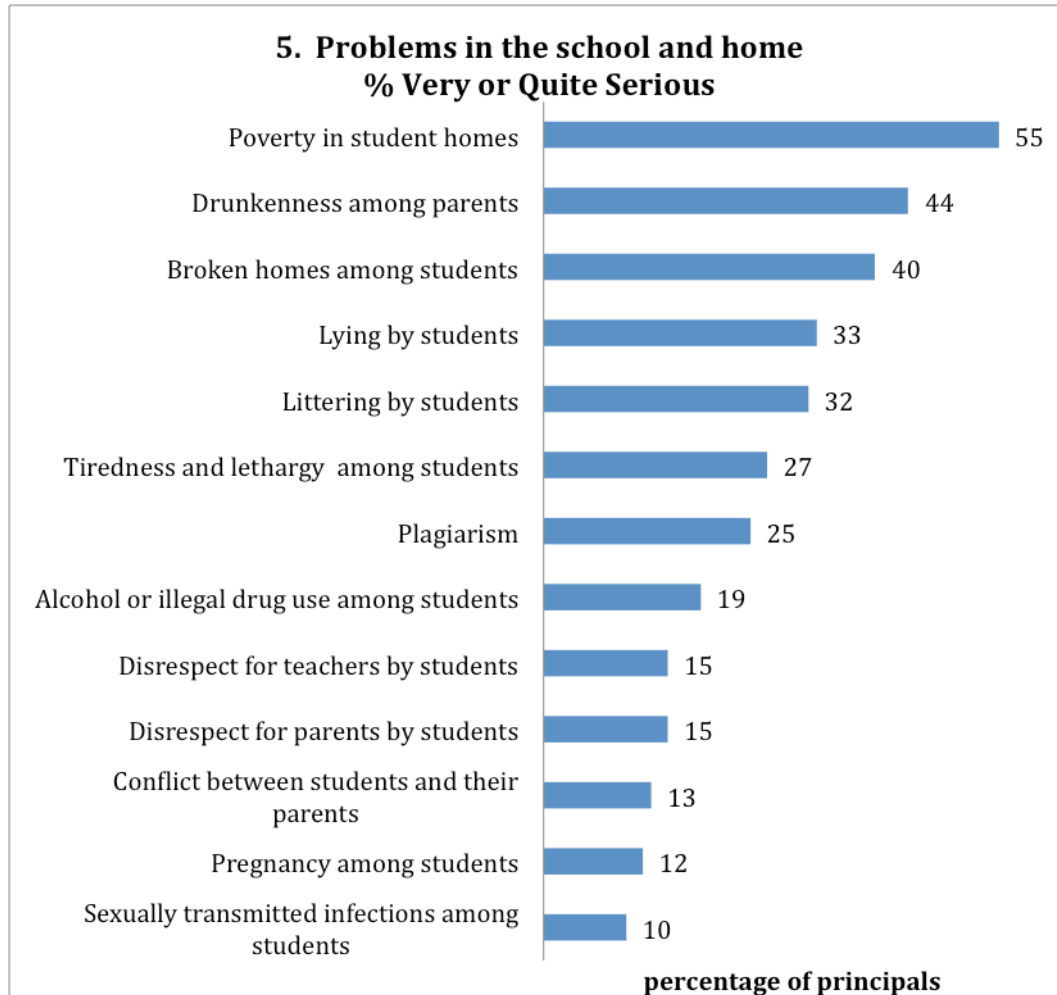
It might be argued that the priority given to societal and group values over more individualist ones indicates the potential vibrancy of the cultural pillar of GNH even if student knowledge in the cultural area is weaker than desirable, as indicated by the earlier principal satisfaction ratings. Since the value base for such knowledge appears to remain strong, as indicated by the Table 3 results, it is likely that enhancing classroom and co-curricular activities that deepen students' appreciation of local wisdom, traditional arts and crafts, folk tales and legends, and the other dimensions of indigenous knowledge described earlier, will fall on fertile ground. The same analysis can be made for environmental issues where the value of caring for nature ranks very high (Table 3) but where actual knowledge is often less than desirable (Figures 17 and 18 above).

In sum, considering the quality and values components of this survey together and in relation to each other provides considerable cause for optimism in the likely effectiveness of implementing the *Educating for GNH* initiative. Since the values base for the cultural and environmental pillars of GNH remains strong, it should be possible to strengthen these pillars considerably through dedicated curricular and co-curricular activities in these areas. Similar analyses might be undertaken for other GNH-related learning objectives.

3. CHALLENGES AND BARRIERS

Bhutan's school principals were asked to indicate the seriousness of different problems and barriers in their schools and the extent to which these problems had become better or worse during the past year.

Figure 19. Key problems in the schools and homes



Educating for GNH Principals' Survey, 2010

Note: Percentage of principals rating problem as very or quite serious.

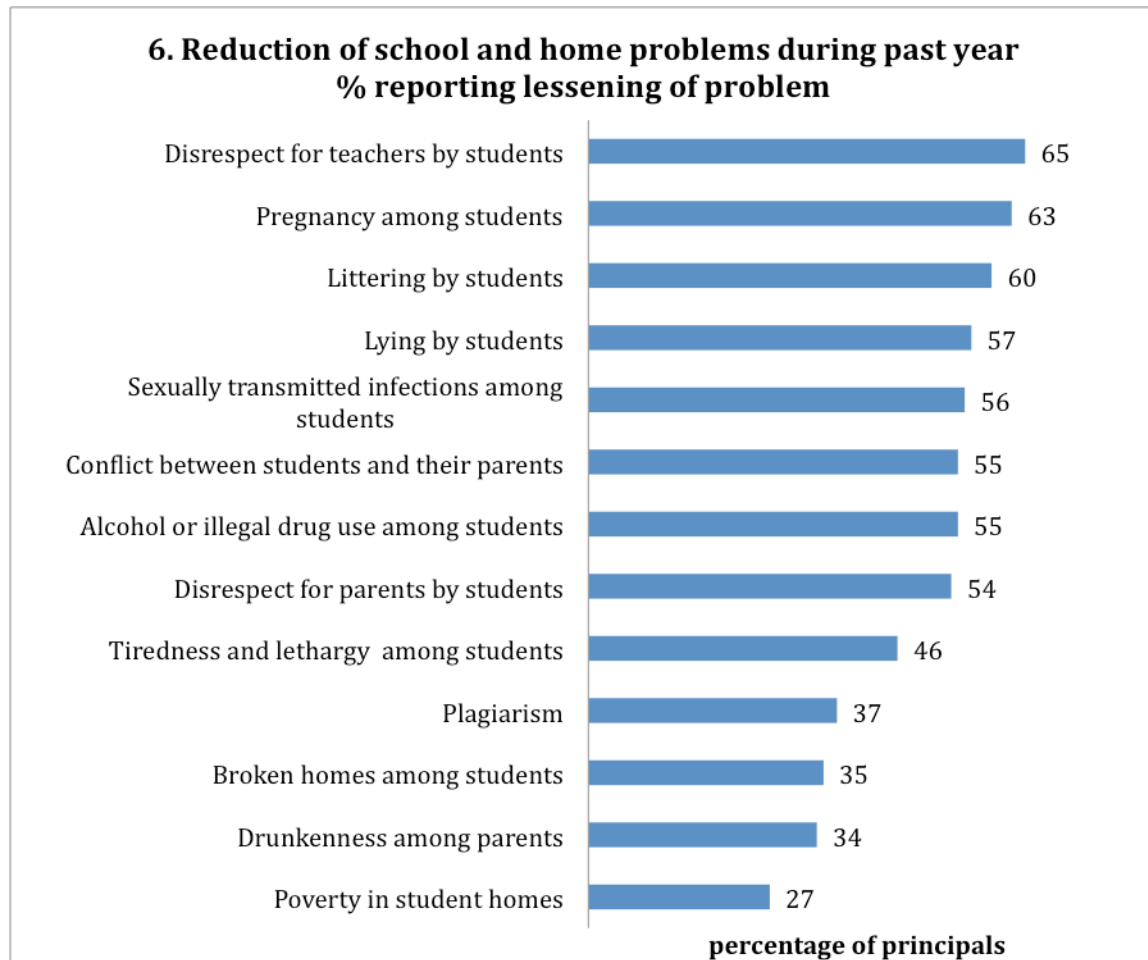
Issues related to students' home environment were most frequently mentioned as very serious or quite serious problems in schools—poverty in student homes (cited by 55% of principals), parental alcohol abuse (44%), and broken homes (40%) (Figure 19 above).

This indicates that movement towards a GNH-based education system cannot take place within schools alone, but must be part of a much broader societal initiative—a key point that

was frequently raised during the December 2009 *Educating for GNH* workshop in Thimphu which launched the initiative. So long as the key challenges to creating a GNH school lie in the home—as these survey responses seem to indicate—efforts to reduce poverty, alcohol abuse, and other societal afflictions can rightly be seen as part of the *Educating for GNH* initiative.

While other problems ranked lower on the list than home-related ones, it is notable that nearly one-third of Bhutanese school principals classify student littering as a very or quite serious problem in their schools, one-quarter identify plagiarism as a serious problem, and nearly one-fifth point to student alcohol or illegal drug use as a very or quite serious problem. Hopefully the new “green schools” initiative that emerged from the 2010 Paro principals’ workshops will sharply reduce the littering problem. But the survey results are useful in identifying other key barriers and challenges that must be overcome in the effort to create a GNH-based education system.

Figure 20. Reduction in school and home problems during past year



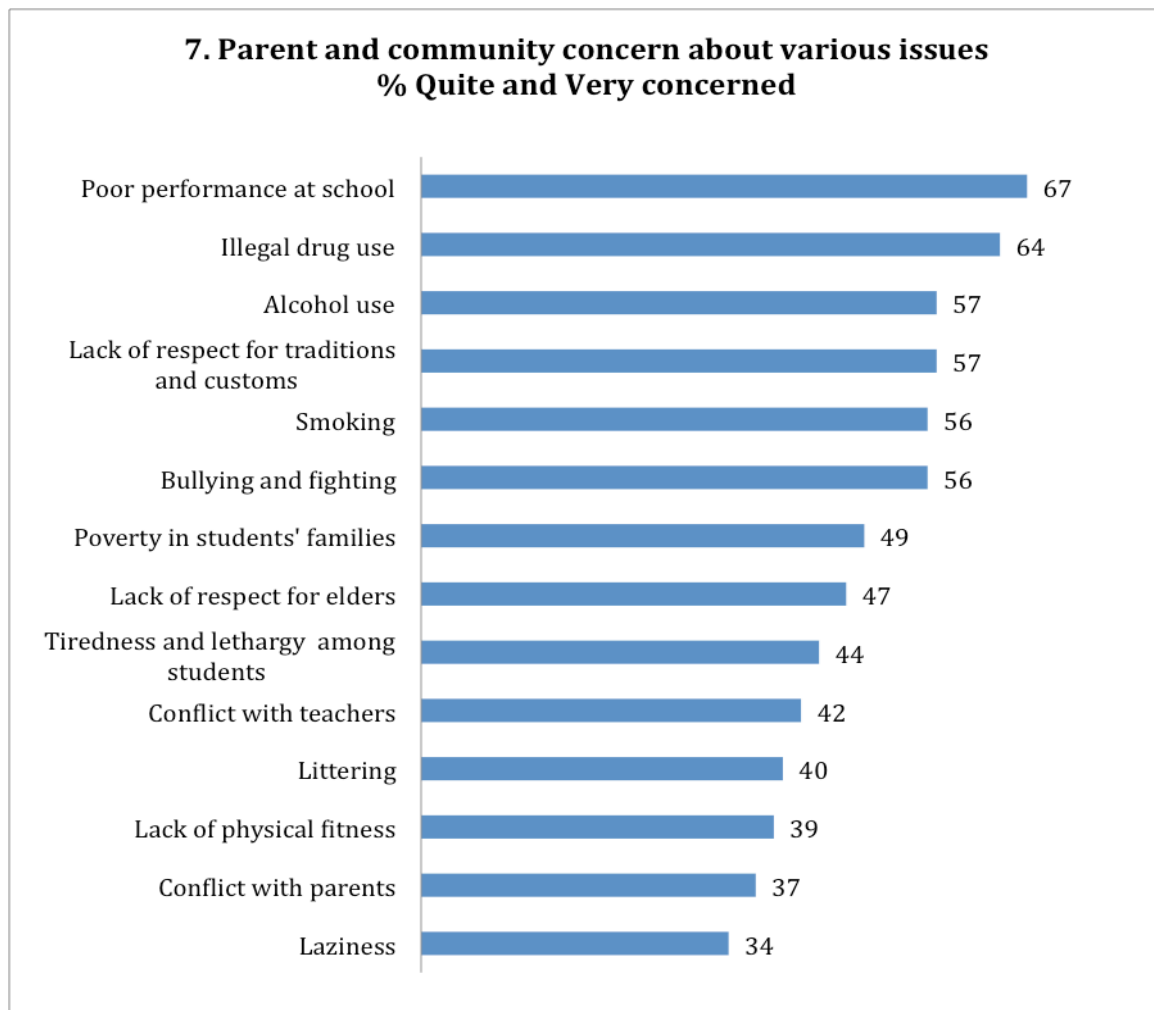
Educating for GNH Principals' Survey, 2010

Note: Percentage of principals rating problem as less of a problem during the past year.

Interestingly, problems in students' home environment were also those identified by Bhutan's school principals as having shown the least improvement during the past year, with only about one-fourth of the principals indicating any reduction in student poverty and only about one-third pointing to a reduction in parental alcohol abuse and broken homes. In sharp contrast, some problems more amenable to in-school intervention showed more marked improvements, with 65% of principals reporting a reduction in student disrespect for teachers and 60% reporting a reduction in student littering (Figure 20 above).

As noted in the introduction to this report, it must be recalled that this survey was designed to collect *baseline* data *prior* to implementation of the *Educating for GNH* initiative. It is hoped that challenges and barriers identified by principals in this baseline survey will be overcome gradually as the *Educating for GNH* initiative is effectively implemented. To assess such changes, it is strongly recommended that a shortened version of this survey be administered at least once every three to five years.

Figure 21. Parent and community concern about various issues among students in the school



Educating for GNH Principals' Survey, 2010

Note: Percentage of principals reporting people are very or quite concerned about the issues.

The principals were also asked to indicate which issues appeared to be of greatest concern to parents and members of the community. About two-thirds of the principals indicated that parents and community-members were quite or very concerned about poor performance at school (67%) and illegal drug use (64%), and a majority also flagged alcohol use (57%), a lack of respect for customs and traditions (57%), smoking (56%), and bullying and fighting (56%) as issues of concern to parents and the community (Figure 21 above).

As noted above, effective implementation of the *Educating for GNH* initiative may be expected to produce improvements in all the areas listed in Figure 21 above, and a reduction in the proportion of those identifying these problems as serious concerns in Bhutanese schools.

4. GNH PRINCIPLES IN EDUCATION

Table 4. Importance of introducing GNH principles, values, and practices in education areas

8. Areas of the education system	Median (out of 10)
Teacher training	10
Assessment systems	9
Physical environment of school	9
Meditation and mind training	9
Extra-curricular activities	8
Community services	8
Revision of textbooks	8
Revision of curricula	8

In response to survey question #8 about the relative importance principals attach to introducing GNH principles, values, and practices into various aspects of the educational system, the principals thought that introducing GNH to all of the areas was important. (Table 4 above)

The median rating for all of the areas was 8, 9, or 10 on a scale of 1 to 10. Principals gave the highest importance to introducing GNH into teacher training, which had a median rating of 10, and to assessment systems, physical environment of the school, and meditation and mind training, which all had a median rating of 9. They gave a somewhat lower importance to introducing GNH into extra-curricular activities, community services, revision of textbooks, and revision of curricula, which all had a median rating of 8.

Principals' Survey: Part 2 Results

Part 2 of the *Educating for GNH* principals' survey, which is considerably more extensive than Part 1, consists of 40 pages of questions—questions 12–95—that reflect the ways and extent to which Bhutan's primary and secondary schools currently reflect GNH principles, values, and practices. The Part 2 results presented here in this composite report consist of highlights of results that are presented in a much larger and more extensive separate report that has been given to the Ministry of Education and UNICEF. Those two agencies have also received a very large Appendix with a full set of charts and tables for all survey questions.

This composite report is therefore necessarily selective since present resources, and the necessity to produce a final report of reasonable length, do not allow a full analysis of all aspects of the very extensive principals' survey. In some cases, special emphasis here has been placed on the results that relate specifically to those areas that the principals identified in the survey as being *challenges* faced by their school. Also, some of the question responses have been cross tabulated by school level and region in order to clarify some of the results.

As such, only a few key charts are reproduced in this Part 2 highlights report. Far more charts are in the extensive Part 2 report, and the full set of Part 2 charts is in the Appendix, both of which documents have been provided to the Ministry of Education and UNICEF. To provide as concise a summary of results as possible, much of the discussion within this present report relates to summary categories, e.g., 1–4, 5–7, and 8–10 on a 10-point scale. Each of the categories is shown in full in the Appendix document, which also contains the survey questionnaire, the frequencies for each survey question—all expressed in both chart and table formats—and the cross tabulation analyses, including those for rural/urban location, that were conducted for key Part 2 questions.

In the future, there is great scope for further work in both analysing the survey questions that remain unanalysed and not reported, and cross tabulating results according to a wide range of different criteria, such as rural-urban distinctions, training and length of service, value prioritization, and much more.

In order to report the results of the more extensive Part 2 of the *Educating for GNH* principals' survey in a meaningful and relevant manner, GPI Atlantic researchers have chosen to use the “broad dimensions” and indicators outlined in the Bhutan Ministry of Education's Curriculum and Professional Support Division (CAPSD) GNH guidebook as a way to structure this analysis. This guidebook, titled *Educating for Gross National Happiness: Refining Our School Education Practices*,¹ was published earlier this year under the auspices of the Department of School Education (DSE) of Bhutan's Ministry of Education.

¹ Curriculum and Professional Support Division (CAPSD), Department of School Education (DSE), Bhutan Ministry of Education. *Educating for Gross National Happiness: Refining Our School Education Practices*. Paro. 2010. Accessed July 2010. Available at: <http://www.education.gov.bt/gnh/guidebook/GNH%20Guide%20book.pdf>

The CAPSD guidebook focuses mainly on some of the ways in which GNH values and principles could be transmitted through everyday school behaviour, and to this end provides a list of “broad dimensions” or key areas where schools could take “conscious and deliberate efforts to transmit Gross National Happiness.” These six key areas of the CAPSD guidebook, which structure the results for Part 2 of this survey report, are:

1. School leadership and management practices,
2. Green school systems (physical and psycho-social ambience),
3. Curriculum delivery (classroom teaching),
4. Holistic assessment system,
5. Co-curricular activities, and
6. School-community relationship.

The CAPSD guidebook also provides indicators within each of these broad dimensions that it suggests could be used to measure progress in these areas.² Although the principals’ survey does not relate to all of the indicators, the survey results do provide information on a considerable number of them.

1. SCHOOL LEADERSHIP AND MANAGEMENT PRACTICES

The 2010 Paro *Educating for GNH* principals’ workshops considered pathways to bring GNH values more deeply and effectively into the educational system. One key area identified was leadership and management—and in particular how to ensure that school leadership and management not only reflect a GNH approach but also transmit this approach effectively.

When principals were asked to rate the level of their support by the Ministry of Education, 79% of principals rated the Ministry of Education’s relations with them relatively highly—between 6 and 10 on a scale of 1 to 10 (with 10 being very supportive and 1 being not supportive at all). But only 22% of principals rated the Ministry of Education’s relations with themselves as being *very* supportive with a 9 or 10 on the scale. (Figure 22 below)

The highest levels of Ministry support were felt among primary school principals, of whom 28% responded with either 9 or 10 on the scale, compared to only 14% of higher secondary school principals. Nearly 29% of lower secondary school principals felt relatively little support from the Ministry of Education—answering between 1 and 5 on the 10-point scale.

Despite the fact that 34% of principals said they felt alone in dealing with school problems, principals also reported that teachers play a very active role in making decisions in the school. For example, according to the survey, 94% of principals agreed or strongly agreed that teachers play an active role in making school decisions on schedules, discipline (92%), assessment (92%), cleaning and maintenance (91%), and cultural programs (91%).

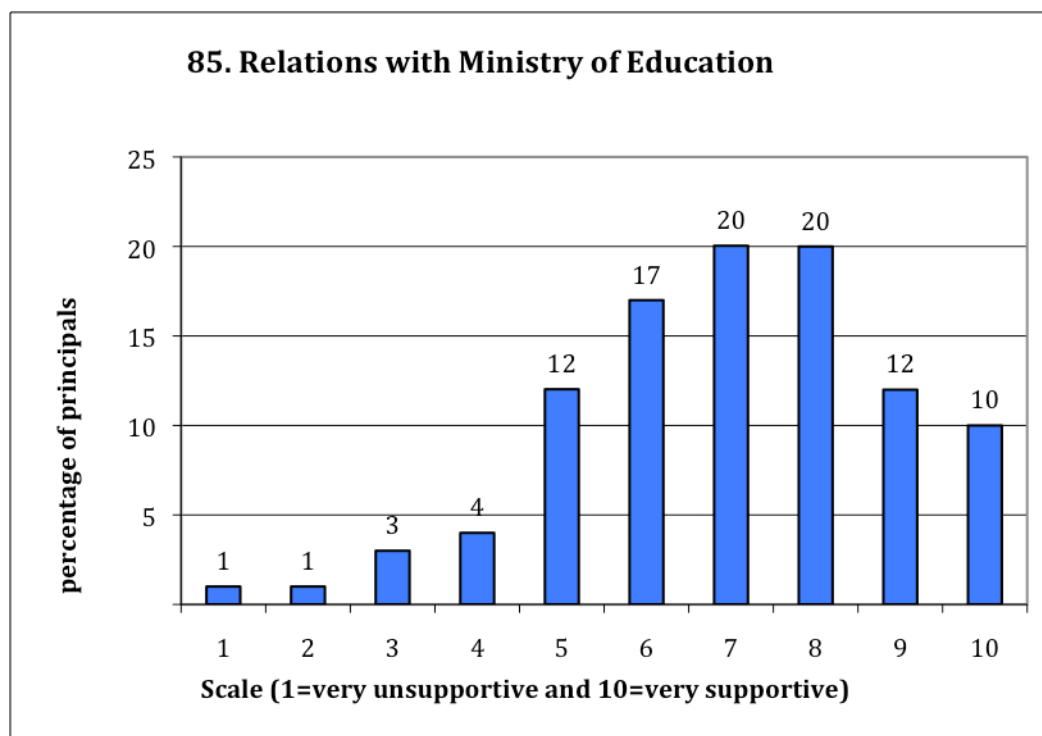
Principals also reported that students play an important role in school leadership and management, especially in making school decisions on cleaning and maintenance and cultural

² The CAPSD indicators can be found listed in the full Part 2 results report and well as the CAPSD guidebook.

programs, and nearly three-quarters of principals said that students feel free to express their views and concerns. With regard to decisions on assessment, however, only 27% of principals agreed or strongly agreed that students play an active role.

According to the CAPSD guidebook, involvement of parents in school activities is an indicator of good leadership and management. The principals' survey indicates that nearly 80% of schools in Bhutan have a formal process that regularly involves parents, while nearly 20% of the schools do not have such a formal process.

Figure 22. Principals' rating of support from Ministry of Education



Educating for GNH Principals' Survey, 2010

2A. GREEN SCHOOLS: PHYSICAL AMBIENCE

Renowned educators have observed that children learn as much if not more from the learning environment and atmosphere they experience as from textbooks and classroom teaching. "Ambience" here refers to the physical, psychological, and social environment of schools, and is a critical vehicle for conveying GNH principles and values. These environments can affect academic performance and standards as well as character and behaviour.

An elegant, dignified, and uplifted environment can make a student feel respected, accepted, and welcomed, and is conducive to learning, while a dirty and degraded environment can make a student feel uncared for and less likely to learn. Whether a hallway or classroom wall

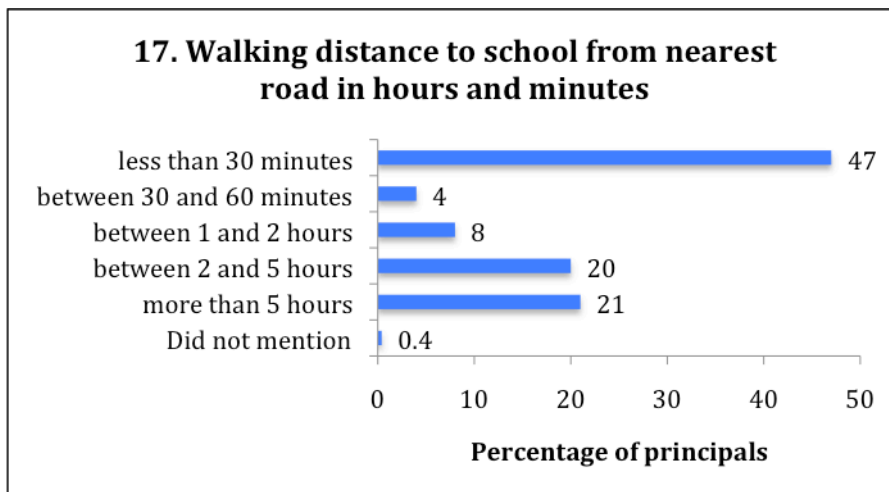
is bare or brightly hung with student artwork, whether the school yard resounds with yelling or respectful tones of voice, whether toilets are smelly and dirty or clean and in good repair—all these signals will send entirely different messages to students.

School greening

During the principals' workshops held in Paro in January and February 2010, all Bhutanese school principals collectively pledged to work towards "green schools for a green Bhutan." Partly because the survey was designed well before the principals' pledge, there were, unfortunately, very few questions in the survey that dealt specifically with school greening and the availability of outdoor learning spaces for students. The two questions concerning outdoor learning activities and gardens were asked of urban principals only. However, it appears that some principals from rural, remote, or semi-urban locations answered these questions as well, making the results inconclusive. It is recommended that future rounds of the survey add more questions that deal specifically with the elements of the principals' pledge to work towards greening their schools in order to ascertain progress in these areas.

Walking distance to the school

Figure 23. Walking distance to school from nearest road



Educating for GNH Principals' Survey, 2010

According to the survey, nearly 47% of principals reported that their school is less than a 30-minute walk from the nearest road (Figure 23 above). However, nearly 20% reported that their school was between 2 and 5 hours walk from the nearest road, and an additional 21% reported their school was more than 5 hours walk from the nearest road.

Unfortunately, due to the poor wording of this question, it remains unclear exactly how far students need to walk from their *homes* to the school, which is the information that is really required. Some students may board at their school and not need to walk, some may be delivered to the nearest roadhead by school bus and then walk, while some student homes

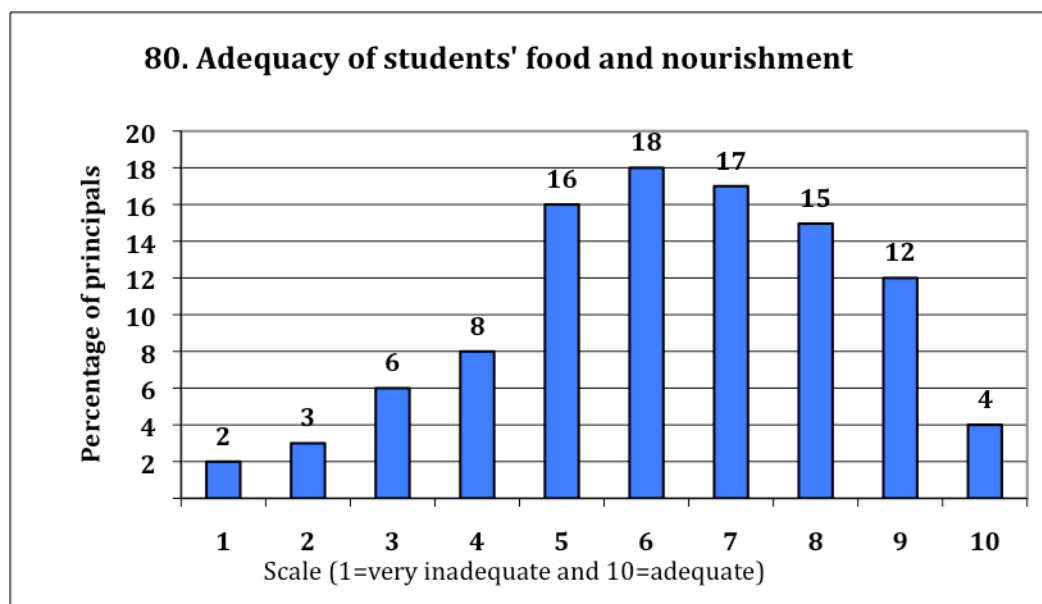
might be close to the school, but farther away from the nearest road. It is also not clear from responses if walking distances provided are one way or return trips.

The data on walking distance from the nearest road were further analysed by region, to ascertain where duration of walking might be most problematic. Cross tabulations found that nearly 51% of principals in the East, 42% in the Central region, and 41% in the South reported walking distances to school from the nearest road to be greater than 2 hours, compared with 27% in West other than Thimphu and 16% in Thimphu.

Student nourishment and illness

In the formulation of the survey questions, there was particular attention paid to issues related to students' health, safety, and hygiene.

Figure 24. Adequacy of students' food and nourishment



Educating for GNH Principals' Survey, 2010

Most principals do not consider their students' food and nourishment to be truly adequate, with 53% ranking that adequacy from 1-6 on a 10-point scale where 1 = very inadequate and 10 = adequate. Roughly 74% of principals rated students food and nourishment in the moderate range (4-8). Only 16% rated it in the high range (9-10 on the scale), and 11% answered that it was inadequate—in the low (1-3) range (Figure 24 above)

Cross tabulations were conducted for student food and nourishment by region. Overall, according to principals' responses, schools in the East, Central, and South regions of Bhutan fare worse than Thimphu and the West in adequacy of student food and nourishment. Thus 16% of principals in the East but 0% in Thimphu rated student nourishment as poor (1-3).

According to the survey, roughly 62% of students bring their own lunch to school, while the remaining 38% do not. However, it is not clear from the question whether the students who do not bring a lunch forego lunch, or if lunches are provided for them at the school.

The survey also looked at the extent to which student learning is hindered by sickness, but did not ask about the prevalence or types of sicknesses common among students, which might also have been illuminating. Results of the survey indicate that 49% of principals say sickness has very little or no effect on student learning, while 51% say sickness has some or a lot of influence on student learning.

School infrastructure

There was also attention paid in the formulation of the survey questions to overall school sanitation, including the state and adequacy of toilets and drinking water.

Principals frequently cited infrastructure issues as challenges faced by their school. A very high percentage of school principals (87%) rated better maintenance of the school as being very important—between 8 and 10 on a 10-point scale, with 10 being extremely important. In fact, 45% of the principals rated the importance of better maintenance as being extremely important—10 on the scale.

According to the survey, nearly all principals consider their schools to be very or somewhat clean. However, results were somewhat different for cleanliness of student toilets. Although 80% of principals said school toilets were very or somewhat clean, fully 20% reported their school's toilets were not very clean or not clean at all.

A number of survey questions dealt with issues regarding toilet and water functioning and sanitation. Overall, it appears that the functioning, cleanliness, and adequacy of student toilets in schools, particularly in non-urban settings, need to be addressed. About 38% of principals did not think that their school had sufficient toilets.

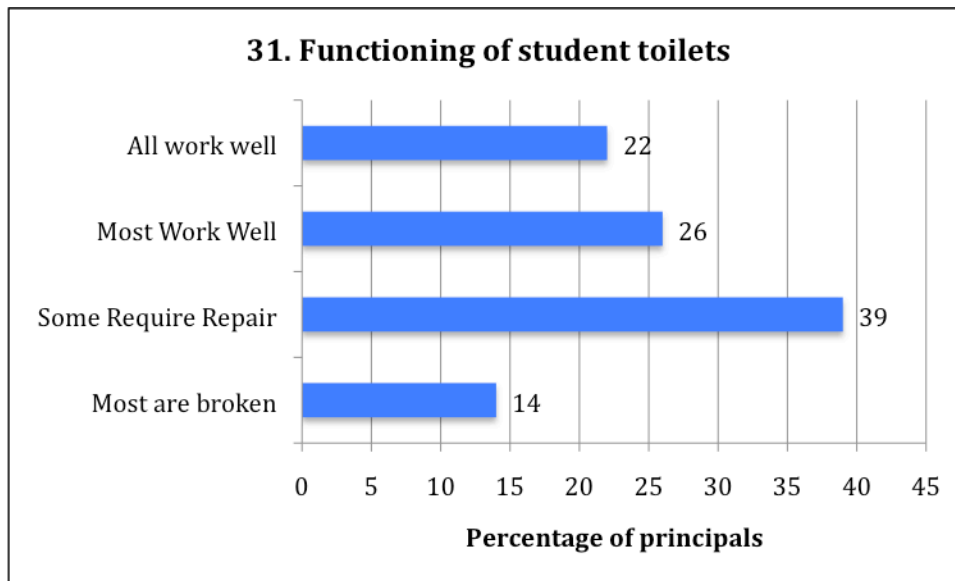
According to the survey, a majority of principals report student toilets as being either in need of repair (39%) or broken altogether (14%). Only 22% of report that all the student toilets work well in their school and 26% report that most work well (Figure 25 below).

Cross tabulations by region for the functioning of student toilets indicate that problems with malfunctioning toilets appear worse in the South where 19% of principals report that most of the toilets are broken and 40% report that some require repair. In the Central region 15% of principals report that most of the toilets are broken and 46% report that some are in need of repair. In Thimphu only 8% of principals reported mostly broken toilets.

The urban/rural cross tabulation indicates that urban principals report better functioning toilets than their rural/remote counterparts, with only 8% of urban principals reporting toilets as being mostly broken compared to 10% of semi-urban principals, 16% of rural principals, and 23% of remote principals.

Community, primary and lower secondary school principals seem to report greater difficulties with student toilets than principals from higher secondary schools. Thus, 54-55% of community, primary, and lower secondary school principals report that school toilets are either mostly broken or require some repair, compared to 50% of middle secondary school principals and 29% of higher secondary school principals.

Figure 25. Functioning of student toilets



Educating for GNH Principals' Survey, 2010

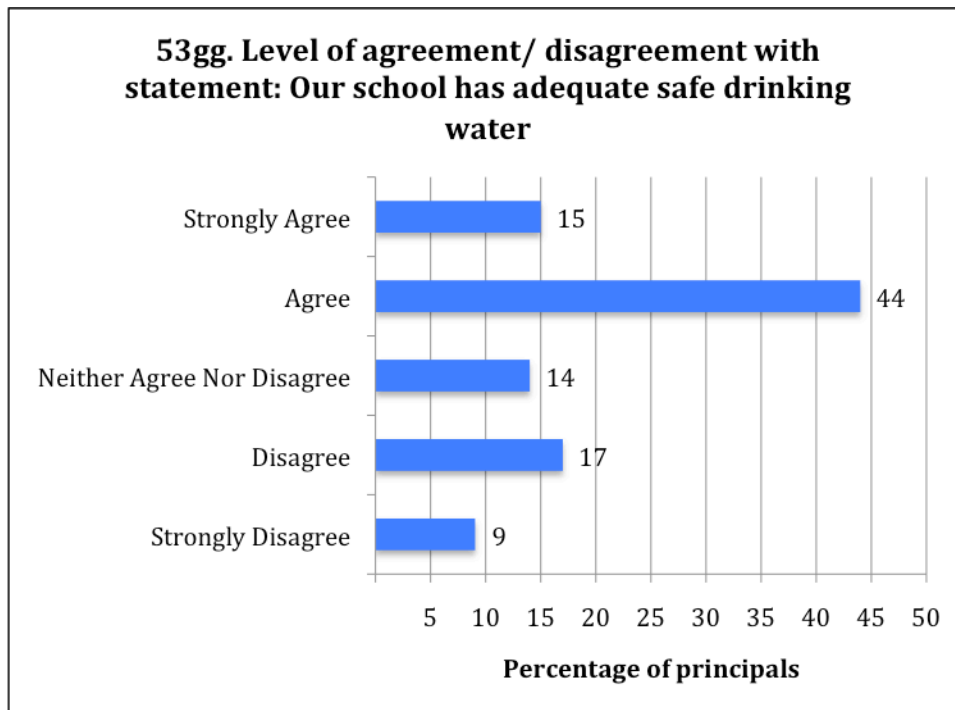
In terms of *type* of student toilets, 0.6% of principals overall reported that their school didn't have any toilets at all. When this was analysed further, it was found that these schools were almost all located in remote regions—where 14.3% of principals reported not having any toilets at all.

Pit toilets appear to be the most prevalent type of toilet in Bhutan's schools (48%), while 35% of principals reported their school has flushable toilets with water available, and 16% report they have flushable toilets with water not available. It was not clear to the report authors whether this meant that those toilets were not functioning due to lack of water.

According to the survey, the safety of drinking water in Bhutan's schools also needs to be addressed. Roughly 26% of principals report that their school does not have adequate safe drinking water (Figure 26 below).

At the regional level, nearly three-fourths of Thimphu schools appear to have adequate safe drinking water. In Thimphu, 11% of principals either disagreed or strongly disagreed with the statement "Our school has adequate safe drinking water" compared to 40% in the South, 25% in the Central region, 24% in the East, and 23% in the West other than Thimphu.

Figure 26. Safe drinking water



Educating for GNH Principals' Survey, 2010

Cross tabulations by school level indicate that community, primary, and lower secondary schools fare the worst in terms of drinking water quality: 35% of lower secondary principals, 31% of primary principals, and 28% of community school principals either disagreed or strongly disagreed with the statement that their school has adequate safe drinking water, while only 12% of middle secondary and 3% of higher secondary principals responded in this way.

With regard to student water tap functioning overall, 25% of principals report that all of the water taps used by students work well and 34% report that most of them work well, but fully 40% of principals say either that some of their student water taps require repair or that most of the water taps are broken.

It appears that when the data are disaggregated by school level, primary and lower secondary school principals report the most problems with water taps: 12% of primary school principals report their school taps are mostly broken, and another 33% report some taps as requiring repair. 9% of lower secondary and community school principals report most taps broken, and another 40% and 31% respectively say some taps need repair. Higher secondary school principals report the fewest problems with taps with 21% reporting them to be either mostly broken or in need of repair.

2B. GREEN SCHOOLS: PSYCHO-SOCIAL AMBIENCE

Psycho-social ambience includes the mental, emotional and spiritual dimensions of the school environment, such as the transmission and manifestation of caring behaviours and values that promote wellbeing in the students' physical bodies, emotional experiences, and mental clarity. In short, psycho-social ambience promotes the “all-round development” of children.

As such, feeling safe and free from abuse and bullying in a caring and supportive environment; being kind, compassionate, and generous towards others; training in meditation or mindfulness practice; and developing a critical intelligence are all important aspects of psycho-social ambience. One could say that this is the space of joining the head and heart in an atmosphere of compassionate action.

Meditation practice in education

Bhutan has become the first country in the world to encourage school principals to include daily meditation practice in the school curriculum. This is not only in keeping with Bhutan's long and ancient wisdom traditions, passed down through an unbroken lineage of great and enlightened masters. It is also a profound instruction for good learning, open mind, clear insight, and transmission of genuine wisdom—all key goals of a GNH-infused education.

Despite its importance, there were only three questions on meditation practice in the principals' survey. Questions relating to meditation might be expanded in future surveys, at which time it might be advantageous to look into the effects of meditation in the schools in more depth.

Part Two of the present survey asked principals to rate the importance that they attach to introducing GNH principles, values, and practices in various areas (on a scale of 1 to 10 where 1 is “not at all important” and 10 is “extremely important”). Almost 75% of the principals gave the area of meditation and mind training a very high rating—between 8 and 10 on the scale—with 55% rating it at 9 or 10, and 35% rated it as 10—“extremely important.” Only 1.4% of the principals gave it a low rating between 1 and 4. This response rate is equivalent to that for the same question (#8a) in Part 1, where 77% of the principals gave the area of meditation and mind training a rating between 8 and 10 on the scale, over 60% of the principals rated its importance as 9 or 10, and 41% rated this as 10. Overall, these results indicate that there is very fertile ground and a high level of receptivity for introduction of meditation into Bhutan's schools as part of the *Educating for GNH* initiative.

Another survey question on meditation simply asked principals to rate “their opinion of the importance of meditation in Bhutanese education”, rather than in relation to GNH values as in question reported above. In this case, the majority of Bhutan's school principals still felt that meditation in Bhutanese education is very important, although not by the same margin as in the question relating meditation to GNH values. In this case, about 68% of principals gave the importance of meditation a rating between 8 and 10 on a 10-point scale—with 25%

giving it a rating of 10—extremely important. Only 3% gave it a low importance rating between 1 and 4, and fewer than 1% rated it as not important at all.

Table 5. Importance of meditation in Bhutanese education by school level: Cross tabulation (Survey question #83)

	percentage of principals										
	1	2	3	4	5	6	7	8	9	10	Total
Community School	0.4	0.8	0.4	0	3	6	17	25	20	28	100%
Primary	2	0	1	2	7	7	17	32	15	17	100%
Lower Secondary	0	0	1	3	5	5	17	26	17	26	100%
Middle Secondary	0	0	0	5	5	7	24	24	14	21	100%
Higher Secondary	0	0	0	0	10	10	14	21	24	21	100%
Total	0.6	0.4	0.6	1	5	6	14	26	19	25	100%

Scale of 1 to 10, with 1 = not important at all, and 10 = extremely important.

Generally, a higher percentage of community school principals (73%) rated the importance of meditation in education between 8 and 10 than did lower secondary (69%), higher secondary (66%), primary (64%), and middle secondary (59%) school principals. As well, 28% of community school, 26% of lower secondary, 21% of middle secondary, 21% of higher secondary, and 17% of primary school principals gave the importance of meditation the highest rating of 10. Only 5% of primary, 5% of middle secondary, 4% of lower secondary, 2% of community school and no higher secondary school principals rated meditation importance as low—between 1 and 4 on the scale (Table 5 above).

Thimphu principals had the highest levels of support for meditation in education, with 87% rating its importance between 8 and 10, compared to 82% in the Central region, 76% in the East, 73% in the West other than Thimphu, and 64% in the South. In Thimphu, 45% of principals view meditation as extremely important (rating of 10), compared to 37% in the East, 35% in the Central region, 33% in the South, and 25% in the West other than Thimphu.

Critical thinking

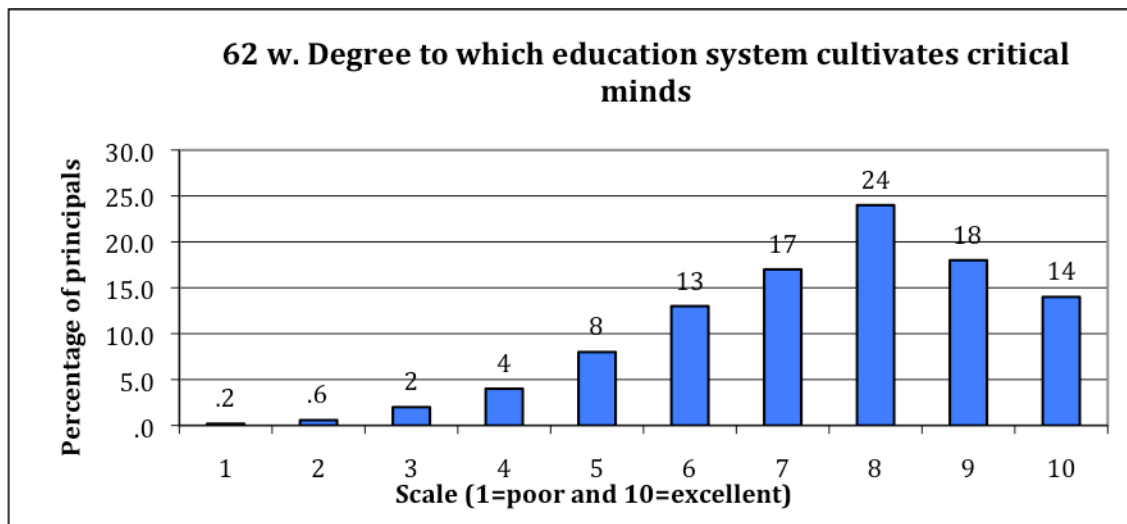
Two questions in the survey concern cultivating critical minds—the priority given to this objective in the school, and the degree to which the education system accomplishes this goal. Educators agree that critical thinking—i.e. discernment, clear thinking, analysis, and intellectual rigour—is an essential dimension of a GNH-infused education system that can

enhance the intellectual, scholastic, and academic integrity of education. Cultivating critical minds is included with meditation in this section of this report because both are associated with mind training, psycho-social ambience, holistic education (“all-round development”), the interconnection between mind and heart, and the overall interconnected nature of reality. In addition, critical and analytical thinking skills are already deeply ingrained in the ancient Buddhist tradition of Bhutan in the form of logical questioning, reasoning, and debate.

In the 2009-10 *Educating for GNH* workshops it was remarked that analytical thinking and teachings on the interdependent nature of reality are largely absent from both school textbooks and classroom teaching and learning, but that efforts will be made to include these aspects of scholastic and academic excellence in future curricular revisions.

More than half of Bhutan’s principals (51%) assigned high priority to cultivating critical minds in their schools—8–10 on a 10-point scale where 10 is extremely high—with 11% rating this priority as extremely high (value of 10 on the scale). Only about 9% of the principals gave cultivating critical minds a low priority rating of between 1 and 4.

Figure 27. Principals’ rating of education system’s accomplishment of cultivating critical minds (percentage of principals)



Educating for GNH Principals’ Survey, 2010

When asked to rate the degree to which they thought the education system successfully accomplishes cultivating critical minds on a 10-point scale, where 1 is poor and 10 is excellent, again more than half the principals thought the school system was doing an excellent job with 56% giving an 8 to 10 rating, and 14% giving an excellent rating of 10. Only about 7% thought the education system was failing to cultivate critical minds adequately, reporting between 1 and 4 on the scale (Figure 27 above).

Safe, caring, and supportive environment (including identification of certain behaviour problems)

A positive psycho-social school ambience includes a safe and caring school environment that is supportive of the students so that they can relax, enjoy their time in school, express themselves without fear, and learn to the best of their ability. Such an atmosphere is seen as vital to ensuring that GNH values are effectively incorporated into the educational system. Conversely, a negative ambience will certainly hinder both learning and transmission of GNH values.

Between 88% and 90% of the principals did not see vandalism, verbal abuse or intimidation of teachers or staff, theft, or lack of respect for children by teachers as substantially hindering learning in their schools. And between 81% and 86% of the principals did not see lack of respect for teachers by children, unruly behaviour in the classroom, verbal abuse or bullying of students, and fighting among students as hindering learning substantially in their schools.

Among all these negative behaviours, principals seemed mostly concerned about fighting among students—with 20% saying that fighting among students inhibited learning at least to some extent. This compares with 10–16% of the principals who responded that the other problem behaviours listed above also inhibited learning to some extent.

That there is frequent yelling in the school—which would certainly disrupt the school’s psycho-social ambience—does seem to be a problem in some schools. About one in five principals (21%) agreed or strongly agreed with the statement that frequent yelling is present, while fewer than half of the principals (48%) disagreed or strongly disagreed that there is frequent yelling. Interestingly, a remarkably high percentage of principals (31%) were non-committal concerning whether there is frequent yelling at the school. The question, however, does not make clear whether the yelling is by students, teachers, or both.

Principals were asked to estimate the extent to which student learning is hindered by anxiety, stress, or other emotional problems among students. Although neither this question nor the one above on problem behaviours asks whether these problems are prevalent among students, it may be presumed that if students are experiencing anxiety, stress, or other emotional problems, learning could be hindered. The principals, however, did not feel that learning was being hindered by these problems since the vast majority of them (83%) responded that learning is hindered not at all or very little hindered by such emotional problems. Only 15% said learning was hindered “to some extent” by these emotional problems, and 2% said it was hindered a lot.

It was noted earlier in analysing responses to Part 1 of the survey, that only about 27% of the principals reported satisfaction with their students’ capacity to manage frustration and anger and to deal with traumatic events—which were very notable exceptions to the generally positive results on students’ knowledge of health and wellbeing issues. In fact, the percentage of principals satisfied with students’ ability to handle these emotional problems was about 40 percentage points lower than the next lowest percentage in the list of health

and wellbeing issues on which principals were questioned. Thus, there might be a discrepancy between the positive responses of principals that emotional problems generally do not hinder learning and their very low satisfaction rating concerning their students' ability to handle anger, frustration, trauma and other emotional problems noted earlier.

“All-round development” of children (including the promotion of values)

One of the CAPSD guidebook indicators in its ‘psycho-social ambience’ section is: “The school promotes all round development of children.” *Educating for GNH* therefore aspires to promote GNH principles and values in an education system that is holistic and specifically focused on the “all-round development” of children.

Based on advice from the Royal University of Bhutan Vice-Chancellor and others, particular attention was paid to these GNH values in the formulation of the *Educating for GNH* survey questions for principals. Of key importance, in the view of those who provided this survey input, is that the promotion of GNH is not just conceptual, but that it actually results in behaviour that is a reflection of GNH values. In other words, values such as caring, kindness, and compassion need to manifest in actions that, in turn, will not only help the children to be more kind and compassionate, but will also manifest in a school environment that is caring and supportive. In addition, the Vice-Chancellor expressed that helping students to discover their full potential, to realize the value of their lives and the basic goodness of others, and to understand the consequences of their actions, as well as holding high character expectations for them, will also help students to manifest GNH principles and values, not only in school but throughout their lives.

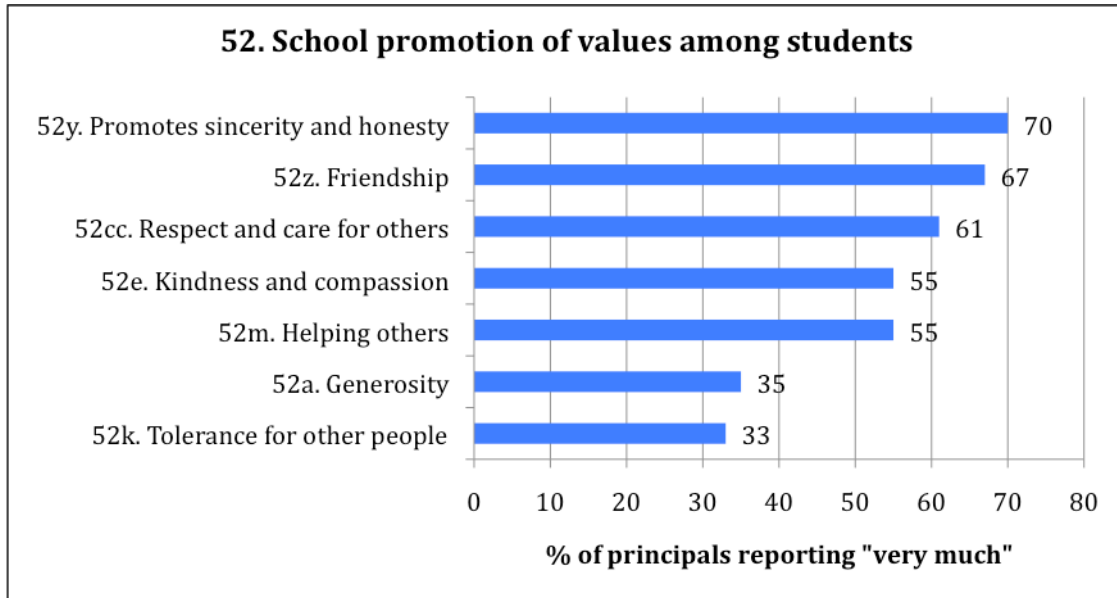
To this end, the survey therefore asks principals whether their school promotes specific values among the students, and it provides five response choices: very much, somewhat, not particularly, not at all, and don't know. The percentages of principals who answered “very much” and “somewhat” about the extent that the school promotes seven values among the students generally ranged from 95–99%, with two exceptions (93% for generosity, and 86% for tolerance for other people). It is difficult to interpret these results in absolute terms because of the consistently high percentage of principals who responded so positively. However, when the results are read and interpreted in relative rather than absolute terms, differences in the results become more apparent.

Thus, Figure 28 below shows the percentage of principals who responded that the school “very much” promotes these seven values among the students—the most positive response. While 70% of principals said their schools “very much” promote sincerity and honesty, and 67% said they “very much” promote friendship, only 35% and 33% respectively said their schools “very much” promote generosity and tolerance for other people. Between 55% and 61% of principals thought that respect and care for others, kindness and compassion, and helping others were “very much” promoted in their school.

About 7% of principals said their school did not particularly or not at all promote generosity, and 14% said their school did not particularly promote tolerance for other people, compared with only 2–5% who said the same about the other listed values. These results appear to

indicate that certain GNH-related values are already strongly promoted in Bhutanese schools and that the *Educating for GNH* initiative might productively support activities that particularly cultivate generosity and tolerance, which do not presently appear to be as actively promoted as some other values.

Figure 28. School promotion of values among students, percentage of principals reporting “very much”



Educating for GNH Principals' Survey, 2010

The scope for improvement is more clearly indicated when comparing the above results on present value promotion to principals' own ratings of the importance of these values. Although the principals ranked the current school promotion of kindness and compassion only 4th out of 7 values effectively promoted in Bhutanese schools today, with 55% saying it was currently 'very much' promoted, yet that same value of teaching kindness was at the very top of principals' own priorities for their schools. Thus, "teaching students to be kind" received a far higher priority rating than any other value in principals' own priority scales.

Fully 80% of the principals gave teaching kindness an 8–10 rating on a 10-point priority scale, while almost a third (32%) gave it an extremely high 10. The percentage of principals giving the teaching of kindness an 8–10 high priority rating was about 20–25 percentage points higher than the percentage of principals giving such high priority to other values.

By contrast, 61% of the principals gave teaching compassion and care for others an 8–10 point priority rating (and 18% gave it a rate of 10); 58% of principals gave teaching students to be tolerant a high priority rate of 8–10 (and 17% gave it a rate of 10); and 55% of school principals gave an 8–10 point priority rating to promoting the value of "helping students to realize that all humans are basically good" (and only 13% gave it the highest rate of 10).

It might be interesting to explore promotion of this last value further, since understanding that all humans are basically good is a core GNH value upon which, it has been argued, all the others are based, and which the RUB Vice-Chancellor therefore specifically requested be included in this survey. In fact, in the Buddhist tradition, a vital aspect of meditation practice—which has now been introduced into the education system—is that it specifically helps practitioners to recognize the basic goodness of oneself and others.

After looking at the extent to which schools promote these various values among their students, and the priority that principals give to teaching the values as a purpose of their school, the survey then asks the principals to rate the degree to which they think the education system actually successfully accomplishes four related goals. These are teaching students to be kind, tolerant, compassionate and caring for others, and helping students to realize that humans are basically good.

The principals' opinions of whether the education system is actually accomplishing these goals did not always coincide with their opinions of the extent to which schools are promoting the same values or goals among the students or with their own priorities.³ For example, about 63% of the principals thought the education system is doing a very good job (a high 8–10 rating) in teaching students to be tolerant, while only 33% thought that their school “very much” promotes tolerance for other people among the students. Similarly, about 70% of the principals thought that the education system is doing a very good job teaching students to be kind, but only about 55% thought that their school “very much” promotes kindness among students. In short, the current education system may actually be accomplishing some of these goals and effectively transmitting these values even without actively promoting them.

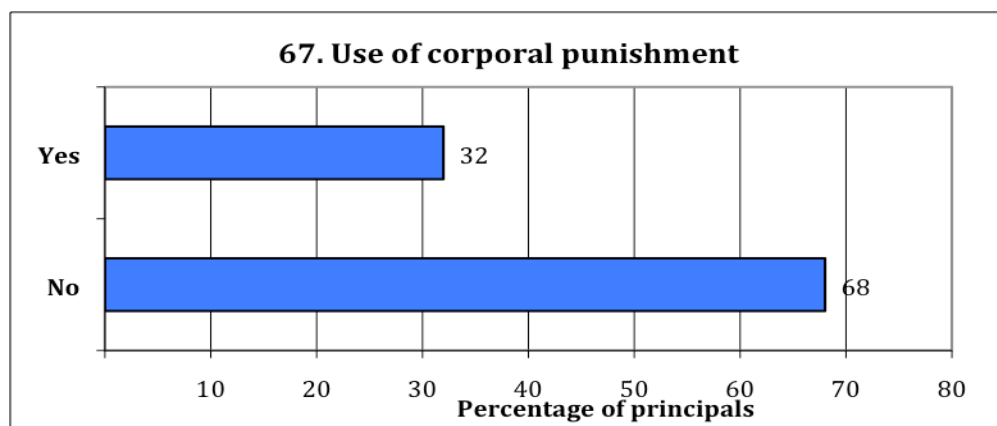
Of the priorities that principals gave to six GNH-related purposes of their school concerning student character and potential, the highest percentage of principals (87%) gave “cultivating good character” the highest ratings (8–10 on the scale). Lower percentages of principals gave the same 8–10 rating to: “helping students realize the value of their lives” (79% of principals), “cultivating confidence” (70%), “teaching students the consequences of their actions” (69%), ensuring that “each student is supported to achieve his or her full potential” (63%), and “helping students discover their full potential” (57%).

Discipline

Discipline appears to be a “hot topic” among school principals and students alike. In fact, corporal punishment was cited as a prominent problem in a survey that students created for themselves during the December 2009 educators' workshop in Thimphu. And in the principals' survey, principals cited disciplinary issues as a major challenge faced by their schools.

³ This comparison assumes that 8–10 on the scale would roughly compare to “very much,” that 5–7 would compare to “somewhat,” and 1–4 would compare to “not particularly/ not at all.”

Figure 29. Percentage of principals reporting whether corporal punishment is used in their schools



Educating for GNH Principals' Survey, 2010

The *Educating for GNH* principals' survey directly asks principals, to the best of their knowledge, if corporal punishment is used in their school. While more than two-thirds of the principals (68%) reported no, it is significant that almost one-third of the principals (32%) reported that corporal punishment is indeed used in their school (Figure 29 above). Discussions in the *Educating for GNH* workshops indicated that many educators and students find the present frequency of corporal punishment use unacceptably high and favour measures to reduce its use.

Table 6. Use of corporal punishment in the school, by school level: Cross tabulation (Survey question #67)

	Percentage of principals		
	Yes	No	Total
Community School	29	71	100%
Primary	32	68	100%
Lower Secondary	36	65	100%
Middle Secondary	38	62	100%
Higher Secondary	43	57	100%
Total	32	68	100%

Corporal punishment use increases by school level, with the highest rate reported by higher secondary school principals (43%) and the lowest by community school principals (29%). (Table 6 above)

A higher percentage of urban and semi-urban principals (37% and 38%, respectively) reported corporal punishment use in their schools than did rural and remote principals (28% and 23%, respectively).

The highest percentage of principals reporting corporal punishment use was in the South (38%), while the lowest was in Thimphu (20%). More than a third of principals in the West (36%), and almost a third of principals in Central (32%) and East (30%) Bhutan also reported corporal punishment in their schools.

Inclusiveness

Only one question in the principals' survey seemed to relate to the issue of inclusiveness—whether the school promotes the value of gender equality and diversity among the students.

Only 17% of principals did not think that this was the case in their school—responding “not particularly” (15%) or “not at all” (2%), while 82% reported that their school did promote gender equality and diversity—responding “very much” (34%) or “somewhat” (48%). Another 1% of the principals responded that they didn't know.

3. CURRICULUM: TEACHING AND CLASSROOM MANAGEMENT PRACTICES

Principals' understanding of GNH

About two-thirds of the principals expressed that they had only a moderate or weak understanding of Gross National Happiness. However, the survey was conducted on the first day of each of the three *Educating for GNH* principals' workshops (Paro, January–February 2010), and presumably, the principals' understanding of GNH would have increased significantly by the end of the workshop. Thus, it might be anticipated that the principals will express a considerably stronger understanding of GNH in the next round of principals' surveys.

Curriculum

Almost 60% of the principals rated the importance of introducing GNH principles, values, and practices in the revision of curricula as being very important—between 8–10 on a 10-point scale where 10 = extremely important. Overall, about a third of the surveyed principals (34%) think that introducing GNH principles, values, and practices into curricula is moderately important (rating 5–7 on the scale), while about 7% think it is not important (rating 1–4 on the scale).

Table 7. Percentage of principals rating the importance of introducing GNH principles, values, and practices in the revision of curricula by school level: Cross tabulation (Survey question #77b)

Percentage of principals											
Scale	1	2	3	4	5	6	7	8	9	10	Total
Community School	2	1	0	2	6	9	19	21	21	19	100%
Primary	2	1	2	4	4	4	19	31	17	16	100%
Lower Secondary	1	1	4	7	8	13	16	22	17	12	100%
Middle Secondary	0	2	2	5	7	17	15	15	22	15	100%
Higher Secondary	0	0	7	0	0	24	28	21	7	14	100%
Total	2	1	2	3	6	10	18	23	19	17	100%

Scale of 1 to 10, with 1 being “not at all important” and 10 being “extremely important.”

When the data were cross tabulated by school level, however, it is seen that only 42% of higher secondary school principals rated introducing GNH principles, values, and practices

in the revision of curricula as very important (8–10 on the scale), compared to 64% of primary principals, 61% of community school principals, and 51–52% of lower and middle secondary principals (Table 7 above). This might indicate that at higher levels of learning, principals may place greater importance on cognitive exam-based learning and academic and scholastic achievement than on cultivation of GNH-based values and principles, while the latter are regarded as more important at lower levels.

Thus, higher secondary school principals were more likely to give the introduction of GNH in curricular revisions a moderately important rating of between 5 and 7 on the scale (52%), compared to middle secondary (39%), lower secondary (37%), community school (34%), and primary school (27%) principals.

At least on the first day of the *Educating for GNH* workshops when this survey was administered, 13% of lower secondary school, 9% of middle secondary, 9% of primary, 7% of higher secondary, and 5% of community school principals rated the introduction of GNH principles, values, and practices in curricular revisions as not important (1–4 on the scale).

It would be interesting to know whether these proportions had shifted by the end of the workshops, and it will be important to assess in future surveys whether priorities in this area have changed as a result of actual implementation of the *Educating for GNH* initiative in Bhutanese schools. For example, prior to training and implementation, principals may well worry that an emphasis on GNH principles may compromise and detract from standard learning objectives, whereas experience will hopefully indicate that it enhances learning.

With reference to specific curricular content, a very high percentage of principals (84%) gave great priority to teaching students to care for the environment (8–10 on the 10-point scale), compared to 82% giving such high priority to teaching basic literacy (reading, writing, and numeracy), 73% who gave teaching about Bhutan such high priority, and only 55% who gave teaching about the world such high priority.

Teaching and learning materials

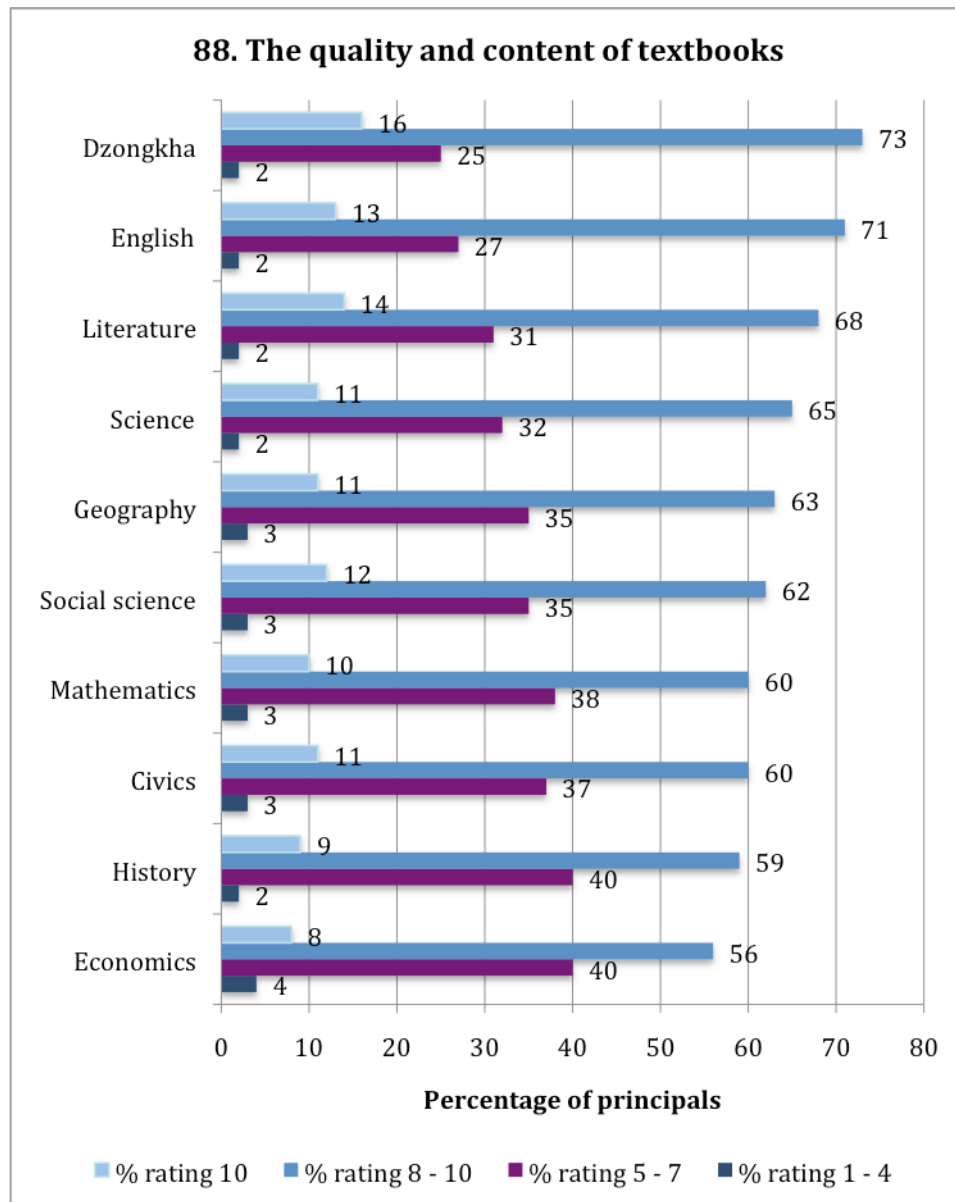
About 7% of the principals listed a shortage of teaching supplies and learning materials such as textbooks as a major challenge for their school. This was the third most frequently mentioned challenge after infrastructure deficits and teacher shortages.

Only between 20% and 29% of the principals responded that student learning is “not at all” hindered by a shortage of writing materials, science equipment, or textbooks. Conversely, almost half of the principals said that a shortage of science equipment hindered student learning “a lot” or “to some extent” and about a third of the principals said the same about a shortage of textbooks and writing materials.

When the principals’ estimation of the extent student learning is hindered by a shortage of textbooks was analysed by school level, 38% of community school, 37% of lower secondary, 35% of higher secondary, 29% of primary, and 21% of middle secondary school principals reported that learning is hindered a lot or to some extent by this shortage.

An overwhelming majority of principals (87%) rated having better textbooks as important (8–10 on a 10-point scale where 10 = extremely important). In fact almost half of all principals rated having better textbooks as extremely important—10 on the scale. At the same time, however, 56–73% of the principals rated the quality and content of the textbooks presently used by their students in 10 areas in the “very good” range (8–10 on a 10-point scale, where 10 = very good). (Figure 30 below)

Figure 30. Percentage of principals rating the quality and content of textbooks



Educating for GNH Principals' Survey, 2010

Note: Rated on a 10-point scale, where 1 = very poor and 10 = very good.

As shown in Figure 30 above, comparing different subject areas, the highest percentage of principals (73% and 71%, respectively) seemed most pleased with Dzongkha and English textbooks (rating these 8–10). But principals were much less satisfied with economics and history textbooks, with only 56% and 59% respectively rating these texts between 8 and 10 on the scale. About 60–68% of the principals rated literature, science, geography, social science, civics, and mathematics textbooks in the 8–10 range.

Teachers

When asked to list the most important challenge faced by their schools, 14% of the principals named “teacher shortage” as the biggest challenge, which was the second highest percentage (after infrastructure) for any challenge listed. Another 4% of the principals listed challenges related to teacher training, morale, and commitment. And when they were asked—if they could magically change one thing at their school, what would it be?—14% of the principals said more or better teachers.

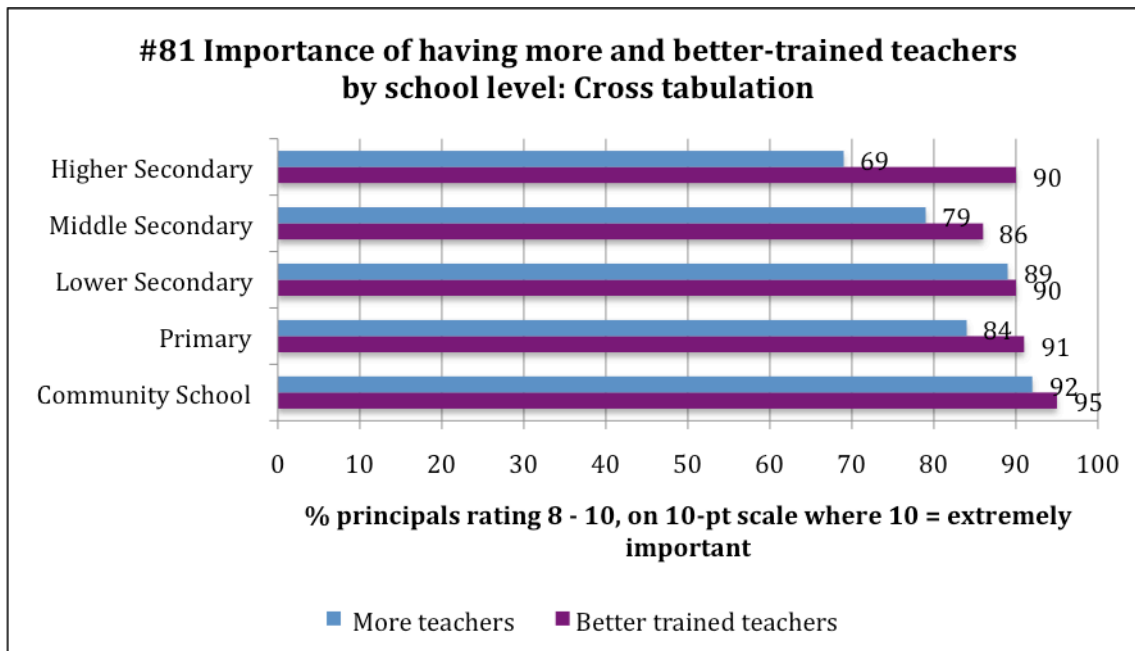
An overwhelming percentage of principals responded that having more teachers (87% of the principals), better-trained teachers (92%), and more inspired teachers (96%) was very important (8–10 on a 10-point scale, where 10 = extremely important). In fact, more than half of the principals rated all three of these issues as being “extremely important” by choosing 10 on the scale.

Community and lower secondary school principals (92% and 89% respectively) were most likely to rank the need for more teachers as very important (8–10 on the scale), followed by primary (84%), middle secondary (77%), and higher secondary (69%) school principals. Likewise, 95% of community school principals responded that having better-trained teachers was very important (8–10 on the scale), as did 91% of primary, 90% of both lower and higher secondary, and 86% of middle secondary school principals (Figure 31 below). If principals’ perceptions accord with empirical reality, then it appears the greatest need for more and better trained teachers is at the community school level.

Principals in Thimphu and in the West other than Thimphu appeared more satisfied with the number of teachers in their schools than those in the other regions. Thus, about 69% of principals in Thimphu and 74% in the West other than Thimphu rated having more teachers as very important (8–10 on the scale), compared with 96% in the Central region, 91% in the East, and 87% in the Southern region.

The same pattern is seen in the principals’ responses to needing better-trained teachers. About 81% of the principals in Thimphu and 85% in the West other than Thimphu rated the importance of having better-trained teachers between 8 and 10, compared with 98% in the Central region, 95% in the East, and 92% in the Southern region. These results again require follow-up work to assess the degree to which principals’ perceptions accord with empirical realities, and whether better-trained teachers are in fact more likely to be placed in Thimphu than in other parts of the country.

Figure 31. Percentage of principals rating the importance to their school of having more and better-trained teachers by school level: Cross tabulation



Educating for GNH Principals' Survey, 2010

Note: Rated on a 10-point scale, where 1 = not important at all and 10 = extremely important.

Approximately 63% of the principals reported that learning is hindered “a lot” or “to some extent” by teacher shortages, while 37% responded that learning is hindered “very little” or “not at all” by such shortages. About 14% of the principals said that the shortage of teachers had actually worsened between 2008 and 2009.

The vast majority of principals expressed that improving teacher quality in each of 12 separate curricular areas was very important (rating 8–10 on a 10-point scale). English (91% of principals) and science (90%) were the areas where the highest percentage of principals felt that improving teacher quality was very important, while the arts (61%), sports (70%), and history (78%) were the areas where the lowest percentage of principals felt improving teacher quality was very important. It is not possible to assess whether these differentials are due to the different priorities principals accord to these subjects or to greater satisfaction with the quality of arts, sports, and history teachers compared to English and science teachers.

According to the principals' survey, it appears that principals feel that many teachers' enthusiasm could be uplifted to benefit their students and schools. Although more than half of the principals rated their teachers' level of enthusiasm as “fairly high” (53% of principals), only 22% rated it as “very high,” and 24% rated it as “average.” More than 1% rated teacher enthusiasm as “fairly low” or “low.”

Students

Several questions in the principals' survey asked about student enthusiasm and motivation, punctuality and time management, and the school's promotion of values related to student learning skills such as hard work, creativity and originality, diligence and perseverance, and independent and self-motivated learning.

The principals' survey indicates that the majority of principals think that there is room for improvement in the level of students' enthusiasm. Although 49% of the principals rated students' enthusiasm as fairly high, only 19% rated it as very high, while 30% rated student enthusiasm as just "average." About 3% rated it as fairly low.

About 53% of the principals responded that student learning is "very little" hindered by student laziness or lack of motivation, but only 14% answered that learning is "not at all" hindered by lack of motivation, while more than a quarter of the principals (28%) answered it was hindered "to some extent" by lack of motivation. About 5% said that laziness or lack of motivation hindered learning "a lot."

Table 8. Principals' estimation of the extent to which student learning is hindered by laziness or lack of motivation, by school level: Cross tabulation (Survey question #27c)

Percentage of principals						
		Not at all	Very little	To some extent	A lot	Total
Community School	% within school level	18	49	28	5	100%
Primary	% within school level	12	54	29	4	100%
Lower Secondary	% within school level	14	58	24	5	100%
Middle Secondary	% within school level	5	55	33	7	100%
Higher Secondary	% within school level	7	52	31	10	100%
Total	% within school level	14	52	28	5	100%

As shown in Table 8 above, where results are cross-tabulated by school level, student learning appears to be more compromised by laziness or lack of motivation at higher rather than lower levels of education. Thus 41% of higher secondary and 40% of middle secondary principals reported that student learning is hindered "to some extent" or "a lot" by laziness

or lack of motivation, compared to 33% of community and primary school principals and 29% of lower secondary school principals.

Regionally, principals in the South were most likely to report that learning is hindered “to some extent” or “a lot” by lack of motivation (37%), followed by the Central region (34%), the East and the West other than Thimphu (31%), and Thimphu (29%).

According to the survey, it appears that some principals do not think the education system is successfully teaching students either to value or to manage their time well. Only about two-thirds of the principals rated the education system’s teaching students the value of their time (63% of principals) and time management (66%) in the very good range (8–10 on the scale). These results are lower than those found in Part 1 of the survey where 81% of the principals were very or quite satisfied with their students’ knowledge of how to manage their time, and 71% were very or quite satisfied with their students’ knowledge of how to value their time.

The percentage of principals (69%) who reported that their school “very much” promotes hard work among their students was about double that for the promotion of other learning skills. This relatively high percentage compared with the 30–36% percent of principals who said that their school “very much” promotes independent and self-motivated learning, creativity and originality, and diligence and perseverance. In future surveys, conducted after GNH values and principles take root in Bhutanese school systems, we might expect to find increases in the value assigned to these other student-learning qualities.

4. CO-CURRICULAR ACTIVITIES

The Curriculum and Professional Support Division (CAPSD) *Educating for GNH* guidebook stresses the importance of co-curricular activities in the all-round development of children. It specifically states that all co-curricular activities should be directed towards the intellectual, physical, and emotional development of the children, and that the activities should incorporate GNH values. In addition, these activities should also “provide opportunities of developing special aptitudes and certain vocational skills as well as life skills which the academic subjects do not fulfill.”⁴

Thus, it has been established that co-curricular activities such as sports, arts, music, crafts and other cultural activities, as well as life skills and career education are important to the broader learning environment and that GNH principles and values need to be effectively brought into all of these learning situations. In particular, the 2010 Paro *Educating for GNH* principals’ workshops emphasized that giving children greater opportunities in their schools to study and appreciate the 13 traditional arts would strongly support the cultural pillar of GNH, and help ensure that these arts remain dynamic and relevant into the future.

⁴ Curriculum and Professional Support Division (CAPSD), Department of School Education (DSE), Bhutan Ministry of Education. *Educating for Gross National Happiness: Refining Our School Education Practices*. Paro. 2010. Accessed July 2010. Available at: <http://www.education.gov.bt/gnh/guidebook/GNH%20Guide%20book.pdf> p 93.

A number of the principals' survey questions relate to the main CAPSD topics in this area:

- GNH values in co-curricular activities,
- artistic and cultural activities,
- sports and games,
- life skills,
- preparation for employment, and
- promotion of civic responsibility.

GNH values in co-curricular activities, artistic and cultural activities, sports and games

The principals' survey asked principals to rate the importance that they attached to introducing GNH principles, values, and practices into extra-curricular activities. Roughly 7 in 10 principals thought that this was very important (8–10 on a 10-point scale, with 1 being not at all important and 10 being very important). However, over a quarter of the principals (27%) did not rate this as highly—giving a rating of between 5 and 7. About 3% thought it was not very important (1–4 on the scale).

Over 95% of the principals responded that their school “very much” (54% of principals) or “somewhat” (42%) promotes respect for traditional customs and traditions among the students. Only 4% said “not particularly,” while 0.4% said “not at all,” and another 0.4% didn't know.

When asked how many cultural events (e.g. drama, dance, masked dance, etc.) their school had organized in the past year, about a third of the principals (32%) responded that their school had organized two or less cultural events in the past year, 18% responded that their school had organized between 2 and 5, 5% reported between 5 and 10, and about 2% reported their school had organized more than 10 cultural events in the past year. Strangely, however, more than 44% of the principals did not answer the question concerning how many cultural events their school had organized in the past year. It may be suspected that this large number of non-responses might swell the ranks of those whose schools had offered very few or no cultural activities.

According to the survey, principals generally think sports are very important to their students' education. About two-thirds of the principals (65%) rated the importance of sports highly (8–10 on a 10-point scale, where 10 is extremely important), and about one-third (34%) rated the importance of sports moderately (5–7 on the scale). Only about 1% of the principals thought that sports were not important (1–4 on the scale).

However, responses also reveal that facilities for physical activity may be lacking in some schools. Although 46% of the principals thought that their sports facilities are good, fully 38% of principals felt that the games and sports facilities at their school are inadequate. Over 81% of principals rated having more sports equipment as being important (8–10 on 10-point

scale where 10 is extremely important). Only 0.8% of the principals rated having more sports equipment as not being important (1–4 on the scale).

Table 9. Level of agreement or disagreement with statement: Our school has good facilities for games and sports, by school level: Cross tabulation (Survey question #53ff)

Percentage of principals							
		Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree	Total
Community School	% within school level	19	25	16	33	7	100%
Primary	% within school level	6	32	21	36	6	100%
Lower Secondary	% within school level	9	26	19	35	12	100%
Middle Secondary	% within school level	5	19	7	52	17	100%
Higher Secondary	% within school level	3	10	17	55	14	100%
Total		13	25	16	37	9	100%

The adequacy of good sports facilities was also analysed by school level. The cross tabulation table above reveals that sport facilities appear to be considerably better at higher than at lower school levels. Thus, a much higher percentage of community, primary, and lower secondary school principles either disagreed or strongly disagreed that their school had good sports facilities (44%, 38%, and 35% of principals, respectively), than did middle secondary and higher secondary school principals (24% and 13%, respectively) (Table 9 above).

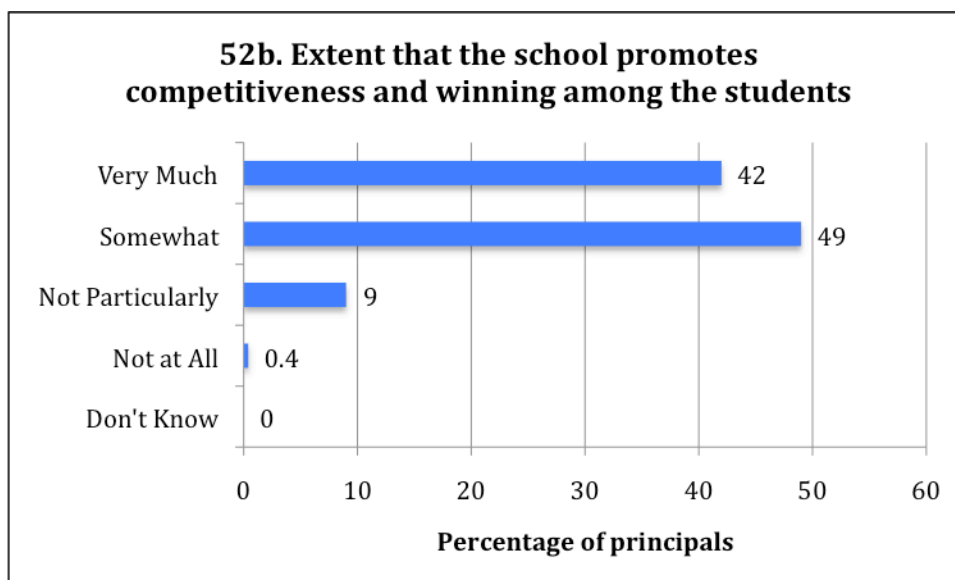
Among the lower school levels, less than half of the principals agreed or strongly agreed that their sports facilities were good—40% of community school, 42% of primary school, and 47% of lower secondary school principals. This compares with 69% of both middle and higher secondary school principals who thought their sports facilities were good.

When the data were cross tabulated by region, half, or less than half, of the principals in all of the regions agreed or strongly agreed that they had good sports facilities—50% of principals in the East, 48% in the West other than Thimphu, 47% in Thimphu, 41% in the Central region, and 39% in the South. Conversely, dissatisfaction with school sports facilities was greatest in the South, where 47% of principals disagreed or strongly disagreed with the

statement that they had good sports facilities, followed by 42% in the West other than Thimphu, 40% in the Central region, 34% in the East, and 32% in Thimphu. If principals' perceptions correspond with empirical reality, it appears that the greatest need for improved school sports facilities is in the South.

The survey also asked the principals to strongly agree, agree, disagree, strongly disagree, or neither agree nor disagree with the statement: "Our school has good open spaces for informal learning," which is where many of the co-curricular activities can take place. Fifty-nine percent (59%) of the principals agreed or strongly agreed that their school has good open spaces for informal learning, while about a quarter of the principals (24%) disagreed or strongly disagreed. Another 17% of the principals had no opinion on the topic.

Figure 32. School promotion of competitiveness and winning among students



Educating for GNH Principals' Survey, 2010

The Honourable Minister of Education Lyonpo Thakur S. Powdyel has remarked that sports can be conducted in schools to emphasize cooperation, collaboration, and teamwork rather than fostering competitiveness and aggression. When asked if their school promotes competitiveness and winning among the students, the overwhelming majority of principals—91%—responded either “very much” (42% of principals) or “somewhat” (49%). This may be a case where the values dominant in Bhutanese schools today, and perhaps among principals themselves, may not be fully in accord with the GNH values of cooperation, collaboration, and teamwork emphasized by the Honourable Minister. Only about 9% of the principals reported that competitiveness and winning were not particularly promoted in their schools (Figure 32 above).

Preparation for employment

According to the survey results, it would appear at first sight that relatively few principals give an extremely high priority to any of the four goals listed as relating to employment. For example, only about 18% of the principals gave an extremely high priority rate of 10 to preparing students to have a successful career, 10% gave this rating to preparing students to succeed in private business, 8% to preparing students for employment, and only 4% to giving students the tools for financial success.

One in five principals (21%) assigned a low priority rating (1–4) to giving students tools for financial success, as did 18% for preparing students to succeed in private business, 8% for preparing students for employment, and 4% for preparing students to have a successful career. Similarly, it appears that relatively few principals think the education system is doing an excellent job accomplishing any of these four goals.

It is, however, difficult to interpret these results, and this set of questions must be carefully re-considered for future updates of this survey. The low priority given to these goals could be interpreted as a sign of adherence to more non-materialist values. But they are very likely simply a statistical artefact due to the vast majority of respondents being primary school principals and employment being a still distant issue for their students. If the same questions are used in future surveys, they should really only be asked to secondary school principals.

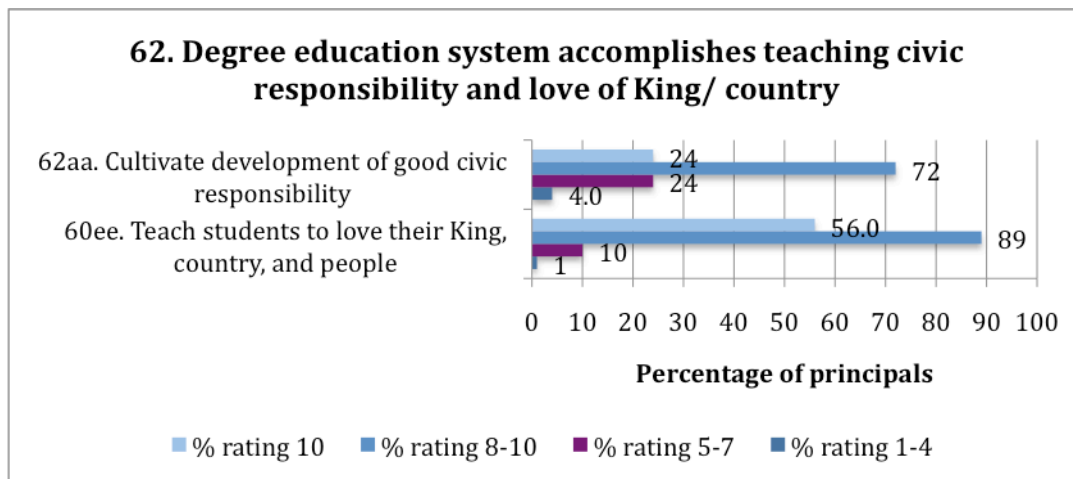
The employment-related questions were not cross tabulated by school level. However, our review of the present survey response data shows that 94–95% of all surveyed principals answered all of these employment-related questions. Clearly, our generalized instruction that principals should only answer those questions relevant to their own schools, grade levels, and students' age and circumstances, was insufficient to deter primary school principals from answering these employment-related questions.

In short, it is simply not possible to assign meaning or significance to the employment-related results described above and in this report. Nevertheless, we regard as a key function of this first ever (and therefore highly experimental) *Educating for GNH* survey the very task of indicating how future such surveys should be designed and structured, as informed by the evidence collected and reported here. All results reported should at some point in the coming three years be analysed specifically with a view to assessing which questions provided more or less meaningful results, and thus to improving future surveys while at the same time retaining as much comparability as possible with the baseline data reported here. Some broad preliminary recommendations along these lines are contained in the conclusion of this report.

Promotion of civic responsibility

As might be expected, the vast majority of principals gave a high priority (8–10) to cultivating the development of good civic responsibility among their students, and to promoting love for their King, country, and people. About 82% of the principals rated their priority for cultivating civic responsibility between 8 and 10—with 32% giving this the highest priority rating of 10. And about 94% of the principals also rated their priority for teaching students to love their King, country, and people between 8–10—with 66% giving this the highest priority rating of 10—more than double the percentage of principals who rated cultivating civic responsibility as 10.

Figure 33. Percentage of principals rating the degree to which the education system is successfully accomplishing teaching civic responsibility, and love of King, country, and people



Educating for GNH Principals' Survey, 2010

Note: Rated on a 10-point scale, where 1 = poor and 10 = excellent.

Approximately 72% of the principals thought that the education system is doing a very good job (8–10) cultivating good civic responsibility among the students—with almost a quarter (24%) rating it as doing an excellent job in this area (value of 10 on the 10-point scale). But almost a quarter of the principals (24%) gave the education system a moderate rate (5–7), and 4% thought the education system is doing a poor job cultivating good civic responsibility among the students (1–4).

Nearly 89% of the principals thought that the education system is effectively teaching students to love their King, country, and people—with more than half (56%) giving the education system an excellent rating of 10 for this achievement. However, 10% of the principals thought the education system is only doing a moderate job (rating 5–7), and only 1% thought it is doing a poor job (rating 1–4) in cultivating such love for King, country, and people (Figure 33 above).

5. CONTINUOUS AND HOLISTIC STUDENTS' ASSESSMENT

At the December 2009 *Educating for GNH* educators' workshop held in Thimphu, speakers remarked that Bhutan's highly competitive standardized exams are entirely contrary to GNH principles and values in many regards. In fact, one highly placed education official characterized the present exam system as "draconian" in the stress it placed on students. Other speakers noted that students who fail to make the requisite 10th grade mark that allows them to continue to grades 11 and 12 frequently see themselves as "failures," as do many students whose grade 12 results are insufficient to ensure them a coveted position in the civil service. They remarked that the consequent lowering of self-esteem often produces serious social alienation and disengagement, and might exacerbate problems such as substance abuse and addiction.

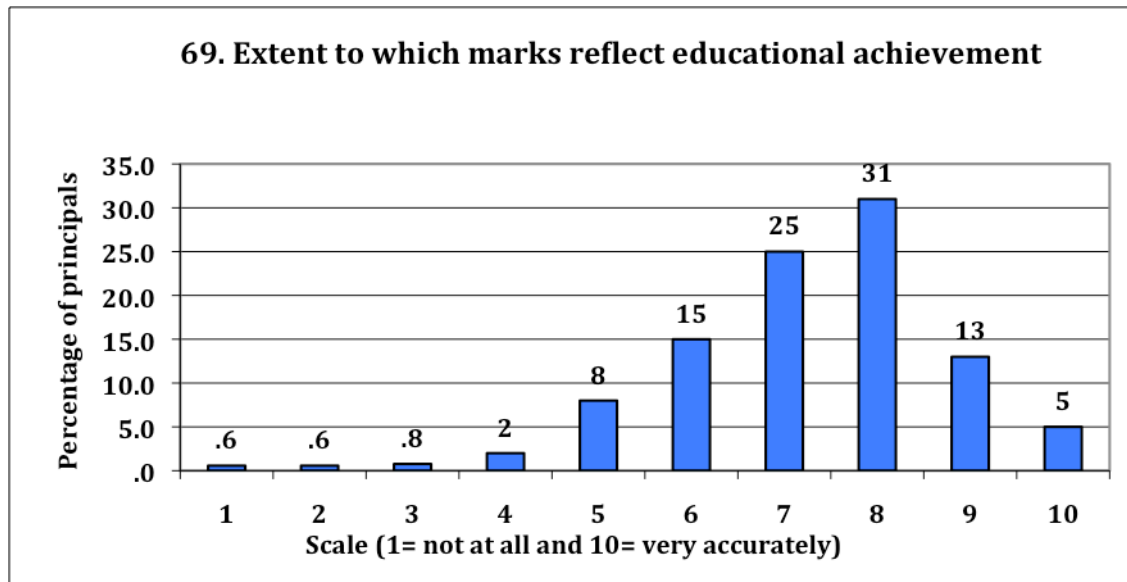
The results of extensive studies and reviews of literature on standardized examination systems globally have shown that standardized test results do not adequately reveal students' actual academic and intellectual capacity and their potential educational attainment and knowledge. More often, studies show, such test results reveal more about students' socio-economic status and educational opportunities than about actual capacity.

As well, scholars and educators have criticized the conventional focus on standardized examination performance as compromising both the quality and content of school education and classroom learning. Thus, many teachers, including some of the most innovative, have complained that the pressure to perform well on the standardized math, science, and reading/writing tests can result in "*teaching to the test*," at the expense of class discussion, creative teaching, fostering of critical skills, and focus on non-test subject areas. Mathematics, reading/writing, and science have come to dominate curricula and classroom effort at the increasing expense of music, art, history, foreign languages, social studies, ecology, and other key subject areas. For detailed reviews of these critiques and analyses of the impact of standardized examinations, see *Educating for Gross National Happiness in Bhutan*, at http://www.gpiatlantic.org/pdf/education/bhutaneduc_litrev_1.pdf, especially chapter 2.1.2, and vol. 3, part 5, Ch. 32.1 on "Student achievement measured by standardized tests."

Holistic assessment, which might be regarded as more in line with GNH principles, values and practices, differs from the conventional approach of standardized tests in attempting to assess the full and real capacities of students as well-rounded, balanced, well-informed "whole" citizens and human beings who will benefit their communities while mastering the knowledge and skills required to handle their world effectively. A system that attempts to assess students according to such criteria would therefore be able to reflect the multi-faceted and complex nature of a student and place value on all the dimensions of being human—giving equal importance both to fostering empathy, compassion and sensitivity and to content knowledge and skill acquisition.

While these issues could not be approached in any breadth or depth in this principals' survey, some survey questions at least sought to assess principals' views on the degree to which exams encourage learning, reflect educational achievement, and cause stress.

Figure 34. Percentage of principals rating the extent to which marks accurately reflect educational achievement



Educating for GNH Principals' Survey, 2010

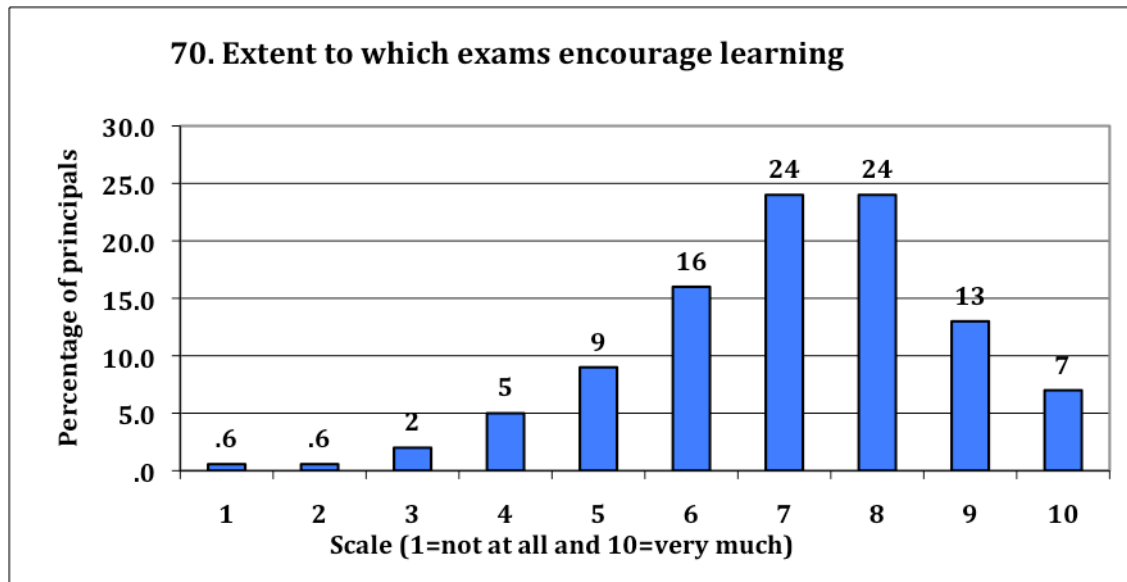
Note: Rated on a 10-pt scale, where 1 = not at all accurately and 10 = very accurately.

The inadequacy of standardized testing in assessing “what matters” in the educational system, as described in scholarly analyses by renowned educators, appears is reflected at least in part in the results of the *Educating for GNH* principals' survey. Thus, when principals were asked how accurately grades and marks presently reflect educational achievement, only 5% responded “very accurately,” and fewer than half of the principals (49%) responded between 8 and 10 on a scale of 1–10, where 1 = “not at all accurately” and 10 = “very accurately.” Overall, 27% of principals did not feel that grades and marks are a very accurate reflection of educational achievement, responding between 1 and 6 on the scale (Figure 34 above).

Interestingly, when cross tabulations were done by school level, lower school level principals seem to have greater faith in exams than those at higher levels where exams matter most. Thus, 52% of community school principals, 44% of primary principals, and 47% of lower secondary principals gave 8-10 ratings for the accuracy of exams in reflecting educational achievement. However, only 7%, 4%, and 6%, respectively, of those principals said exams “very accurately” (rating of 10) reflect achievement.

But at the higher secondary level, where the exam stakes are highest, only 38% of principals gave an 8-10 rating for the accuracy of exams in reflecting educational achievement; only 7% gave a 9 rating; and 0% said “very accurately” (10). Nearly one-quarter of these higher secondary school principals (24%) gave a low 1-5 rating on the 10-point scale to the ability of exams to reflect educational achievement, and more than 1 in 10 gave a very low 1-3 rating. Fully 36% of middle secondary school principals (who administer the make-or-break grade 10 exams) gave only a 1-6 rating to the ability of exams accurately to reflect educational achievement.

Figure 35. Percentage of principals assessing the extent to which the exam system encourages students' learning



Educating for GNH Principals' Survey, 2010

Note: Rated on a 10-point scale where 1 = not at all and 10 = very much.

According to the principals' survey results, only 7% of principals gave the highest rating of 10 (on the 10-point scale) and 13% gave a 9 rating to the statement that exams encourage learning, while 17% disagreed with that statement, by giving it a rating between 1 and 5. Nearly 64% of principals answered 6–8 on the scale for this question, indicating that most principals feel that exams encourage learning to a moderate degree (Figure 35 above).

Table 10. Exams encourage learning by school level: Cross tabulation (Survey question # 70)

		Percentage of principals who say exams encourage learning									
		1	2	3	4	5	6	7	8	9	10
Community school	% within school level	.4	.4	3	3	7	20	24	23	10	9
Primary	% within school level	0	0	0	8	6	11	23	30	14	8
Lower Secondary	% within school level	0	1	0	6	10	14	32	18	14	5
Middle Secondary	% within school level	0	0	2	2	21	19	17	21	17	0
Higher Secondary	% within school level	0	3	3	10	10	14	17	24	14	3
Total	% within school level	.2	.6	2	5	9	17	24	23	12	7

Interestingly, middle and higher secondary principals, in whose schools exams matter most, had less faith in exams as learning tools than did the younger grade school principals. Thus, 25% and 26% of middle and higher secondary principals respectively responded between 1 and 5 on the scale concerning whether exams encourage learning, compared to 16% of lower secondary and 14% of community and primary school principals (Table 10 above). This seems to indicate that the more experience educators have with exams, and the more important exams actually become in determining students' future, the more disillusioned educators become, and the less they feel that exams actually encourage learning.

When it comes to the stress and strain caused by exams there appears to be some disagreement among principals as to the extent of the strain. Roughly 10% of principals reported that exams are “very much” the cause of severe strain for students, answering 9 or 10 on the 10-point scale. However, fully 17% did not think exams cause much strain, answering between 1 and 4 on the scale. Nearly 73% of the principals answered between 5 and 8 on the scale, seeming to indicate that most principals see exams as causing at least some but perhaps not excessive stress and strain for their students.

Not surprisingly, cross tabulations of these data by school level reveal that principals of higher grade level schools (where presumably exams are more prevalent and have a more marked effect on students' futures) report the highest degree of strain from exams, with 17% of middle secondary principals and 21% of higher secondary principals answering 9 or 10 on the 10-point scale to indicate that exams “very much” cause severe strain on their students. By contrast, only 14% of primary school principals, 8% of lower secondary, and 6% of community school principals rated exam stress at the highest (9 or 10) levels.

Only 2% of principals rated the academic achievement of most students as “excellent” (i.e. 10 on a scale of 1–10, where 1 = very poor and 10 = excellent), while nearly 18% answered 9 on a scale of 1–10. The vast majority of principals (72%) rated student academic achievement as being moderate—between 6 and 8 on the scale.

One of the questions on the principals' survey dealt with seasonal performance of students and the extent to which academic performance may be influenced by season. Based on the results, it appears that academic performance is lowest in July and August when only 12% and 15% of principals respectively answered that academic achievement is “extremely good” (i.e. 10 on a scale of 1 to 10, where 1 = extremely poor and 10 = extremely good). Conversely, student performance seems to improve towards the end of the school year: 20% of principals reported that academic achievement is extremely good in September, compared with 23% in October and 32% in November, the last month of school before winter break.

6. SCHOOL–COMMUNITY RELATIONSHIP

It is acknowledged that children learn not only from textbooks and curricula, but also from their families, peers, and communities, and through the media, Internet, advertising, and other means. As such, the *Educating for GNH* principals' workshops in January–February 2010, recognized that a key criterion for a GNH school is a good and mutually beneficial relationship between the school and the broader community. That principle was also strongly emphasized by the Honourable Prime Minister in his extended sessions with the participants, when he stressed that schools do not exist in isolation but always in the context of their surroundings. In these sessions he gave numerous practical examples of constructive ways in which schools could serve their communities and draw on community resources. Indeed, this theme of school-community relations alone was assigned nearly a full day in each of the 6-day principals' workshops.

According to the survey, an overwhelming majority of school principals (87%) are “very satisfied” (27%) or “quite satisfied” (60%) with the extent to which their school acts as a model of good practices for the community. More than 86% of the principals reported that their school “very much” (39%) or “somewhat” (47%) promotes service to the community among students, while about 10% did “not particularly” think their school does so, and only about 3% said their school does “not at all” do so.

Principals were asked to list the three most important community services their school has performed in the past academic year. The results were varied and showed that many schools already contribute to their communities in significant ways. Approximately 22% of the principals said their school had held cleaning campaigns, which was the service most often reported. Another 7% listed various infrastructure projects. For example, schools had raised funds for and built classrooms, offices, toilets, and water supply infrastructure. About 5% reported that they had contributed to community awareness of health, sanitation, and hygiene, including awareness of HIV/AIDs, STDs, and drug and alcohol problems.

Among their extensive activities, schools had also contributed to local festivals and cultural events, helped low income families with financial support and supplies such as school uniforms, provided donations to earthquake victims, helped with harvesting, held literacy and continuing education programs, and encouraged community and parent participation in their school.

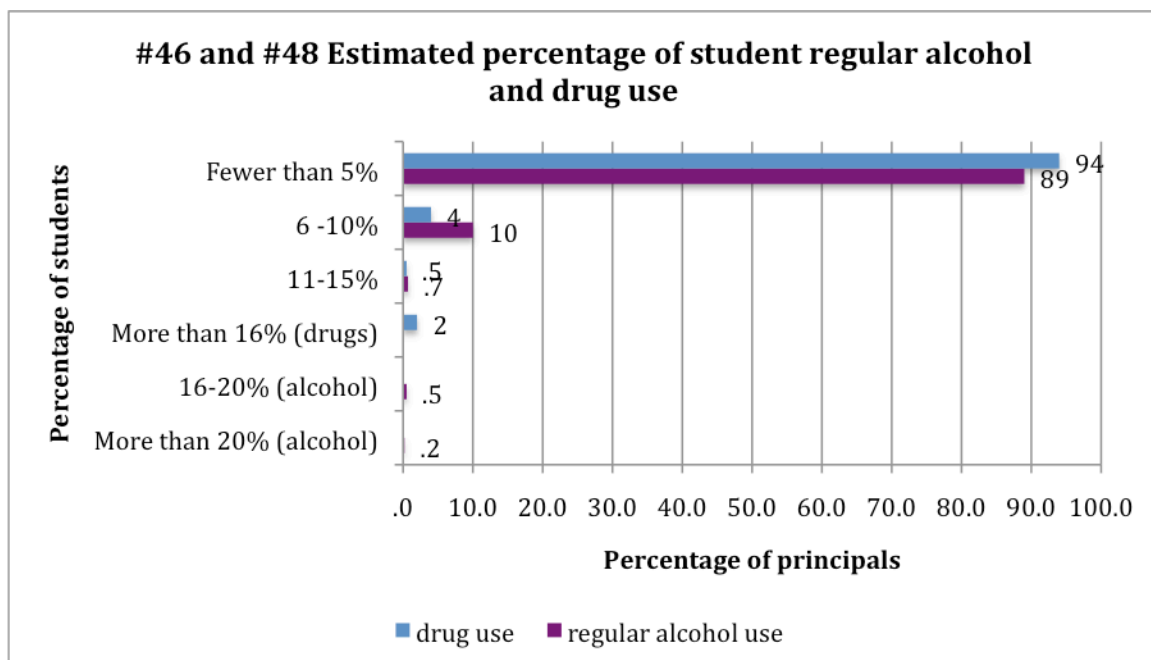
With regard to parental participation in the school, more than 58% of principals either agreed (45%) or strongly agreed (13%) with the statement that parents generally play an active role in the school. On the other hand, 21% either disagreed (18%) or strongly disagreed (3%) with the statement, and 20% neither agreed nor disagreed.

Student alcohol and drug use

The principals' survey included a number of questions that relate to regular student alcohol and drug use, including principals' own estimates of the extent of such use and the degree to which that use hinders learning. The survey questions on student drug use are similar to those concerning alcohol use, but they do not specify *regular* drug use. These questions relate to the CAPSD guidebook indicator referring to school promotion of alcohol and drug free life styles in partnership with the community, but the survey questions focus on current student usage of these substances rather than specifically addressing school promotion of alcohol and drug free life styles.

Principals were also asked to list the types of drugs most used by students, and about 24% said marijuana and 16% said alcohol. An additional 24% cited tobacco, and the rest of the responses were scattered among various pharmaceutical drugs and solvents, including correction fluid and petrol.

Figure 36. Estimated percentage of students who regularly use alcohol and drugs



Educating for GNH Principals' Survey, 2010

In general it appears that principals do not think that alcohol or drug use present major problems in their schools. As shown in Figure 35 above, 89% of principals responded that fewer than 5% of their students *regularly* use alcohol. Similarly, 94% of the principals reported that fewer than 5% of the students in their school use drugs. About 10% of all principals estimated that 6–10% of the students use alcohol regularly, and about 4% said that 6–10% of the students use drugs. Only 1% estimated that more than 10% of students use alcohol regularly, and 3% of the principals estimated that more than 10% of students are

drug users. The vast majority of principals responded that the use of alcohol (90%) or drugs (94%) hindered student learning very little or not at all.

Nevertheless, it would be a mistake to take solace too readily in these seemingly positive results, for several reasons. In fact, key ambiguities again point to the need to revise and improve the wording of certain questions and the survey tool itself in future updates. For example, the positive results reported above appear to contradict a significant finding in the Part 1 core GNH survey results, where nearly one in five principals pointed to student alcohol or illegal drug use as a very or quite serious problem in their schools. Also 64% of principals reported that student drug use is a very or quite serious issue of concern among parents and the community, and 57% reported that student alcohol use causes such concern.

Table 11. Estimated percentage of student regular alcohol use, by school level: Cross tabulation (Survey question #46)

percentage of principals							
		Fewer than 5%	6-10%	11- 15%	16- 20%	More than 20%	Total
Community School	% within school level	91	8	0	0	0.5	100%
Primary	% within school level	89	9	2	0	0	100%
Lower Secondary	% within school level	92	6	0	3	0	100%
Middle Secondary	% within school level	82	13	5	0	0	100%
Higher Secondary	% within school level	70	30	0	0	0	100%
Total		89	10	0.8	0.5	0.3	100%

Not surprisingly, as indicated in Table 11 above, when student regular alcohol use is examined by school level, the percentage of principals who report that fewer than 5% of students regularly use alcohol generally decreases as the school level gets higher—e.g. from 91% of community school principals to 82% of middle secondary school principals to only 70% of higher secondary school principals.

In fact about 30% of higher secondary school principals report that between 6% and 10% of their students regularly use alcohol. That might be considered an alarmingly high figure when considering:

- that this question refers to *regular* rather than occasional use,
- that principals may well be unaware of or underestimate the extent of alcohol and drug use among students,

- that when the percentages are extrapolated to absolute numbers nationwide, there is a remarkably large number of regular alcohol users among youth, and
- that the average 17-year-old actually enrolled in a higher secondary school is probably far less likely to be a regular alcohol or drug user than his or her 17-year-old counterpart who is not in school or employed.

It is surprising, however, that middle secondary (13%), community school (8%), primary (9%), and lower secondary (6%) principals report regular alcohol use among between 6% and 10% of their young students. In addition, 2% of primary and 5% of middle secondary school principals report that 11–15% of their students regularly use alcohol; and 3% of lower secondary school principals report that 16–20% of their students use alcohol regularly. These results are counter-intuitive and require further investigation.

Students in remote areas appear to use alcohol regularly more than students in other areas. Although 82% of principals in remote areas say that fewer than 5% of their students regularly use alcohol, 18% of these remote principals report that between 6% and 10% of their students do so. This compares with 13% of urban, 11% of semi-urban, and 9% of rural principals who also report that 6–10% of the students use alcohol on a regular basis.

The percentage of principals who reported that fewer than 5% of students are regular alcohol users is 86% in the East and Central regions, 90% in the South, 94% in Thimphu, and 95% in the West other than Thimphu.

More than 10%, 11%, and 13% of principals in the South, East, and Central regions, respectively, report that 6–10% of their students use alcohol regularly, compared to 7% of Thimphu principals and 5% in the West other than Thimphu. In the East, 3% of principals report regular alcohol use in more than 10% of their students, as do 2% of Central region principals.

Similarly and again not surprisingly, as indicated in Table 12 below, when the extent of student drug use was cross tabulated by school level, it can be seen that most student drug use takes place in higher secondary schools—79% of higher secondary principals report fewer than 5% of their students use drugs, compared with 95–96% of community school, primary, lower secondary, and middle secondary school principals. Roughly 21% of higher secondary school principals also say that 6–10% of their students use drugs.

As with the results on regular alcohol use noted above, there appears to be some drug use even among young students. In fact 4-6% of community, primary, lower secondary, and middle secondary school principals report that more than 10% of their students use drugs.

Examining results by region, the percentages of principals estimating that fewer than 5% of their students use drugs range from 92% in the South to 96% in Thimphu and the West. However, 7% of principals in the South, 6% in the Central Region, and 4% in Thimphu and the West report 6–10% of their students using drugs, and 5% of principals in the East report drug use among more than 10% of their students.

Table 12. Estimated percentage of student drug use, by school level: Cross tabulation (Survey question #48)

Percentage of principals						
		Fewer than 5%	6-10%	11-15%	More than 16%	Total
Community School	% within school level	96	1	0	3	100%
Primary	% within school level	95	2	2	2	100%
Lower Secondary	% within school level	95	3	1	1	100%
Middle Secondary	% within school level	95	5	0	0	100%
Higher Secondary	% within school level	79	21	0	0	100%
Total		94	4	1	2	100%

Recommendations for future surveys

As emphasized by the Honourable Minister of Education, rather than representing a fixed “program” that can be rigidly implemented and evaluated according to set criteria, Bhutan’s bold *Educating for GNH* initiative—unprecedented globally—should be seen as a dynamic and fluid experiment that is a continuing learning experience evolving over time. In the view of the authors of this study, the Kingdom of Bhutan’s *Educating for GNH* initiative is so bold, innovative, significant, and far-reaching, with implications and importance stretching far beyond Bhutan’s own borders, that it merits nothing less than the most extensive documentation, monitoring, and evaluation that are needed to further the initiative’s application and adaptation outside, as well as inside, Bhutan. Thus, the principals’ survey reports are offered as a modest preliminary contribution to that documentation effort.

From that perspective, the *Educating for Gross National Happiness Principals’ Survey* provides valuable baseline information concerning the present state of Bhutan’s education system, which will be required to assess change and progress over time within Bhutan’s schools as a result of the GNH-related innovations now being introduced. It is suggested that follow-up surveys on selected questions and issues be conducted in three to five years in order to begin to assess progress in moving towards a genuinely GNH-based educational system.

In anticipation of this proposed follow-up survey, the report authors were asked to provide both evidence-based views on what worked or didn’t work in the present survey and general guidelines that could jump-start an actual survey revision process in the future. As noted, the *Educating for GNH* initiative (and thus also the principals’ survey) is unprecedented. While individual schools have been established on GNH-type principles, we could find no model for such an initiative on a national scale anywhere in the world. Therefore, of necessity, this entire process—including both implementing and monitoring the *Educating for GNH* initiative—involves learning by doing, which includes making mistakes. In terms of this survey, therefore, the best (and perhaps the only) way to learn what works and what doesn’t in an empirical evidence-based way is actually to analyse the survey results and examine which survey questions yielded meaningful and significant results and which produced only ambiguous or difficult-to-interpret results. Trying to pick only the “right” questions at the beginning would have required choices based on mere opinion and would certainly have missed questions that yielded very important results. So now, after undertaking the data analysis, is the time to identify what worked and what didn’t on the basis of actual evidence.

Thus, the remainder of this conclusion consists of two lists that will: first, document the key challenges, caveats, ambiguities, and survey items that need to be revisited and perhaps done differently in the follow-up survey, most of which are currently mentioned throughout the report; and second, provide initial recommendations on what might be added, kept, or dropped from the future update survey. The intention of these lists is not to undertake a detailed analysis of the survey instrument, which must in any case be done at a later time prior to the actual design of future surveys. Rather, the intention here is to provide examples and general initial recommendations for the next part of this future survey design process.

KEY CHALLENGES, CAVEATS, AND RECOMMENDATIONS

The list below contains examples of items that might be revised in future principals' surveys, such as those items that have ambiguous, difficult to interpret, or questionable results—and recommendations related to them. Most of these issues are mentioned within the body of this report. Some of the items are broad and somewhat significant, while others are minor. As such, the list is certainly not definitive, but is intended to provide a starting-point for future survey revisions. The second section of this conclusion includes additional recommendations that could be considered for the next principals' survey.

1. Survey length

The main difficulty with the principals' survey is its excessive length—55 pages containing about 100 questions plus a time-use diary (which has not yet been analysed). The main reason for the survey length was the very detailed input and advice received from many sources, including very senior Bhutanese educators and education officials. The survey designers did not feel either qualified or empowered to remove questions specifically requested and recommended by senior officials. In the end, all such input was included.

In addition, the survey was divided into two separate parts that took the principals about 90 minutes in total to complete. In fact, when asked to comment on issues not covered in the survey, many of the principals mentioned its length and suggested that repetitions be removed, that they be given more time to answer the survey, or that they be allowed to complete it overnight when they would have more time to consider their answers.

The survey length made a detailed analysis of all of the questions virtually impossible considering the time and resources such an analysis would require. As well, the division of the survey into two parts complicated the necessarily selective analytical process. Although the intention was to link the two parts, some labelling mistakes were made during the initial collection and data entry processes that made linking the two survey parts questionable. Having two separate parts also made reporting and comparison of results more difficult.

In addition, missing responses certainly skewed some results. Respondent failure to answer some questions could partly be the result of the survey length, insufficient time to answer all questions, or principal fatigue at the end of a long first workshop day of presentations and discussions and prior travel days. It is not known, however, whether the principals may have had other reasons for not responding to some of the questions.

Educators, and the report authors themselves, have suggested that perhaps the size of the survey can and should be reduced by about half. A reduction of this size in the survey length is certainly needed, but it is complicated by the fact that there are areas in the survey that could clearly benefit from having *additional* questions. However, repetitions in the survey can be removed, and questions that are similar but add no significant additional information can be eliminated. Some examples of possible deletions and additions are given in the following general recommendations section of this conclusion.

In addition, Parts 1 and 2 could be combined, with key questions from Part 2— especially those reflecting the four GNH pillars—added to the relevant Part 1 categories. Part 2 could be reorganized, perhaps along the lines of the CAPSD *Educating for GNH* guidebook indicators, with additional sections related to the personal characteristics of principals. Combining Parts 1 and 2 would not only help reduce the survey length, but would also solve problems related to analysis such as linking the surveys and comparing and reporting results.

2. Positive response bias

One major caveat to the survey results is that many of the questions need to be understood in relative rather than absolute terms, which means that many of the results must be reported comparatively in order to be meaningful. Generally, with a few exceptions such as teacher shortage and infrastructure problems, the principals provided responses that put the educational system in a very positive light. Indeed, if one were to examine many of the results individually in absolute terms, it could appear that GNH is already securely embedded in the educational system, and that very little work is needed either to strengthen the mostly positive aspects of the system, or reduce the few weaker aspects. Thus, it is likely that the results have a positive response bias likely resulting from principals having a vested interest in depicting their schools in positive light and feeling that they are already effectively promoting GNH principles, values, and practices.

Therefore, the only way to report meaningful results was to analyse the results relatively and comparatively. For example, question **#27 (a–y)** asks principals to respond to the question of whether the specific behaviours hinder student learning, by choosing one of four response options: “not at all”, “very little”, “to some extent”, “a lot”. The responses to the behaviours listed form a definite pattern: In almost every case the vast majority of principals responded that the behaviour hindered learning “not at all” or “very little.”

It is difficult to determine from the consistency of these responses if this might indicate a strong positive response bias due to principals wishing to demonstrate good GNH-conducive conditions in their own schools, or if there actually are no or very few behaviour problems among students in the schools. It was only by examining the behaviours relatively (i.e. comparatively) using only one category of response that one could determine that principals were actually more concerned about fighting among the students than about the other behaviours. Thus, 19% of principals reported that fighting among students hindered learning to some extent, compared with 8%–15% of principals who reported that the other listed behaviours hindered learning to some extent.

This response bias was seen in many other questions as well, especially those concerning values. For example, the results of question **#52 (a–dd)** indicate that 80–99% of the principals said that their school very much or somewhat promotes 26 out of 30 specific values. In fact, 95–99% of the principals responded in this way to 14 of the questions—almost half of the questions.⁵ How to correct for this bias needs more examination.

⁵ The four values which fewer principals reported being promoted in schools were financial success (49% of principals), economic security (60%), spirituality (77%), and calmness (78%).

3. Negative response bias: Questions related specifically to secondary schools

Another issue that led to questions needing to be understood in relative rather than absolute terms was that some of the questions clearly applied more to secondary than primary schools. This led to a negative response bias in cases where primary school principals answered questions inapplicable to younger children. Although principals were advised before the start of the survey to answer questions applicable only to their own schools, the judgment on what was and was not applicable was left to individual principals, and individual questions were not flagged as applicable only to secondary schools.

Thus, for example, the data show that many primary school principals responded to questions on whether their students were knowledgeable about world events, political news, and Bhutan's constitution (**#1.8a–f**), or knowledge of the health risks of unprotected sex or of how HIV/AIDs is transmitted (**#1.5-l and m**), even though primary school children are less likely to have such knowledge than secondary school students.

One key example of this potential negative response bias is that relatively few principals gave an extremely high rating to learning objectives relating to vocational and career goals—either in their own priorities, in their level of satisfaction with student knowledge, in delineating the purposes of their school, in school promotion of these objectives, or in assessing the degree to which the education system accomplishes such vocational goals—**qus. #1.7a–c; 52c and v; 60a, e, f, w; and 62a, d, e, cc**). Although such career-related questions are much more applicable to secondary school students than to primary students, it appears that both primary and secondary principals answered these questions. For example, 94–95% of all surveyed principals answered questions about giving students tools for financial success, and preparing students for employment, to have a successful career, and to succeed in private business (**#60**). Thus, the results are very likely to be statistical artefacts due to the vast majority of respondents being primary school principals and employment being a still distant issue for their students. Therefore, it is simply not possible to assign meaning or significance to the employment-related results described in this report.

In future surveys, questions related mainly to secondary schools should at least clearly state that primary school principals should not answer them. However these directions may not be sufficient. Two questions in the survey were specifically prefaced by: “*For Urban Schools,*” but it appears that, in addition to principals from urban schools, many principals from rural, remote, and semi-urban locations answered these questions as well, making the results inconclusive. Consideration should therefore be given to whether future surveys should be designed and administered separately to primary and secondary school principals.

4. Response categories

The survey pre-test with 14 principals found that questions with only three response options (e.g., agree, disagree, and undecided) provided too much implicit encouragement for all responses to land in the “agree” category, so the categories were expanded to add two more response category options (such as “strongly agree” and “strongly disagree”). In other cases,

a more extensive 10-point scale response option was adopted to allow for more subtle and detailed prioritization of values, attitudes, and behaviours. While these expanded response categories facilitated the comparative analysis described in point #2 above, they likely added to the length of time it took principals to complete the survey.

In some cases, the additional response categories proved unnecessary since most responses landed in the agree/disagree categories anyway, and the researchers in any case often ended up combining categories in the analysis (e.g., “agree/strongly agree”, “disagree/strongly disagree”, or “very/quite satisfied”). Similarly, the expanded 10-point category responses often seemed to represent too many response choices, and the researchers again often combined categories for analytical and reporting purposes (e.g. 1–4, 5–7, and 8–10)—although it was sometimes useful to have the highest and lowest categories (1 and 10). In short, it is recommended that in future surveys, the number of response categories might be reduced for some (though not all) questions, and particularly for those questions where categories were in any case combined in reporting results in this report.

5. Comments concerning specific questions

Question number:

13. This question asks principals to list the region where their school is located (East, Central, South, Thimphu, or West other than Thimphu) and to write in the name of the dzongkhag if they are unsure of the region. It appears that many of the principals were unsure, because many of them wrote in the name of their dzongkhag. In addition, in some cases principals both checked a region and wrote in the dzongkhag name, which did not correspond to the region checked. Thus, in future surveys it would be helpful if the dzongkhags within each region could also be listed (i.e., **East:** Lhuentse, Mongar, Pemagatshel, Samdrup Jongkhar, Trashigang, Trashiyangtse; **Central:** Bumthang, Trongsa, Zhemgang; **South:** Chhukha, Dagana, Samtse, Sarpang, Tsirang; **West (other than Thimphu):** Gasa, Ha, Paro, Punakha, Wangdue Phodrang; and **Thimphu**).

16. Although question #16 asked principals if their school was rural, urban, or semi-urban, it also provided a blank space to write an answer: “If you are unsure, please explain.” The principals frequently made a distinction between rural and remote and wrote “remote” into the blank space, but they were often unsure of the differences between “rural” and “semi-urban”. Since a number of principals wrote “remote” in the space provided, the researchers added the separate “remote” category for the purposes of the analysis. However, because “remote” was not offered in the original listed response options for this question, there are likely considerably more “remote” schools represented in the large “rural” response category (56% of principals). In future surveys it is therefore recommended that the “remote” category be included in the listed options, and that definitions and/or examples be provided of all the categories

17. Concerning school walking distance from the nearest road, nearly 47% of principals reported that their school is less than a 30-minute walk from the nearest road. However, nearly 20% reported that their school was between 2 and 5 hours from the nearest road, and an additional 21% reported their school was more than 5 hours walk from the nearest road.

Unfortunately, due to the wording of this question, it remains unclear exactly how far students need to walk from their *homes* to the school. Several ambiguities in the present question wording are described earlier in this report, and need not be repeated here. But this question should definitely be re-worded in subsequent surveys to provide information on students' actual daily walking distance to and from school, according to what percentage of students walks what distance daily.

Also the questions that appear in the survey with regard to student lateness (**#27a** and **#28a**) are worded in such a way that they presently do not shed any light on whether walking distance to school is causing student lateness.

19. The responses to question #19 concerning the occupations of students' parents were too varied to code and analyse properly. Many principals wrote in occupations in the space provided for "Other," rather than checking one of the occupations provided—civil service, private sector (business), and farming. Certainly it appears from a review of responses to this question that parents in most schools do not form a coherent group in terms of occupations so that principals cannot easily answer the question according to the categories provided. As well, some write-ins were military related, or a mixture of the categories provided (e.g. civil service and farming, civil service and private sector, or "mixture of all three"). Because responses to this question could not be meaningfully analysed, this question might well be dropped in future surveys.

27/ 28. Survey question #27 asks principals the extent that learning of students is hindered by various *behaviours*, and #28 asks if these problems have increased, stayed the same, or decreased between 2008 and 2009. The evidence reveals several problems with these questions:

First, questions **#27 i–l** and **28 f–i** concern a shortage of textbooks, writing materials, science equipment, and teachers, all of which are not behaviours, and so should be moved to another section of the survey. Also, the questions do not ask whether or not principals think there is a shortage of these items and teachers—only whether such a shortage hinders learning. It is not clear from the present question whether such a shortage is implied. Perhaps two of the questions concerning shortages are redundant, since **#81** asks about the importance of more teachers and better textbooks.

Second, the remainder of question **#27 (a–h and m–y)** is ambiguous and the results unclear due to the apparent telescoping of two separate issues—(a) the extent of the problem and (b) the degree to which it hinders learning. To remove this present ambiguity, the survey should therefore first ask if and to what extent the behaviour problems are present in the school, before asking if they hinder learning. In short, it is presently unclear whether learning is not hindered because the problems don't exist, or whether the behaviour problems do exist but do not interfere with learning for some reason. It is presently implicitly assumed that if the behaviour problems are present in the school, then learning certainly will be hindered, but in some cases this may not be so if other means (e.g. disciplinary measures) are used to deal effectively with the problem. As well, it would be valuable simply to know the

prevalence of these behaviour problems, which is presently unclear, since those problems would need to be addressed regardless of whether or not they hinder learning.

It is also questionable whether or not the results of question **#28** are meaningful. Over 90% of the principals said that the problematic behaviours had decreased or stayed the same. As with **#27**, the degree to which the behaviour problems actually exist in the school remains unclear, since this is not presently asked.

27c. Concerning whether learning is hindered by “laziness or lack of motivation,” perhaps the word “laziness,” which has pejorative connotations, could be dropped from the question. Combining these two concepts in a single question implies some likeness between them. But educators are aware that students’ lack of motivation may have many causes that have nothing to do with student laziness, such as uninspiring curriculum content, an unenthusiastic teacher, or student fatigue caused by poor nutrition or long walking distances.

27h. One of the “behaviours” in question **#27** is the extent to which student learning is hindered by sickness. Knowing the prevalence or types of sicknesses might also be illuminating and would assist educators and education and health officials in dealing with the problems, especially since 51% of the principals said that sickness has some or a lot of influence on student learning. While the survey can certainly be reduced in size overall, this particular question is a case where additional information would be most useful.

27p/ 27q. Again, whether or not the use of drugs or alcohol hinder student learning might imply the use of these substances. The fact that 94% of principals said that student learning is not at all or very little hindered by the use of drugs, and 90% said the same about the regular use of alcohol is not consistent with the principals’ responses in Part 1 of the survey where nearly one in five principals pointed to student alcohol or illegal drug use as a very or quite serious problem in their schools. Therefore, these results are uncertain. Because later questions do ask about the extent of alcohol and drug use in schools, these sections (p) and (q) of question 27 could easily be dropped.

35. While 35% of principals reported their schools have flushable toilets with water available, 16% report they have flushable toilets with water not available. It was not clear to the authors of this report whether this meant that those flushable toilets with no water were not functioning due to lack of water. Some rewording is needed here to remove this ambiguity.

44. Question **#44** asks about “seriously overweight” students, based on principals’ observations. However, because no definition of “seriously overweight” was provided, the results are not very indicative of overweight, since one principal’s opinion of what constitutes “seriously overweight” could be very different from that of another. Unless some consistent definition is added to this question, it should probably be dropped, especially since the Centre for Bhutan Studies GNH survey already assesses overweight prevalence far more precisely based on Body Mass Index (calculated from weight in relation to height).

46–49. Concerning regular alcohol and drug use, in general it appears that principals do not think that alcohol or drug use present major problems in their schools. But key ambiguities

again point to the need to revise and improve the wording of these questions in future updates. First, the positive results appear to contradict the significant finding in the Part 1 survey results, where, as noted, nearly one in five principals pointed to student alcohol or drug use as a very or quite serious problem in their schools.

As well, this area may be another example (like the employment-related questions noted above), where questions should only be administered to secondary school principals rather than to all principals. Again it is clear that the general instruction only to answer questions relevant to school type (primary, secondary, etc.) did not deter most primary school principals from answering the drug and alcohol questions. The extent to which reporting results by the full response sample may distort reality is seen when usage results are analysed by school level. The full response sample indicates that 89% of principals report that fewer than 5% of their students use alcohol regularly. Not surprisingly, when student regular alcohol use is examined by school level the percentage of principals who report that fewer than 5% of students regularly use alcohol generally decreases as school level increases—e.g. from 91% of community school principals to only 70% of higher secondary principals.

On the other hand, school level cross tabulations indicate that primary and community school principals do report some student alcohol or drug use, which is very important information. Thus, it was revealing that about 9% of community school and 11% of primary principals reported regular alcohol use among more than 5% of their young students, and that 4% of community school and 6% of primary school principals reported more than 5% of their young students using drugs. So despite the fact that the aggregate results for this question are not very meaningful, the utility of the disaggregated cross-tabulations makes the questions worth retaining for principals of all school levels. Future surveys might ask primary and secondary principals these questions separately—either in separate questions in the same survey or in two dedicated surveys.

50. In this question, principals were asked to list the main drug types used by students according to usage: “most used”, “next most used”, and “3rd most used”. Some of the responses to this question were difficult to decipher, and 39% of the principals did not answer the question at all. As well, the vast majority did not relate to the three separate lists: 70% of respondents left “next most used” blank; and 85% left “3rd most used” blank. This question could likely be dropped without detracting from the overall survey value.

51. More than 44% of the principals did not answer question #51 about how many cultural events (e.g. drama, dance, masked dance, etc.) their school had organized in the past year. About a third (32%) of the principals responded that their school had organized two *or less* cultural events, and principals could have chosen this response if their school had not organized an event. Therefore, it is not known why such a high percentage of principals did not answer the question, or how meaningful the results are. It may be suspected that this large number of non-responses might swell the ranks of those whose schools had offered very few or no cultural activities. A re-wording of this question should be considered.

52a, e, k, m, y, z, and cc. Question #52, which asks principals whether their school promotes specific values among students, is another question where the positive response

bias seems to be especially present. For example, the percentages of principals who answered “very much” and “somewhat” about the extent that the school promotes seven values among the students (i.e. generosity, kindness and compassion, tolerance for other people, helping others, sincerity and honesty, friendship, and respect and care for others) generally ranged from 95% to 99%, with two exceptions (93% for generosity, and 86% for tolerance for other people). It is difficult to interpret these results in absolute terms because of the consistently high percentage of principals who responded so positively. However, when the results are read and interpreted in relative rather than absolute terms, the differences in results might indicate that there is still work to do in the schools to promote generosity and tolerance. Such a conclusion does not mean that Bhutanese schools fail to promote such values at present, only that there is scope for strengthening this emphasis.

52u. Concerning school promotion of spirituality, it may be useful to provide a definition and/or examples of spirituality so that all principals are relating to the same concept and so that the results are more clear. Does promotion of spirituality relate to pilgrimages or field trips to Lhakhangs or holy places (mountains, lakes, etc.)? Does it refer to a reverence for the basic sacredness of the world, including its material and non-material elements, which might be furthered by nature excursions, etc.? Does it relate to meditation practice in the schools, or to traditional customs and rituals, spiritual folklore, the study of religions such as Buddhism? Or does it relate to all of the above and more? This lack of clarity, however, may be more of a difficulty for western researchers than for Bhutanese principals.

In any case, perhaps the question on spirituality may be important enough for GNH to be included as a separate question and expanded using a list similar to the one in the previous paragraph as a check list. Question **#11**—How often are students at your school taken on nature excursions—and question **#12**—How often are students at your school taken on pilgrimages—might be folded into an expanded spirituality question, although question **#11** might also fit into the preservation of the environment category (**#1.2**). In sum, despite the overall imperative of reducing the survey size, there are some lines of questioning like this one where expansion and further detail might be most useful.

53b–h, q, t, v, y, kk, and nn. Question 53 on school climate asked principals to indicate whether they strongly agree, agree, disagree, strongly disagree, or neither agree nor disagree with a wide range of statements about their school. A relatively high percentage of principals (between 17% and 33%) responded to parts of **#53** by choosing “neither agree nor disagree”. An especially high percentage of principals was non-committal concerning whether students are well-nourished (30% of the principals), where there is frequent yelling at the school (31%), and whether students play an active role in making school decisions on assessment (33%).

Why principals have no opinion on these questions, or whether they actually do not know if the statements are true or not is not possible to interpret from these responses. What is clear is that such high non-committal rates on particular questions make the responses more difficult to analyse and interpret, and that the question wording should therefore be revisited.

53v/ 53x. Questions #53v and #53x on the appearance of classroom walls—as well as their results—were similar, but one was posed positively and one negatively: In response to #53v, 74% of principals agreed or strongly agreed that there is a lot of student artwork on the walls of classrooms and hallways, while 8% disagreed or strongly disagreed with that statement, and nearly 18% neither agreed nor disagreed. In response to #53x, 72% either disagreed or strongly disagreed that the walls of the school and classrooms are mostly bare, while 12% agreed or strongly agreed, and 17% neither agreed nor disagreed. Because of these response similarities, one of the questions can easily be eliminated.

53hh. According to the survey, nearly 29% of principals either disagreed or strongly disagreed with the statement that their school is in a safe location, while 12% neither agreed nor disagreed with the statement. Unfortunately, it is not clear from the question why the school’s location is considered unsafe by these principals, but this seems an area worth investigating since student safety is an issue of paramount importance. In light of this new evidence that nearly one in three principals do not consider their school to be in a safe location, follow-up questioning should therefore investigate the cause of this lack of safety just for those who disagreed with the statement.

53jj. There is no question #53jj in the principals’ survey preceding #53kk, so this omission is a typographical error that can be corrected in future survey updates.

53kk. That there is frequent yelling in the school does seem to be a problem in some schools. Thus, about one in five principals (21%) agreed or strongly agreed with the statement that frequent yelling is present, and fewer than half of the principals (48%) disagreed or strongly disagreed that there is frequent yelling. The question, however, does not make clear whether the yelling is by students, teachers, or both, and should therefore be rephrased to clarify this.

53rr. To make question #53rr on teacher workloads comparable with the other questions that relate to teacher standards and practices, the researchers needed to change it from a negative orientation to a positive one. The actual statement that principals were asked to agree or disagree with is: “Several teachers in my school *do not* carry their proper share of the workload” (*italics added*). Thus, the disagree/strongly disagree responses to that particular question cannot be compared with responses to the other statements on teacher standards, such as: “Teachers in my school have very similar quality standards” (#53o); “Teachers at our school regularly meet to discuss how to improve teaching/learning” (#53p); “Teachers regularly visit each other’s classroom to give each other feedback” (#53q); and “The vast majority of teachers hold high academic expectations” (#53pp). Therefore, for comparison purposes at the data analysis stage, the question was changed to “Teachers in my school carry their proper share of the workload,” and responses were changed to agree/strongly agree (i.e. “disagree” responses were changed to “agree” responses, etc.) To avoid this process, this question should in future be phrased positively for comparison purposes.

55. According to the survey, roughly 62% of students bring their own lunch to school, while the remaining 38% do not. Again, it is not clear from the question whether the students who do not bring a lunch forego one, or whether lunches are provided for them. Instead of this

question, as currently phrased, principals might in future be asked to estimate the percentage of students in their schools who go without lunch.

58/ 59. According to the principals' responses, nearly 61% of urban schools have vegetable gardens and 54% of urban schools have regular outdoor learning activities for hands-on study of ecological topics. However, these overall results are not meaningful, since cross tabulations reveal that semi-urban, rural, and remote school principals also responded to the questions (even though the written question instruction specifically directed: *For Urban Schools* only). Cross tabulations by urban/rural location indicated that only 31% of urban school principals reported the presence of a garden—about half the rate indicated by the aggregate results—compared to 100% of principals of remote schools, nearly 77% of rural principals and 71% of semi-urban school principals.

Similarly, it appears that principals from rural, remote, or semi-urban locations answered the question on regular outdoor learning activities as well. Although this question was not cross tabulated by urban/rural location or region, the original data show that 111 principals answered “yes” to this question and 93 principals answered “no.” Thus, 204 principals in total answered the question and 337 principals did not. However, according to question #16 which asks principals the urban/rural location of their school, there should only be 76 urban principals answering the question. This indicates that nearly 2/3 of respondents to the outdoor learning activity question designated only for urban principals were actually from non-urban schools, again rendering the aggregate results virtually meaningless.

One simple solution to this dilemma is not to designate these two questions for urban principals only as was done in this survey, particularly since the questions seem highly relevant for all schools in every location. A subsequent cross-tabulation by school location can then produce the separate results for urban schools.

62. It is hard to interpret some of the responses in question #62—which asks principals to rate the degree to which they think the education system is successful accomplishing particular goals. This is because the principals' opinions of whether the education system is accomplishing its goals often differed from their responses on the extent to which schools are actually promoting the same goals. In some cases a relatively high percentage of principals said that the education system is successfully accomplishing a specific goal, while earlier, in question #52, the results indicate that the school is actually promoting the goal much less effectively, since a much lower percentage of principals had said that the school was strongly promoting the same goal.

For example, about 63% of the principals thought the education system is doing a very good job (giving a high 8–10 rating) in teaching students to be tolerant (#62o), while in question #52k, only 33% thought that their school “very much” promotes tolerance among the students. Similarly, about 70% of the principals thought that the education system is doing a very good job in teaching students to be kind (#62u), but in question #52e, only about 55%

thought that their school “very much” promotes kindness among students.⁶ Might these discrepancies mean that no active promotion of these values is necessary? The range of possible interpretations certainly compromises the meaningfulness of these results. In designing future survey updates, consideration must certainly be given to either dropping or rephrasing those questions that did not produce meaningful results in this survey.

68a–c. The results of the questions concerning student expulsions, suspensions, and warnings are highly dubious due to the overwhelming percentage of principals who did not respond to the questions: 92% of principals did not answer the question on student expulsions, 85% did not respond to the one on suspensions, and 45% did not respond to the one on warnings. This may well be because no student expulsions or suspensions occurred in the vast majority of schools, but in that case principals could have written “0” when asked how many such instances occurred in their schools. These questions must clearly be revisited.

74. This question should read: “please *rate* your understanding of Gross National Happiness,” rather than “please *rank* your understanding....” (*italics added*).

77. This question asks principals to rate the importance they attach to introducing GNH principles, values, and practices in various areas. The response choices given on the 10-point scale range from “not at all” to “very respected”. The latter is a typographical error:—“very respected” should read “very important.”

80. In question #80 only 31% of principals rate the food and nourishment that most students get as truly adequate (9–10 on the 10-point scale where 10 is “adequate”). However, these results may possibly contradict those of questions #42 and #53y, and are therefore difficult to interpret. Question #42 indicates that 68% of school principals report that undernourishment affects “none” to “fewer than 5% of students.” And question #53y indicates that nearly 56% of principals either agree or strongly agree that students in their school are well nourished. Because the three questions (42, 53, and 80) are asked differently and with different response categories and scales, it is recommended that only one of the three current questions on student nourishment be asked in future survey updates and that the other two be dropped.

87. It is difficult to interpret some of the results in question #87, partially because the survey question—“What level of importance do you assign to improvement in teaching quality in the following areas?”—is potentially ambiguous.

For example, while 91–90% of principals assigned a high level of importance to improving teacher quality in English and science, respectively (rating 8–10 on a 10-point scale), only 61% and 70% of principals assigned this high level of importance to improving teacher quality in the arts and sports, respectively. Is this because the teacher quality in the arts and sports is already excellent and not in need of improvement, or do principals think that the

⁶ This comparison assumes that 8–10 on the scale would roughly compare to “very much,” that 5–7 would compare to “somewhat,” and 1–4 would compare to “not particularly/ not at all.”

arts and sports are not as important as other areas (e.g., Dzongkha, English, science, and mathematics), and therefore improving teacher quality in the arts and sports is not as important?

Conversely, do principals think that improving teacher quality in English and science is very important because the level of teachers in these areas is poor, or because they think the subjects are the most important? In sum, if this question is to be retained, which may not be necessary, it should be rephrased to remove this ambiguity.

90. In question #90 of the principal’s survey—“List the three most important challenges faced by your school”—a total of 30% of the principals cited infrastructure as being one of the top three challenges. Some of the principals simply cited infrastructure (12%) while others more specifically noted toilets (2%), electricity (2%), or water supply/quality (4%). As such, it isn’t clear what specific infrastructure challenges were being referred to by those who simply cited “infrastructure” as being a challenge. Consideration should therefore be given to re-doing the response categories for this question by listing more specific options.

93. Responses for question #93 concerning what training or preparation principals were lacking may have been incorrectly entered into the database, because those doing this work could not understand or decipher many of the principals’ written responses.

In general, there was difficulty reading the principals’ handwriting for most of the write-in responses throughout the survey, and there was also difficulty in categorizing or coding the responses so that the data could be tabulated. While there are advantages to open-ended questions, the inability to use the responses in practice indicates that the open-ended questions included in the present survey could well be dropped in future survey updates.

Since this section focuses on potential directions for survey revision, we have necessarily highlighted challenges, ambiguities, and examples of results that are difficult to interpret, based on the actual evidence of which results are more or less meaningful, and the actual experience of analyzing and interpreting data. Clearly, as the wide range of interesting and useful results in this report and in the more detailed Part Two report and Appendix indicate, the listing of difficulties and ambiguities in this section is by no means a recommendation to “throw the baby out with the bathwater” so to speak. But the sample questions listed above indicate that there are sufficient questions that did not produce meaningful results to allow the survey to be sharply reduced in size to include only those questions that are most relevant to the *Educating for GNH* initiative. At the same time, we have listed some sample questions where results are important enough to warrant an expansion of some lines of questioning. A far closer and more detailed analysis of the survey and its results should be undertaken prior to a full-scale revision and update of the survey before it is re-administered in 3-5 years from now to assess progress in implementing the *Educating for GNH* initiative.

ADDITIONAL RECOMMENDATIONS FOR NEXT PRINCIPALS' SURVEY

The previous section contained general recommendations for the proposed principals' survey update, such as reducing the survey length, separating the surveys or survey questions for primary and secondary principals, revisiting the need for expanded categories in many questions, and specific recommendations concerning individual sample questions.

The following list of recommendations for the proposed principals' survey update includes suggestions for items that could be added, kept, or dropped. This is a sensitive area, not only because so many of the questions used in the initial survey were recommended and deemed important by esteemed educational leaders and officials in Bhutan (and retained for that reason), but also because, in order to recognize trends, the follow-up survey must be sufficiently similar to the initial survey so that the data are comparable.

Since recommendations to drop particular questions are now based on actual evidence and on our best efforts to analyse and interpret the data, the authors feel confident that esteemed Bhutanese educators and officials will not oppose dropping questions they recommended if the evidence clearly indicates that responses to those questions produced ambiguous rather than meaningful and usable results. And, for comparison purposes, we strongly recommend that, wherever present results are deemed useful, interesting, and meaningful by readers, analysts, educators, and officials in Bhutan, and wherever there is deemed to be value in assessing progress on those dimensions, the wording of existing questions be retained in future survey updates to allow statistically valid and reliable trend analysis in years to come.

1. Main recommendation: reduction in survey size

As discussed more fully above in the key challenges, caveats, and recommendations section, the main recommendation is to roughly *halve* the size of the survey. Having said that, however, there are areas in the survey that could clearly benefit from having additional lines of questioning (as in the school safety question noted above, to give just one example). Such additions clearly complicate the survey length issue, but we nevertheless feel very confident that the survey can in fact be halved in length without losing either its essence or its most important and valuable contributions. Some examples of possible deletions and additions are given below, but this list is by no means intended to be either comprehensive or definitive. Bhutanese educators will certainly want to thoroughly review the survey questionnaire and its results to decide which dimensions and elements are the most relevant to infusing GNH into the educational system.

2. Question selectivity in the principals' survey report

It might be tempting to claim that the questions that were chosen to be included in this report were thought to be the most significant, and the ones chosen not to report were thought to have less meaning—and therefore that those questions not chosen to be reported could be recommended for elimination. However, this is not necessarily the case. For example, in order to report the extensive results of Part 2 of the principals' survey in a

relevant manner that related to GNH, the researchers needed to find a meaningful way to structure the results and choose which questions to report.

Therefore, as a way to organize the report and key survey results, GPI Atlantic researchers chose to use the “broad dimensions” outlined in the Bhutan’s Ministry of Education’s Curriculum and Professional Support Division (CAPSD) guidebook for educators titled: *Educating for Gross National Happiness: Refining Our School Education Practices*.⁷ According to the guidebook itself, much of its content was “drawn from the proceedings of the *Educating for GNH* workshops both at Thimphu and Paro, speeches made by eminent guests speakers at those workshops, and papers written by GNH experts.”⁸

The CAPSD guidebook focuses mainly on some of the ways in which GNH values and principles can be transmitted through everyday school behaviour, and to this end provides a list of “broad dimensions” or areas where schools can make “conscious and deliberate efforts to transmit Gross National Happiness.”⁹ These key areas include: School leadership and management practices, Green school systems (physical and psycho-social ambience), Curriculum delivery (classroom teaching), Holistic assessment system, Co-curricular activities, and School-community relationship. The CAPSD guidebook also includes an extensive list of suggested indicators for each of these six areas. To that end, an attempt was made in this report to include information that would relate to some of these indicators.

Focusing this report on the specific key areas of school activity listed above and in the CAPSD guidebook necessarily left out other topics that may be very important to some educators. For example, questions concerning characteristics of the principals themselves were not included, such as their age and gender, how many years they have been a school principal, their highest qualification, study abroad, education as a first career choice, motivation to be a school principal, urban/rural preference, if adequately trained for their job, and what training they considered lacking—although all these questions were asked in the survey. Also, questions concerning principals’ opinions of the importance of various issues for the future of Bhutan (**#76a–m**) were not included, because these issues did not directly relate to the present state of the education system itself.

Also not included were some items asking how satisfied principals were with various facilities at their school such as adequate staff rooms, library, and tables and chairs for teachers (**#26a, c, d, f, g**). Other items relating to school infrastructure and maintenance such as adequate toilets and safe drinking water were included, however. Although questions concerning alcohol and drug use were included in the report, questions about student smoking and students’ and teachers’ use of doma, which are also important, were not included, basically because those issues were not included among the CAPSD indicators.¹⁰

⁷ Curriculum and Professional Support Division (CAPSD), Department of School Education (DSE), Bhutan Ministry of Education. *Educating for Gross National Happiness: Refining Our School Education Practices*. Paro. 2010. Accessed July 2010. Available at: <http://www.education.gov.bt/gnh/guidebook/GNH%20Guide%20book.pdf>

⁸ Ibid, p 5.

⁹ Ibid, p 44.

¹⁰ However, data charts and tables showing results for *all* of the questions are included in the separate Appendix document. Survey data can therefore easily be given by the Ministry of Education to any other interested body,

In addition, in some cases, rather than emphasizing what was working well in the school, special emphasis in this report was placed on issues that relate specifically to the areas that the principals identified in the survey as being *challenges* faced by their school. This is in order to focus on areas where improvement can be most expected as a result of implementing the *Educating for GNH* initiative.

For all these reasons that determined the particular selection of questions and responses reported in this summary report, we cannot recommend that the questions we omitted be eliminated from the next survey. Such decisions on content priority must be decided by the educators and officials of Bhutan based on their own assessment of the importance of particular dimensions of the information for bringing GNH fully into Bhutan's education system.

To the best of their ability, the report authors did, however, attempt to follow such made-in-Bhutan guidelines by aligning the structure of this present report with the Ministry of Education's CAPSD guidebook and indicators. To that end, it must be acknowledged that the omitted questions did not fit particularly well into the the broad dimensions outlined in the CAPSD guidebook and used as the framework for this report. Thus, the 'selectivity' that went into choosing which results to report was not made in isolation or based on researcher priorities but rather with close reference to existing published Ministry of Education guidelines on the *Educating for GNH* initiative. In that regard some of those omitted questions also seemed more tangential to the *Educating for GNH* initiative and to an assessment of the strengths and weaknesses of the educational system.

In sum, we recommend a 'middle way' approach here in which the many questions omitted from this report be considered as first candidates for potential exclusion from future updates with a view to sharply reducing survey size, but also that each of those questions not be dropped without careful consideration of its own potential value and importance. For all the reasons given above, the selectivity that went into choosing which questions to include and exclude from this report must be very carefully reviewed in light of long-term educational and policy priorities in Bhutan.

3. Possible items in the survey that could be combined or eliminated

As noted in the key challenges, caveats, and recommendations section of this conclusion above, combining Parts 1 (questions 1–16) and 2 (questions 12–95) and eliminating repetitions and similar questions in the survey could go a long way towards reducing its length. Several examples of such repetitions and similar questions (such as the three questions on student nourishment, the two questions on classroom walls, etc.) have been given in the previous section.

research group, or analyst particularly interested in and willing to begin analysis on sections that are not included in these final GPI Atlantic reports, and according to their own interests.

As well, some of the questions in Part 1 were repeated in Part 2. For example, questions **#8a–k** and **#77a–k** are identical. Both use the same language, areas, and response categories when asking about the importance that principals attach to introducing GNH principles, values, and practices in each of eight areas. Plus they each have spaces for three “Other” areas in which principals were instructed to specify other areas of their choosing. Thus, not only can one of those questions be eliminated without any loss, but the three “Other” areas can also be eliminated, since survey results show that very few principles elected to specify these.

Questions asking principals to rank their understanding of Gross National Happiness—**#10** and **#74**—are also identical, as are questions **#9** and **#78** asking principals to rate the academic achievement of most of the students, and questions **#13**, **#14**, and **#16** in both Parts 1 and 2 asking about school region, level, and urban/ rural location. The results of the identical questions are also very similar. If the two parts of the survey are combined, as is recommended here, then only one set of questions in each of these groups is needed, with no need for repetition. Repetition of particular sections in Parts 1 and 2 was only needed this time for analytical purposes, because the two sets of data in each were separately analysed, but is not needed in a condensed and combined survey and report.

In some cases the principals were given identical or very similar lists that ask about the same topics from slightly different perspectives, such as (1) the priority that they themselves give to the school promotion of specific GNH-related values or goals, (2) the degree to which the school promotes the same values or goals, and (3) whether the education system accomplishes the same values or goals. In each case the same set of seven values and goals was listed. This repetition, which was geared towards understanding key subtleties and nuances related to different dimensions of implementing the *Educating for GNH* initiative, did not always produce more definitive results. On the contrary, as we have seen in this report, the effort to assess the same outcomes from different perspectives sometimes produced ambiguities that made interpretation of results more challenging and difficult. Some of these questions might therefore be eliminated without losing important information.

In another similar example, question **#4a–dd** asks principals to rate the priority (on a 10-point scale) that they themselves give to the promotion of a list of 30 values in their school, while question **#52a–dd** asks principals if their school promotes the exact same list of values. In the latter case, however, the response choices are not the same 10-point scale as in question **#4a–dd**, but are “very much so”, “somewhat”, “not particularly”, “not at all,” and “don’t know.” When efforts were made by the researchers to match the two sets of response categories (for example by equating “very much so” with an 8-10 ranking on the 10-point scale), the results from both questions were seen to be very similar. Thus, it would seem that if a principal gave a high priority to the promotion of a particular value in his or her school, then the principal would also ensure that the school would promote that value. In short, one or the other of these categories could potentially be eliminated without losing the content substance of the questions.

This is not to imply that such choices are simple. On the contrary, some of these decisions on which question to drop and which to retain are subtle and complex, since many apparent

repetitions are not a matter of simple ‘duplication’. As noted above, for example, the principals’ opinions of whether the education system is accomplishing its goals (**#62a–ff**) did not always coincide with their opinions of the extent to which schools are actually promoting the same values among the students (**#52a–dd**). Thus, there does seem to be a distinction between these two types of questions even though they are asking about the same set of values. Nevertheless, as noted in the previous section, in some cases the principals indicate that the education system is successfully accomplishing a goal that the school is not promoting. Despite careful analysis of responses, and considerable testing and speculation, the reasons for some of these discrepancies remain unclear to the researchers, and they must acknowledge that the apparent discrepancies cast doubt on the accuracy of some results.

Elimination choices are easier in cases where survey questions are very similar and received results that were also very close, which is why the evidence gleaned from the actual survey results provides the best and most reliable basis for updating and revising the survey instrument. In cases where results are similar for overlapping questions, perhaps only one of those questions is needed.

In question **#60** for example, the two values to which the least number of principals gave high priority (8–10 on the scale) among the various value questions in **#60**—namely “Help students discover their human potential” (**#60c**), and “Each student is supported to achieve his/her full potential” (**#60d**)—seem very similar, and it is noteworthy that almost identical proportions of principals (12% and 13% respectively) assigned the highest priority rating of “extremely high” (10 on the scale) to these two statements. Although there is a subtle difference between discovering and achieving potential, the very similar results indicate that one of the two questions could be dropped without loss of meaning or significance.

Likewise, questions **#62c** and **#62f** ask principals to rate whether the education system is successfully accomplishing the goal of helping students discover (**#62c**) and achieve (**#62f**) their human potential. Again, principal responses are very similar—with 54% and 53% of principals, respectively, rating the education system’s success in these goals between 8 and 10 on the scale, and with 12% and 13%, respectively, rating this success as a 10. Because response rates are so similar, it seems possible in this case to retain only one of the four questions (**#60c**, **#60d**, **#62c**, **#62f**) and to drop the other three without compromising results.

Scattered throughout the survey are sub-components of various questions that are also quite repetitious or similar. As one example, question **#26g** asks how satisfied principals are that their school has an adequate library, **#53z** asks principals to agree or disagree on whether their school has a good library of books, and **#81g** asks principals to rate the importance to their school of having more library books. Again, just one of these three questions will likely suffice in an updated survey.

As well, based on the results, it might be possible to eliminate the whole category of questions that ask whether problems have increased, stayed the same, or decreased over time, since such questions did not tend to produce meaningful results. Overwhelmingly, most of the negative problems or issues listed showed no increase (or stayed the same),

while the positive issues overwhelmingly showed no decrease (or stayed the same) (e.g. #3, 6, 28a–x, 37, 39, 41, 43, 45, 47, 49). Eliminating this entire category of increase/decrease questions would produce a major reduction in survey length. Again, it must be emphasized that all the recommendations being made here are based on the actual evidence produced by the survey results and the degree to which these results were meaningful and useful.

Question #86a–i, which dealt with the seasonal performance of students and the extent that academic performance is influenced by season, could possibly be eliminated from the next principals' survey, because the results were as might be expected and most likely would not change significantly in the follow-up survey. Based on the results, it appears that academic performance was lowest in July and highest in November, the last month of school before winter break. Between August and November, academic performance, according to the principals, rose incrementally each month.

4. Topics that are important to monitor over time: Strengths and challenges

In order to understand trends over time, it is especially important to continue to monitor those issues that have been identified as being both educational strengths and challenges. The lists below focus mainly on which issues may be most meaningful to track over time, and especially which challenges are crucial to monitor in order to assess whether introducing GNH principles, values, and practices into the school system is producing improvements in these areas.

Strengths

- It is crucial to retain the four basic demographic questions: school level, region, urban/rural location of the school, and number of students in the school. These questions allow important cross tabulations of all the questions by school level, region, etc. As seen in this report, it is these cross tabulations that often produce the most meaningful results and that highlight significant differences between regions and among school levels and locations. This information can be very valuable to policy planners in identifying needs and in deciding where to allocate scarce resources.

Educational issues directly related to the four pillars of GNH are very important to track. Although student knowledge in some of these areas was lacking, they are all areas for which the principals showed a high level of support. Thus, GNH-related survey sections that are recommended for retention include:

- the questions related to the four pillars of GNH in Part 1 of the survey,
- questions related to greening the schools, caring for the natural environment, and ecological literacy,
- questions on preserving the culture of Bhutan, such as respect for and interest in traditional customs, traditions, arts and crafts, language and local dialects, folk lore and legends.
- questions on knowledge of government functioning, civic responsibility, and community relations, and
- questions on knowledge of economic issues.

There are many strengths in the existing educational system revealed in the survey results. Highlights of these strengths, which should also be monitored over time, include:

- the priority principals give to the promotion of values such as caring, kindness, and compassion—or the extent of school promotion of these values,
- levels of student knowledge on issues related to social behaviours and cultural norms
- understanding issues related to student health and wellbeing,
- basic skills, such as basic literacy, managing time, and developing good study habits
- the extent to which schools act as a model of good practices for the community, and contribute towards their communities in a myriad of ways.

Challenges

Most of the learning objectives that received poor satisfaction ratings from the school principals when analysed relatively, are also important to monitor over time. These ‘problem areas’ are precisely where the greatest improvements are likely to be seen as the *Educating for GNH* initiative is fully and effectively implemented. Broad areas of principal concern, including those that presently show low levels of student knowledge, include:

- contemplative knowledge, which is gained from mindfulness and meditation training, critical thinking, and independent learning,
- students’ dealing with traumatic events, frustration, anger, and interpersonal conflict,
- news and current events both internationally and within Bhutan,
- lozey and traditional crafts,
- governance issues,
- environmental issues,
- financial management issues,
- school infrastructure,
- teacher shortage.

In response to a question about the relative importance of introducing GNH principles, values, and practices into various aspects of the educational system, all of the suggested components were rated as important, but the highest priorities were given to:

- teacher training,
- assessment systems,
- physical environment, and
- meditation and mind training.

These areas were followed in importance by:

- extra-curricular activities,
- community services,
- revision of textbooks, and
- revision of curricula.

Specific objectives that produced relatively low principal response levels included:

- principals’ understanding of GNH (this likely changed after the workshop)
- meditation training,

- school promotion of generosity and tolerance for other people,
- helping students to realize that all humans are basically good.

And specific problems and challenges highlighted by principal responses included:

- plagiarism,
- student littering,
- student alcohol and illegal drug use,
- corporal punishment in schools,
- need for more, better-trained, and more inspired teachers,
- school infrastructure, especially the functioning, cleanliness, and adequacy of school toilets and safe drinking water,
- need for more and better textbooks,
- need for better sports facilities and equipment,
- walking distance to school,
- student food and nourishment,
- student sickness,
- assessment systems that more accurately reflect educational achievement,
- issues related to students' home environment—especially poverty in student homes, parental alcohol abuse, and broken homes, and
- school promotion of competitiveness and winning among the students (which had a high rating, in contradiction to the Minister of Education's recommendation that sports can be conducted in schools to emphasize cooperation, collaboration, and teamwork rather than fostering competitiveness and aggression).

All the above strengths and weaknesses seem important to monitor and track over time, with significant improvements particularly expected in the above “challenge” areas as a direct result of implementing the *Educating for GNH* initiative. In all these areas, the report authors feel that the present survey produced significant and meaningful results that can be highly useful to education policy planners and officials, and that can aid the effective implementation of the *Educating for GNH* initiative. It is recommended that all the issues and subject areas listed above be included in the updated *Educating for GNH* principals' survey that will be hopefully be administered in 3-5 years. It is further recommended that question wording in these areas correspond as far as possible to that in the 2010 principals' survey to allow for statistically accurate comparability and trend analysis.

5. Areas that could be considered for additional questions in future surveys

In analysing the results of the 2010 *Educating for GNH* principals' survey, it became clear that some vital dimensions of the *Educating for GNH* initiative were insufficiently covered by the survey. Without compromising the objective of reducing the overall *Educating for GNH* principals' survey by half, there are some lines of questioning that clearly need to be expanded, and where carefully selected additional questions can greatly enhance the value of the survey.

Greening schools — During the *Educating for GNH* principals' workshops held in Paro in January and February 2010, the principals collectively pledged to work towards “green

schools for green Bhutan.” There were few questions in the survey that dealt specifically with school greening and the availability of outdoor learning spaces for students—and two of those questions were directed only to urban schools. In order to ascertain progress in this area, future rounds of the survey could include additional selected questions that deal specifically with the key elements of the principals’ pledge to work towards greening their schools as models for their communities.

Thus, in their pledge principals committed to working towards greening school grounds by planting flower and vegetable gardens, creating outdoor learning spaces, and using local, sustainable building materials. They also pledged to practice resource conservation at their schools, including conserving water and energy, reducing waste at source, composting, recycling, and minimizing car use. The principals also agreed to work with the local community to procure food from local sources, draw on local wisdom, adopt a stream or part of a forest to provide its sustained care, and be a model for the community. Finally, the principals agreed to extend this awareness into classroom learning through including nature field trips, incorporating ecoliteracy and full-cost accounting into studies, studying best practices worldwide, and bringing natural materials into the classrooms.

These very specific action areas are highly amenable to new survey questions designed to assess progress towards realization of the principals’ pledges.

Meditation practice — Bhutan has become the first country in the world to encourage school principals to include daily meditation practice in the national school curriculum. Despite its importance, there were only three questions on meditation practice in the 2010 principals’ survey. Questions on meditation practice might be expanded in future surveys, with the particular goal of examining the effects of meditation on school climate, and on student behaviour and performance.

It should be noted that the 2010 principals’ survey was administered before meditation had been formally introduced into the schools. However, it is clear from the survey responses both that the principals attach great importance to this significant dimension of the *Educating for GNH* initiative and that principals currently give a very low rating to current student training in meditation and mindfulness, with only 17% of principals expressing satisfaction in this area. This is clearly one area where significant improvement can be expected as a direct result of the *Educating for GNH* initiative and is worthy of deeper exploration and questioning in future survey updates and revisions.

Critical thinking — Two questions in the present principals’ survey concern cultivating critical minds—the priority given to this in the school, and the degree to which the education system accomplishes this goal. However, in the principals’ workshops it was noted that analytical thinking and teachings on the interdependent nature of reality are largely absent at the present time from both school textbooks and from classroom teaching and learning, and that efforts will be made to include these aspects of scholastic and academic excellence in future educational revisions. One suggested direction is introduction of a ‘process-based’ approach to learning that encourages students to question the source and origins of everyday objects as well as their disposal—asking where things come from and

where they go. In addition to nurturing critical thinking and analysis, this approach naturally highlights the ecological and societal dimensions of production and disposal processes, and thus cultivates deeper understanding of GNH principles and practices.

Given the importance of cultivating critical thinking, which was one of the five key subject areas covered in the January-February Paro *Educating for GNH* principals' workshops, it may be useful to expand questions on critical thinking in future surveys, perhaps to include student knowledge of the interdependent nature of reality.

Media literacy — There are no questions in the survey on media literacy, which is an aspect of critical thinking that was also a particular focus at the 2010 Paro principals' workshops. With Bhutan rapidly opening to the world, and with television and the Internet introduced just 12 years ago, it was agreed at the *Educating for GNH* workshops that students must be able to see critically and incisively through the barrage of materialist, individualist, and consumerist messaging to which they are increasingly subjected, and to discern truth from illusion. Thus the area of media literacy is an important candidate for new questions in the next principals' survey.

Holistic assessment — One of the broad dimensions in the CAPSD *Educating for GNH* guidebook is holistic assessment. However, it is uncertain whether the indicators listed under "Continuous and holistic students' assessment" in the guidebook reflect holistic assessment systems. A number of questions in the principals' survey relate to exams and marks as well as to the promotion of values, but no questions specifically relate to holistic assessments. Results of the survey indicate that principals may potentially favour holistic assessments. When principals were asked how accurately marks presently reflect educational achievement, only 5% responded "very accurately." In terms of the importance of introducing GNH principles and values into assessment systems, which would by definition be holistic, the vast majority of principals agreed (74%) that this was important—rating it between 7 and 10 on a scale of 1–10.

Holistic assessment, which might be regarded as more in line with GNH principles, values and practices, differs from the conventional approach of standardized tests in attempting to assess the full and real capacities of students as well-rounded, balanced, well-informed "whole" citizens and human beings who will benefit their communities while mastering the knowledge and skills required to handle their world effectively. A system that attempts to assess students according to such criteria would therefore be able to reflect the multi-faceted and complex nature of a student and would place value on all the dimensions of being human—giving equal importance both to fostering empathy, compassion, and sensitivity, and to content knowledge and skill acquisition.

There are a number of questions in the survey that ask about the "all-round" development of students and their values, which are aspects of holistic assessment, but these questions were not connected with school assessment processes per se. Therefore, it is worth investigating whether two or three questions on holistic assessment—both whether students are currently assessed according to these criteria and principals' openness to such an assessment system—could be included in the next survey.

At the January-February 2010 Paro principals' workshops, the Honourable Prime Minister specifically recommended weekly self-assessments in which students sat with teachers to consider and write down in a dedicated journal their reflections on the past week from a GNH perspective in relation to their own behaviour, their families, their class and school, and the wider community. This might include acts of kindness, picking up litter, resolving a dispute with a classmate through an act of generosity, or any other action that furthered or reflected GNH values. The session would also include honest reflections on actions that had diminished GNH (such as quarrelling with a classmate, lack of consideration for a family member, littering, etc.) and it would end with resolutions for the following week. This recommendation was publicly endorsed at each of the principals' workshops by the Ministry's Director-General of School Education. Whether or not principals have adopted this recommendation in their own schools would be an example of a holistic assessment question that could be incorporated into the revised principals' survey.

Counselling — One of the CAPSD guidebook psycho-social ambience indicators is concerned with counselling programs in the schools: "The school conducts counselling programs and services with protocols for referrals." Bhutanese students attending the educators' workshop in Thimphu (December 2009) identified a lack of adequate counselling as a prominent problem in education. They recommended that there should be well-trained school counsellors who are not teachers, and that School Captains should receive peer-counselling training. In Part 1 of the principals' survey only about 27% of the principals reported satisfaction with their students' capacity to manage frustration and anger and to deal with traumatic events. These mental health dimensions of wellbeing were very notable exceptions to the generally positive results on students' knowledge of health and wellbeing.

Although Part 2 of the principals' survey asks several questions that relate to the potential need that students might have for counselling—such as questions relating to alcohol and drug use; the extent that the learning of students is hindered by anxiety, stress or other emotional problems; whether anxiety, stress, or other emotional problems among students have increased, decreased, or stayed the same during the past year; and the extent that the exam system places students under severe strain—it does not contain any questions dealing with counselling programs per se. Future survey updates might therefore contain a few key questions on the availability, type, usage, and perceived effectiveness of school counselling programs, on the qualifications of counsellors, and on student training in peer counselling.

Process of teaching — The survey includes questions that imply teaching *processes*, such as questions concerned with the promotion of values, but it does not include any specific questions on the actual teaching methods used in classrooms. Since GNH principles and values are transmitted as much if not more through *how* values are transmitted as through content, it might therefore be beneficial to include in the next survey a few key questions concerning actual classroom practices, or the process of teaching. The CAPSD guidebook includes a number of indicators concerned with the process of teaching from a GNH perspective that might inform new survey questions, such as:

- Teachers use a variety of learner-centred teaching strategies (role play, dramatization, group work, classroom debates, question-answer techniques, field trips, project work, etc.) appropriate to each subject.
- Teachers translate the knowledge of their subjects into effective classroom teaching by relating to GNH values and principles without compromising the quality of the content.
- Teachers relate the lessons to the prior knowledge and experiences of learners for desired results.
- Teachers invite student questions and discussions for clarification of doubts.

Principals' comments — Question #95 in the survey asked principals to write in any other comments not covered in the survey, which they felt should be addressed. In addition to comments referring to the survey length and the need for more time to complete it, other principals also thought that the survey should have more emphasis on:

- in-service programs for teachers, especially those in rural areas,
- budgets, with a prominent concern being that primary and community schools should be given separate budgets in the same way that higher secondary schools are;
- the many duties carried out by teachers and principals other than teaching loads; and
- the multiple problems of remote schools.

CAPSD indicators — As mentioned, the CAPSD *Educating for GNH* guidebook provides indicators within each of the broad dimension areas that could be used to measure progress from a GNH perspective in these areas. There are questions in the principals' survey that directly relate to some of these indicators, but many of the CAPSD indicators are not represented in the survey. It might be useful to education policy planners and evaluation staff in the future if the principals' survey and CAPSD indicators were somewhat synchronized, so that the survey could provide data for the indicators. Therefore, it would be helpful to compare the CAPSD indicator list with the principals' survey to discover if some of the CAPSD indicators can suggest questions for inclusion in the next survey.

In the future, there is great scope for further work in both analysing the survey questions that remain unanalysed and not reported, and cross tabulating more results according to a wide range of different criteria, such as school level, rural-urban distinctions, training and length of service, value prioritization, and much more.

At this time the authors submit these reports as a simple start point and modest contribution to the Ministry of Education's EMSSD GNH-based evaluation and monitoring program that will hopefully produce increasingly in-depth and ongoing monitoring and evaluation over time. Indeed, if even the survey and data uncertainties and ambiguities identified in these reports serve no other purpose than to improve future documentation and assessment of the *Educating for GNH* initiative, these reports will hopefully have served a useful purpose. Ideally, and so long as they are used with caution, at least some results presented here can point to areas where existing strengths can be nurtured and where steps might be taken to deepen the infusion of GNH principles, values and practices in the educational system.

Appendix

BACKGROUND AND CONTEXT OF THE PRINCIPALS' SURVEY¹¹

The effort by the Kingdom of Bhutan to transform its entire educational system to reflect profound ecological and human values, principles, and practices is clearly ground-breaking and unprecedented. While individual schools in different parts of the world have been established on these principles, no country has ever tried to transform its entire national educational system along these lines.

And yet, the need to do so is increasingly widely recognized, and not only in Bhutan. Globally, we have trampled, degraded, and destroyed both nature and indigenous cultures, and in doing so we have not only threatened life on the planet as we know it, but sapped and diminished the human spirit. Unless our youth grow up with a profound appreciation and care for nature and for local wisdom, as Bhutan's Honourable Prime Minister says, there is literally no future.

That change of consciousness must come from deep within the educational system—from what is taught in the classroom and how it is taught, from the school atmosphere and ambience, from the school's service to local communities and how it is governed, and from how students are assessed.

With Bhutan rapidly opening to the world, with television and the Internet introduced just 11 years ago, that change of consciousness must also be reflected in how critically and incisively students can see through the barrage of materialist, individualist, and consumerist messaging to which they are increasingly subjected. And it must be manifest in the effective transmission of the profound wisdom transmission that has been passed along in unbroken lineage in Bhutan for more than a thousand years.

Monitoring and Evaluation

All this is no small order! And the depth of change envisioned by the Honourable Prime Minister of Bhutan raises hugely challenging questions of how that change is to be monitored and evaluated.

- What are the markers of success in Bhutan's bold experiment?
- How will we know if the required changes of consciousness, values, action, and behaviour have begun to occur and how far they have progressed?
- How can we assess whether our schools are becoming true GNH schools, and our students real GNH graduates in the sense described by the Honourable Prime Minister above?

¹¹ The Introduction to this report summarizes the information found in this Appendix section, which explains the background and context of the Principals' Survey in more detail.

While these reports make no claim to answer those questions—that assessment will take many years—they do attempt at least to begin to ask the kind of questions that may be needed for such long-term monitoring and evaluation.

Those questions were developed during extensive meetings, consultations, and in electronic correspondence following the seminal international *Educating for GNH* workshop held in Thimphu, 7–12 December 2009, which launched the new initiative. During that highly successful and productive exchange, dozens of renowned international educators, scholars, and school founders and directors from 16 countries engaged with top Bhutanese officials and educators on how such transformation might happen.

Immediately following that international workshop, Bhutan’s Ministry of Education gathered all the country’s 541 school principals, along with district and assistant district education officers, Ministry officials, teachers college lecturers, directors of Royal University of Bhutan colleges, and others in three week-long *Educating for GNH* workshops held at the Paro College of Education (PCE) in January and February 2010.

Those PCE workshops were designed to initiate Bhutan’s leading educators into the new GNH-based educational paradigm, and to suggest concrete ways they could immediately introduce and strengthen GNH values in their schools. The Prime Minister himself addressed each of the workshops at length and engaged the educators in extensive in-depth 5–6 hour sessions both on the vision and on the very practical ways they could effectively launch the initiative.

Since all the country’s school principals were gathered together during these three weeks at Paro College of Education, the occasions were seen as a highly suitable and convenient opportunity to gather baseline data on the current school situation. Based on the initial questions asked in January–February 2010, follow-up surveys on selected questions and issues might be conducted five or ten years into the future to begin to assess progress in moving towards a genuinely GNH-based educational system.

As well, it was envisioned that future population-wide assessments, perhaps linked to the Centre for Bhutan Studies’ national GNH surveys, might also monitor and evaluate the degree to which the GNH-based educational transformation initiated in 2010 was shifting national values, knowledge, awareness, and behaviour. Ultimately, the Honourable Prime Minister’s expressed goal is that GNH permeate and pervade every dimension and aspect of Bhutan’s society and lifestyle. The *Educating for GNH* initiative is seen as one crucial step in that broader societal endeavour.

Another key step in monitoring and evaluating the changes was taken immediately after the three PCE principals’ workshops, when—with support from the International Development Research Centre in Canada—Dr. Daniel Buckles of Carleton University worked closely for a week with the Ministry of Education’s evaluation and monitoring unit (EMSSD) to develop new GNH-based criteria, indicators, and guidelines for all Bhutan’s schools.

As a first step, however, it was decided to survey all Bhutan's school principals gathered in Paro in January–February 2010, according to GNH-based criteria and guidelines, in order to collect initial baseline data that could subsequently be used to assess change and progress over time *within* Bhutan's schools as a result of the innovations now being introduced. Methods have yet to be developed to assess the wider societal changes resulting from the educational transformation. What follows is therefore a brief description of how the initial school-based survey questions were developed.

Principals' Survey and Questionnaire Development

In December 2009 and January 2010, extensive meetings and consultations were held, both in person and in electronic correspondence, to develop the questionnaire that was administered to all Bhutan's school principals in January and February 2010. The following educators all recommended new questions, reviewed suggested questions, and recommended revisions to the evolving survey. Many of these also provided survey, assessment, and other relevant materials, and almost all had participated in the December *Educating for GNH* workshop:

- Bhutan's Minister of Education Lyonpo Thakur S. Powdyel took a direct role in helping create the survey in correspondence, provision of materials, and at least three separate meetings.
- Other key Education Ministry officials, including the Ministry Secretary Aum Sangay Zam, Director-General of School Education Tshewang Tandin, members of the Ministry's Evaluation, Monitoring and Support Services Division (EMSSD) and curriculum design unit (CAPSD), and others also participated actively in meetings that reviewed survey questions.
- Royal University of Bhutan Vice-Chancellor Dasho Pema Thinley carefully reviewed the survey and recommended several questions and revisions of wording in two separate meetings.
- Royal University of Bhutan's Centre for Educational Research and Development reviewed survey questions and made recommendations.
- Royal Education Council Director Mark Mancall reviewed successive survey drafts both electronically and in two extensive meetings, and recommended many additional questions, particularly to allow correlations between GNH-oriented data and more conventional educational indicators like quality of teaching, textbooks, and student academic performance.
- Centre for Bhutan Studies President Dasho Karma Ura, the country's leading scholar (with extensive Oxford University training in research and statistics), reviewed successive drafts of the survey, and—in extensive meetings—also recommended many additional questions, revisions in wording, removal of potential ambiguities, and inclusion of variables that allow important correlations between key factors.

- Five leading researchers of the Centre for Bhutan Studies—all of whom played key roles in the CBS national GNH survey in 2008 and 2010—carefully reviewed all questions and, in an extensive meeting, not only made recommendations on content issues, but also provided very useful advice, based on their own experience, on question coding, wording, and survey structure.
- International participants in the December *Educating for GNH* workshop who provided valuable advice, input, recommendations, and materials for our principals' survey include: Dr. John (Jack) Miller (Ontario Institute for Studies in Education at the University of Toronto); Dr. Cheryl Charles (President, Children and Nature Network); Dr. Aostre Johnson (Education Department, St Michael's College, Vermont); Zenobia Barlow (co-founder and director, Center for Eco-literacy); Dr. Judith Simmer-Brown (Naropa University); and several others.

We pre-tested a draft of the survey with 14 school principals, who completed the survey and then reviewed the survey (question by question), providing extensive feedback in two meetings, revising wording of particular questions to remove ambiguities and improve clarity; and adding key questions on socio-demographic characteristics to ensure that results can be categorized and later analysed according to the varying circumstances and conditions of different schools and principals. Some teachers college lecturers also completed the survey along with the principals and offered further advice and suggestions.

Results of this pre-test were also analysed by UNICEF Bhutan staff, and the chief UNICEF representative in Bhutan and two other key UNICEF Bhutan staff reviewed all survey questions and provided their own input and recommendations. Some of those recommendations were in line with key UNICEF priorities like gender equality and improvement of physical conditions in schools, and several questions were added to the questionnaire to address these priorities.

In sum, we are satisfied that the final survey as administered to Bhutan's school principals genuinely reflects the views, understanding, knowledge, and experience of many of the leading educators and education officials in the Kingdom of Bhutan and of principals themselves with direct experience of the utility and meaningfulness of the survey to those who will complete it.

Construction and Administration of Final Survey: Challenges Faced

Based on all the above input, feedback, and recommendations, the following key steps were taken to complete the survey design process:

- (i) All the above content feedback was carefully examined by a research team in Canada, led by Michael Pennock, former director of Dalhousie University's Population Health Research Unit, and currently Population Health Epidemiologist with the Vancouver Island Health Authority, who has presented to the last three international GNH conferences and spent three months in Bhutan helping the Centre for Bhutan

Studies design its national GNH database and training CBS researchers in quantitative data processing and analysis methods. Other members of this Canadian research team included Martha Pennock, the GPI Atlantic executive director, Dr. Ronald Colman, senior GPI Atlantic researchers Karen Hayward and Linda Pannozzo, Dr. John Miller, Ontario Institute for Studies in Education at the University of Toronto, several international delegates to the December 2009 *Educating for GNH* workshop in Thimphu who kindly reviewed and advised on the draft questionnaire, and the GPI Atlantic research team.

Based on the detailed input, advice, and recommendations of the Bhutanese educators and others noted above, this Canadian research team added and revised questions, converted new materials and general recommendations to specific survey questions, attempted to organize the growing survey into clearly defined categories, and tried its best to reconcile the sometimes conflicting advice received without excluding any thoughtful, well-considered expert input received. The final survey questionnaire was constituted and formatted by Martha Pennock and Michael Pennock.

- (ii) As extensive advice, input, and feedback flowed in from Bhutan, the Canadian team devoted considerable time to tricky formatting challenges, coding response categories, expanding the level of response possibilities, considering the appropriate order of questions, and other methodological issues involved in survey design.

For example, the survey pre-test with 14 principals found that questions with only three response options (agree, disagree, and undecided) provided too much implicit encouragement for all responses to land in the "agree" category; so these were often expanded to add 'strongly agree' and 'strongly disagree' options. In other cases, a more extensive 10-scale response option palate was adopted to allow for more subtle and detailed prioritization of values, attitudes, and behaviours.

Questions were also considered from the perspective of their capacity to provide useful information on trends in the longer term. In this survey design process, such a wide range of methodological challenges was encountered that our research team at many times doubted its capacity to deal with all issues satisfactorily in the limited time available.

- (iii) By far the biggest challenge became the *survey length*. So many new questions were requested and recommended by the Bhutanese educators that the survey massively expanded in length during the December–January survey design process. If the survey design team had an additional two to three months of preparation time, its main task would have been to reduce the survey length. Given the scheduling of the principals' workshops in January–February 2010, time did not allow this compression to be undertaken with sufficient certainty that we were not losing important questions.

As well, this *Educating for GNH* initiative is so new—with no similar national precedent anywhere in the world — that the survey design team simply had no way of knowing at this early stage which questions were more important and which results would be most meaningful in the long term. Reducing the survey length effectively would therefore have required considerable further pre-testing and analysis of sample results—which time did not allow.

Another challenge in reducing the survey size might be classified as “political.” Those who added and recommended questions and lines of questioning are all key players in Bhutan's education system, as seen above, from the Minister of Education himself to the University Vice-Chancellor to the Director of the Royal Education Council to the President of the Centre for Bhutan Studies—all of whom felt strongly, and with considerable justification, that their particular questions and line of questioning were crucial and seminal. In some cases, certain lines of questioning recommended by some key people mentioned above were at odds with the approach of others.

We, as Canadian researchers, were simply not in a position to “judge” which of those questions was more or less important than others, or how potential conflicts of priorities could be effectively resolved. Indeed, it would not have been correct, proper, or even ethical for us to make such decisions. The only choice—given the time constraints—was to include all the questions for the purposes of this initial *Educating for GNH* survey, and then let evidence and results speak for themselves. At later stages, prior to re-administration of the survey perhaps five years from now to assess trends over time, that evidence can be carefully examined to assess which questions and results prove most meaningful and significant. Then, based on that analysis, the survey can and should accordingly be sharply reduced in size.

In sum, there is no doubt that the main survey flaw at this time is its excessive length. In the end we have had no choice but to allow the actual survey administration and analysis itself to be the test of which questions and results are most meaningful. Administration of the survey revealed that it takes an average of about 90 minutes for a principal to complete the full survey properly. Fortunately, having a “captive audience” at the *Educating for GNH* workshops at Paro College of Education in January–February 2010, it was possible to schedule the lengthy survey administration into the first day of each workshop program, and thus not impose on the principals’ personal time.

- (iv) The survey size created other challenges, with particular concern among the researchers that data analysis would become far too complicated with an excessive number of variables and with a potential loss of focus. Since time did not permit a proper culling based on testing, the following three-fold solution was devised by researchers in Canada as a stop-gap measure that could later lead to greater refinement and culling prior to re-administration of the survey after a year:

- a) The large number of questions was carefully divided into two parts, with Part 1 (15 pages of questions, questions 1–12 + 3 demographic questions) representing a kind of "core" survey with all questions considered directly related to GNH principles, values, and practices. At the data analysis stage, this section has been analysed first to ensure there is no undue delay in producing at least a core set of meaningful results.

The more extensive Part 2 (40 pages of questions, questions 12–95) contains questions that some might consider marginally more peripheral to central GNH principles and values. We hesitate to say "less important" because that is not the case. But for the sake of convenience, this much larger section has been analysed as a second phase report.

- b) Present resources do not allow analysis of every question in the survey. The survey data can therefore be given to any other interested body, research group, or analyst particularly interested in and willing to begin immediate analysis on sections that are not included in the final GPI Atlantic reports, and according to their own interests.

To cite just one example among the many results not reported here, the time use survey at the conclusion of the questionnaire was recommended by The Centre for Bhutan Studies in light of its own experience of the value of such time use analysis in its national GNH survey. GPI Atlantic can confirm the extraordinary value of time use analysis as a window on quality of life, since it reveals, like no other tool, how respondents balance competing demands on their time. In the school setting, a principal overwhelmed by administrative demands may be unable to devote the time and resources necessary to GNH-based school governance, participatory processes, and community service.

Despite its importance, GPI Atlantic was simply unable—due to time and resource constraints—to analyse the results of the time use survey (and other key survey components) as part of these reports. We therefore see the initial two survey reports as just the first step in reporting particular key baseline data and results, and we look forward to other leading research bodies, like The Centre for Bhutan Studies for example, doing further analytical work and reporting on other survey components (particularly those they themselves recommended for inclusion) as resources become available.

- c) Finally, once the actual results are scrutinized, it will quickly become clear which are the most meaningful and which have simply produced results that are too general, vague, or ambiguous to interpret clearly. This will allow culling based on the actual evidence. It is anticipated that successive surveys administered in future years to assess trends in *Educating for GNH* will be very much shorter (probably 1/3 the present length) than the one administered in Paro in January–February 2010, and which is the basis for these GPI Atlantic reports. Based on actual experience in implementing the *Educating for GNH* initiative in coming

years, those future surveys will be based on careful and considered analysis and consultation on which trends will be most meaningful to track over time.

- (v) Printing of the surveys was completed literally minutes ahead of the survey administration in what turned out to be a real nail-biting adventure. After printing, the two survey sections, divided as described above, were then hand-marked with identical numbers to allow each respondent's Part 1 and Part 2 to be linked, so that correlations can eventually be drawn between any of the variables in each of the two parts. The two survey parts were administered at the end of the first workshop day of the three Paro principals' workshops. The first batch of principals discovered three minor errors that were corrected in the surveys administered to the second and third batches of principals.

Dedication of Merit
Educating for Gross National Happiness

May our endeavor to educate for Gross National Happiness
Fulfill the wishes of Their Kind Majesties
And benefit all the inhabitants of the Kingdom and the world.
May our students and teachers flourish.

May all beings overcome the darkness of ignorance,
Find enjoyment in learning and clarity of insight,
And live in harmony with each other
And with the elements of the natural world.

May we all find happiness in our service
To others everywhere.