



## Transnational collaboration in building educational research capacity in a new university: An applied phenomenographic investigation

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### ABSTRACT

This paper reports on a phenomenographic investigation concerning the perceptions of primarily early career academics on the value and importance of educational research, and the challenges and enablers of establishing and building educational research capacity, within a new university in a developing country. The study was conducted as part of a three year project which itself is based within a longitudinal programme of collaboration between the Royal University of Bhutan (RUB) and the University of the Highlands and Islands (UHI). The paper outlines the transnational collaborations between the two universities to date, before considering key issues in the development of educational research and an educational research culture within universities that are not research intensive, and for whom educational research is a nascent or emerging area.

The rationale and methodological approach for the phenomenographic investigation, which seems to be the first phenomenography to address perceptions relating to the development of educational research within the context of a new university, are then considered. The main findings resulting from the phenomenographic process of thematic analysis are subsequently presented. This includes a synthesis and articulation of the findings in the form of a phenomenographic 'outcome space' that pertains to the academics' motivations and perceptions in relation to the development of educational research at RUB. The paper then articulates how the findings of the phenomenography were applied in identifying and implementing tangible interventions to support the participants to engage in conducting and disseminating educational research projects relating to dimensions of their own educational practice. The paper concludes with recommendations and lessons learned relating to the development of educational research capacity in emergent and transnational collaborative contexts.

**Keywords:** educational research, research development, challenges and enablers, transnational collaboration, phenomenography

### Introduction

#### Royal University of Bhutan

The Royal University of Bhutan (RUB), established in 2003, is a federated university comprising nine colleges, and two affiliate colleges, with specialisms in subjects including education, engineering, business, science and technology, natural resources, and language and culture. RUB is a geographically distributed institution, with campuses located at multiple locations across the country, often in rural locations. Connections across the university are constrained by this geographic spread, with limited opportunities for staff to gather together to share and develop professional practice. Until the establishment of a new University of Medical Sciences, RUB was the only university in Bhutan and is the main provider of HE.

The traditional education system in Bhutan is historically based upon monastic education and memorisation by rote (Denman & Namgyel, 2008; Phuntsho, 2000). With the establishment of RUB, policy decisions have favoured moves from teacher-centred to more learner-centred educational practice, and a commitment to constructivist learning approaches, although it is recognised that most of the curriculum offer would benefit from increased flexibility in both delivery and assessment for students (Gyamtso & Maxwell, 2012; 2013; 2016). As the only university in Bhutan until recently, and as the main provider of HE in the country, RUB has challenges (as any new university does) with establishing, measuring, and maintaining the appropriate academic and administrative levels commensurate with its university status. In general, the majority academic staff at RUB are engaged in teaching, with little time available to engage in research and limited experience in conducting research. However, as recently detailed by Choden and Choden (2019) the university is doing much to support and accelerate the development of further research activity. This has included establishing a Department of Research and External Relations (DRER), annual university research grants, forging external partnerships nationally and

internationally, and supporting an increasing number of colleagues to undertake postgraduate study. A small number of academic staff have gained PhDs from a range of universities out with Bhutan and several of these staff members have had an impact in supporting and mentoring junior staff to engage with research issues (Maxwell, 2019). Furthermore, RUB has implemented a range of initiatives to support staff to engage in scholarly activities and make the transition from scholarship to research, and in 2012 established the Bhutan Journal of Research and Development. Bhutan has a relatively high literacy level for the region - around 80% male urban, 57% male rural, 60% urban female, 29% rural female (Maxwell et al. 2014) and a commitment to improving education for all. There is a higher achievement rate at school for females than males, but female progress into HE drops off, partially as a result of lack of flexibility in educational delivery and in the labour market. Female employment in academia reflects this, and although male/female teaching loads are apparently shared equally, research and service roles are strongly gendered in favour of males (Maxwell et al., 2014). The aspiration for sustainable and equitable socio-economic development is the first pillar of the Bhutanese national criteria to measure societal good.

### Transnational collaboration in the context of two distributed universities

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In common with RUB, the University of the Highlands and Islands (UHI) is also a geographically distributed, federated university. UHI is comprised of a central Executive Office and thirteen further and higher education colleges, and specialist research institutes, with campuses and regional study centres located across the Highlands and Islands of Scotland.

The two universities have been engaged in long-standing programme of collaboration that commenced early in the founding of RUB, the structure for which is partially based on the UHI model. The initial work undertaken involved research and knowledge exchange activities focused on analysing and responding to fundamental academic imperatives in the newly established RUB. Conducted between 2005-2008, and enabled through a series of participative workshops attended by over 200 staff at RUB, this early work supported the development of academic strategies and regulations, flexible curricula models, technology-enhanced learning, and conducting research and writing peer-reviewed publications (Rennie & Mason, 2007; 2008). Work in the latter area led directly to a small number of staff producing a peer-reviewed book 'Bhutan: Ways of knowing' (Rennie & Mason, 2008).

In addition to being geographically distributed federated universities, RUB and UHI also share a common interest in the further development of educational research, both generally and in ways that befit their own natures, subject specialisms, and wider missions within their communities and economies. For RUB, the further development of educational research is important to enhancing and expanding the nature and delivery of higher education nationally, and ensuring the robustness and relevance of this to their learners and the socio-economic needs of Bhutan. As a young, teaching-focused university providing HE across their geographically dispersed communities, educational research has particular relevance as an area of research development within RUB. A comparable rationale applies to the development of educational research at UHI, where there has been significant investment in people and resources since 2014 to grow educational research from an emergent area of research activity to one which is strategically important, and with a particular emphasis on digital education practice, learner transitions from FE to HE and employment, and teacher education (for which UHI has a regional remit).

Previous work (Gyantso & Maxwell, 2013) has recognised three main influences on the development of education in Bhutan: the previously noted influence of monastic education, the influence of norms and practices from the neighbouring Indian educational system, and the influence of western educational practices. While certainly there is a strong dimension in our collaborations to date whereby we are seeking to share experiences and practices from UHI with RUB, collectively we are mindful of the culturally biased and detrimental approaches discussed by McBurnie and Ziguras (2009) and including the wholesale replication of curricula, policies and processes, supported by the 'flying faculty' phenomena where by institutions send academics to provide (often time limited) interventions to replicate their own higher education practices in different countries and cultures. Cognate of this, from the outset we have co-developed our projects to mitigate against developing and implementing culturally inappropriate activities and outputs, and ensure appropriateness to culture and context. This extends to the current project we come on to describe, including the selection of phenomenography as a research method.

### Developing educational research capacity and culture

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Despite the field of educational research being well-established, the standing and development of educational research is contested and viewed unevenly within the HE sector and within many universities, with particular challenges facing institutions who are seeking to establish and build an educational research culture and capacity.

Cotton, Miller and Neale (2018) discuss the challenges arising from the perceived credibility of educational research at sectoral and strategic levels, including the mistaken assumption that educational research is simply about the refinement of practice in specific, individualised contexts and is therefore not as rigorous, intellectual or valuable as discipline research. With respect to the value placed on educational research at institutional and sectoral level, e.g. through the national Research Excellence Framework which assesses the quality of research outputs of UK universities to determine future research funding allocations, Cotton et al. (2018, p. 1629) contend that the aforementioned assumptions about educational research "becomes a self-fulfilling prophecy since it does not receive the same institutional support and funding as other research areas". The perceived value of educational research, and the status and support it is accorded or not, may also be influenced

by the compounding of, or a confusion over the difference between, the scholarship of teaching and learning (commonly termed SoTL) versus educational research (Cotton et al., 2018, Larsson, Mårtensson, Price and Roxå, 2020).

SoTL is primarily concerned with the study of and inquiry into teaching and learning, with a focus on enhancing practice through evaluative, reflective and dissemination activities, and as Larsson et al. (2020) observe it is a broad field of practice that encompasses scholarship relating to teaching and learning from across disciplines. SoTL overlaps with formal educational research, but is not by definition formal educational research. While Larsson et al. (2020) recognise the potential criticisms of SoTL, including inquiry-based approaches that may not be seen as methodologically rigorous in terms of educational research norms or conventions, they also recognise the contribution that both SoTL and educational research make to the underpinning and enhancement of effective teaching, learning and student support practices.

Being engaged in scholarly activity related to teaching and learning, and the provision of structured opportunities for this, can also provide an important platform for advancing educational research, particularly in universities seeking to nurture a culture of educational research in a developmental manner. In an institutional case study relating to the development of an educational research culture, key practical enablers identified by Ridley (2011) included support for the development of research skills including questionnaire design, conducting interviews, transcript analysis and observational approaches of classroom interaction as a starting point. Beyond this, Ridley identified the importance of staff being supported: to understand the wider conceptual, theoretical, policy and practice landscapes within which educational research sits and is conducted; in coming to know the research which exists already so as to “provide a reference point for an assessment of the originality of [one’s own] work”; and in having opportunities (within and across departments, institutions and cultures) to network, collaborate and share knowledge in developing and undertaking educational research (p. 286).

Mentoring becomes critically important in the context outlined above, and formal mentoring schemes and systems are amongst the institutional requirements that Heng, Hamid and Khan (2020) identify in their extensive consideration of factors that can influence academics’ research engagement in developing contexts and developing countries (their particular focus being on narrowing the North-South research divide). Heng et al. (2020) also identify a range of individual and institutional factors that contribute to developing research capacity and productivity in developing contexts. Individual factors include having an orientation towards research, clear motivations for engaging in research, research knowledge and skills, research efficacy, and time to spend on research. Beyond mentoring, other institutional factors include availability of funding, availability of leading and/or experienced research academics, appropriate opportunities to engage in research collaborations, and appropriate professional development provision.

## Overview of current study

During a further series of collaborative workshops held between RUB and UHI in 2018, which focused on exploring professional development and recognition opportunities relating to learning and teaching, scholarship and research, an immediate response was to consider the development of a longitudinal framework to build research capacity throughout RUB by enabling staff to learn and develop robust research skills through investigating their own practice. It is within this context, and that of shared educational research objectives, that the ‘Creating Helpful Open Research Tools for Engaging New Staff’ (CHORTENS) project was initiated (a chorten is a Buddhist shrine with particular cultural significance in Bhutan).

Supported by the Global Challenges Research Fund (GCRF), CHORTENS is a three-year research and development initiative running between 2019-2021, aiming to: (a) establish a baseline study of the conceptual and practical engagement of staff at the Royal University of Bhutan (RUB) with the issues of educational research on their own practices; (b) to develop and co-develop appropriate capacity-building interventions and support structures; and (c) to analyse the RUB staff responses and institutional development and to document the research processes.

In relation to the nature of the difference between educational scholarship (or SoTL) and educational research within the context of CHORTENS, and the above stated aims, the project sought to make a broad distinction between the two. Educational scholarship was viewed as utilising existing learning and teaching research, examples of best practice, and standard evaluative approaches (e.g. student feedback surveys) to inform educational practice, in addition to disseminating personal practice through informal sharing, presenting (e.g. at workshops) and reflective or report writing. Educational research was viewed as applying a particular methodological approach to investigating some aspect of learning and teaching, and collecting and analysing data in order to, or with an aspiration to, produce written research outputs for dissemination.

It is recognised that there is an overlap within these broad distinctions, and this perhaps reflects the difficulty in drawing a clear line between scholarship and research in learning and teaching (if indeed this can easily be done). However the above differentiation is a useful one in the context of CHORTENS and what the project is seeking to achieve.

The approach that has been taken is to hold an annual residential workshop with associated research activities over the duration of a week, facilitated by the UHI and RUB project team with participating academics from each of RUB’s nine federated colleges. The residential workshops to date (in 2019 and 2020) have been highly focused and interactive, involving the exploration of key concepts, ideas and approaches that lead into the co-design of tasks and projects to be undertaken between each workshop. The residential workshop format has also sought to directly address the aforementioned challenge of bringing colleagues from RUB together to develop practice, and to do so in a concentrated but substantial period of time.

The first workshop in 2019 focused on: critical reflection on current educational practices at RUB and UHI; exploring theoretical perspectives, concepts and models relating to learning and teaching and educational research; and exploring the principles of action research including the problem definition-planning-evaluation-reflection cycle (Lewin, 1946).

The substantive task for the participants was to then apply the principles of action research in designing their own educational research project focused on investigating and enhancing a particular aspect of teaching and learning. Working individually or in small groups, participants produced and presented an initial 'action research design' which was further refined through discussion in the wider group and with guidance from the core project team. There was a particular focus, in refining the designs, on addressing practical and logistical considerations relating to the scale and manageability of the projects, and data collection and analysis. The implementation of the research projects across the nine colleges of RUB, including initial data collection and analysis, was then taken forward between the 2019 and 2020 residential workshops.

## Methodology

The first residential workshop, and associated activities, also served the wider purpose of establishing the baseline study in objective (a) above. In order to establish the current context for and levels of engagement with educational scholarship research at the RUB, and to identify potential enablers and factors related to the further development of educational research at RUB, including between RUB and UHI, the research objectives of the CHORTENS project were to determine:

1. the perceived purpose and value of educational scholarship and research within RUB;
2. the extent to which existing educational scholarship and research in the wider field is informing learning and teaching within and across discipline areas at the RUB;
3. the nature and extent of educational scholarship and research being undertaken at RUB, including perceived challenges and enablers for engagement;
4. identifying the areas of learning and teaching practice where there is particular potential for new or further educational research activity within RUB to be scoped and taken forward;
5. identifying the potential foci for collaborative educational research projects to be undertaken between RUB and UHI, including benefits and relevance to the partner institutions and to other universities working in geographically and digitally distributed contexts.

Objectives 1 to 3 were the main focus of our baseline study conducted in year one, towards the end of the residential workshop once there had been the opportunity to explore key concepts and ideas pertaining to educational research. The baseline study took the form of a phenomenographic investigation, which involved conducting semi-structured individual interviews with eighteen RUB academics who had been chosen to participate in the CHORTENS project.

Ethical approval for CHORTENS, including data collection through phenomenographic interviews, was sought and granted through UHI. Participants in the baseline study were provided with a written and verbal briefing on the research dimension to the CHORTENS project, including how anonymised interview data would be used, before providing signed consent.

## Phenomenography

Phenomenography is "the empirical study of the limited number of qualitatively different ways in which various phenomena in, and aspects of, the world around us are experienced, conceptualised, understood, perceived, and apprehended" (Marton 1994, p. 4424). As a method for educational research, phenomenography developed from research in the 1970's that explored students' intentions and experiences when undertaking various academic tasks, including reading academic texts, and is notable for advancing much of the current understanding we have of the student experience of learning in HE, particularly with respect to 'approaches to studying' and 'deep learning' (Marton, Hounsell & Entwistle, 2005).

Phenomenographic research employs semi-structured individual interviews, focused around open-ended questions that allow the participant to reflect on and share their perceptions, conceptions and experiences related to the phenomena of interest. Within phenomenography it is the collective range of experiences and perceptions of the same phenomena, and revealing the qualitative differences between these through an iterative process of thematic analysis, that is of interest. The responses of each participant are not analysed and presented on an individual basis, but rather as part of a 'rich picture' that seeks to illuminate the range of ways the same phenomena is comprehended (Marton, 1994).

Phenomenographic research initially focused on the student experience of learning in HE, but has also been applied widely in investigating different dimensions of academics and practitioners experiences. This has included phenomenographic research focused on the different ways academics think about and approach their academic and scholarly practices (Trigwell, Prosser & Taylor, 1994; Trigwell, Prosser & Waterhouse, 1999), experiences of transitioning into becoming a university teacher (Akerlind 2004), variation in experiences of educational leadership (Martin, Trigwell, Prosser & Ramsden, 2003), and transitioning from classroom to online teaching (Smyth, Mainka & Brown, 2007).

Academics' conceptions of, approaches to and experiences of research have been the focus of a small number of notable phenomenographic investigations. This includes the study by Brew (2001) which identified four qualitatively different ways in which research was understood by senior research academics. The variations discovered were related to holding external or internal orientations to research activity and perceptions of positionality in relation to research. In relation to how research was perceived, qualitative differences related to the interpretation of research as: solving problems or answering questions; a process of discovering, uncovering or creating underlying meanings; a social market place for the exchange of knowledge, ideas and products; and as a personal journey of discovery (Brew, 2001, p. 280).

Young (2006) took a phenomenographic approach to exploring academic staff perceptions of differential status and rewards in relation to teaching and research, finding that teaching was perceived as being accorded lower status and with rewards in the form of tenure and promotion accruing to research, management and institutional administration. In addition, Dupin, Larsson, Dariel, Debout and Rothan-Tondeur (2015) present a more recent phenomenographic study concerning nurses' conceptions of learning to become researchers. This identified factors important to sustaining 'individual apprenticeship' in becoming research engaged, including modes of commitment (i.e. approaching research as a practitioner or researcher), the need for dedicated support (at individual and collective levels), and the validation of research in practice.

With respect to phenomenographic research that addresses academics' perceptions, conceptions and experiences specifically in relation to educational research, this seems to be an underdeveloped area. An extensive search of the literature did not yield any examples of this, or of phenomenographic research that has investigated academics' perceptions relating to the development of educational research within the context of new universities or developing countries.

## Participants

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CHORTENS has placed a particular emphasis on the inclusion of young or early career new staff, female academics, and early-career researchers in order to provide a basis for sustained capacity building in educational research at RUB.

Year one and two activities have involved a range of colleagues across these categories. However, specifically in relation to the participants in the year one phenomenographic baseline study, the eighteen participants (two from each of the nine colleges) comprised sixteen males and two females. The majority were early career, with three colleagues having been appointed to their first academic posts in the preceding year. The exception were the four colleagues from RUB's two education colleges, who had several years teaching experience and had conducted formal teaching and learning evaluations.

## Data collection and analysis

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The eighteen interviews were conducted by two of the researchers towards the conclusion of the year one residential workshop, using the same semi-structured interview schedule. This included open-ended questions related to: reasons and expectations for taking part in CHORTENS and the year one workshop; perceptions of benefits associated with participating; use of existing discipline related and educational research in teaching practice; experience of conducting discipline related and educational research; perceived benefits of engaging in educational research including potential beneficiaries; challenges to engaging in educational research; aspirations for their own action research projects; and the support that may be required to undertake their projects and to develop educational research across RUB going forward.

Interviews lasted up to forty minutes and were digital audio recorded for subsequent transcription. Data analysis was undertaken by one of the researchers who has previous experience of conducting phenomenographic analyses.

The iterative process of thematic analysis undertaken within a phenomenography starts with an initial organisation of responses under the broad themes explored in the interviews. This is then further refined to include new groupings of responses that are revealed through a reading and re-reading of the data, until the point at which all data is accounted for within 'pools' of responses that relate to the different aspects or dimensions of the phenomena of interest.

Qualitative differences in how the same aspects of the phenomena have been experienced are then discerned and given descriptive terms. This supports a rich analysis for which phenomenographies typically have two outputs. The first is a set of 'categories of description' relating to the different dimensions of the phenomena of interest, and the second is an 'outcome space' which represents or attempts to articulate (as a model or framework of some kind) the relationship between the different categories of description and which can guide further research and/or practice (Marton, 1994).

Within phenomenography, the use of open-ended questions and the process of analysis outlined above are intended to let the data, and the collective views and experiences of the interviewees, 'speak for itself' with minimal research bias.

To mitigate further against researcher bias, it is important that the researcher makes a conscious attempt to "bracket" existing knowledge and beliefs regarding the phenomena being investigated lest the direction of the interview and subsequent analysis be distorted (Ashworth and Lucas, 1998). This aspect of conducting a phenomenography has increased significance in the context of the CHORTENS project, and endeavoring to benchmark and take forward the development of educational research in ways that are informed by and appropriate to the culture, context and priorities of RUB.

## Findings

While space does not permit a full representation of the findings from a phenomenographic investigation in journal paper format, key insights and the main outcome of the investigation (i.e. the 'outcome space') can be provided.

### Benchmarking current engagement in research

The questions explored in relation to current engagement in research revealed an orientation towards scholarly informed practices with respect to keeping abreast of research and developments in respective disciplines. This was reflected in engagement with key journals and books, and social media: *"Besides looking at the textbook, I also visit blogs that people write about the subjects that I teach, as well, as I frequently, you know, watch talks like TED could be one whereby there are so many talks related to, you know, management concepts and all those things. So I try to grab some ideas from there"*. Emergent practices in research-based disciplinary teaching were also evident, with students being supported to undertake focused research tasks in specific aspects of their studies. This extended to examples where participants had begun to engage in discipline research activities and brought those into teaching: *"I keep myself updated with a research proposal coming up, related to the filter [system] I teach in the class. So, I implement that, and share it, share it with my students in the class"*.

Engagement in educational research had an identifiable dimension around evaluative practices: *"we have this student feedback that comes every... actually twice in a semester. So we look at the students' feedback, we have a rating system day, and then also some feedback that is focussed on the teaching [and] learning method and the assessment method. And looking at those feedbacks, we try to [make] changes and improvement"*. An emerging dimension also concerned engagement in educational research through formal professional development: *"I attended the post graduate diploma in Higher Education...and during that programme we have four modules, and one of the modules is action research, actually. So, I have done one action research based on, which is related to my teaching course only"*. Designing and conducting educational research in HE contexts did not extend beyond these particular dimensions.

### Perceptions and motivations

In exploring the wider perceptions and expectations regarding relating to engaging in educational research, and the importance of this, the phenomenographic analysis revealed intentional orientations concerned with enhancing learning and teaching practice through educational research, personal development as a teacher and educational researcher, sharing and cascading good practice, and also enhancing at an institutional level the provision, reputation and standing of RUB. Aspects of this, and the continuum of perceived benefits from practice, through self, to the institution, are illustrated in Table 1.

**Table 1** Perceptions on benefits of engaging in educational research

<i>"And by engaging with educational research it will only lead to new ways of engaging students. It will also lead to motivating students to learn. It will also enhance the capacity of the module tutors to recognise the areas of deficiency in the module... So, this type of research will basically help both the students and the teachers to work together, find possible ways to move ahead. To advance. And if they are facing some critical issues, problems, this kind of research... is going to give them possible solutions."</i>
<i>"Educational research? I think it informs you about your own practice. You also collect data... and then at the end you share the result. You know you share the result. And whatever you write and present, it's read by other people. And then it's critiqued upon, or it's built on. So you inform other people about best practices. And also, you know, your own philosophy."</i>
<i>"If many teachers are involved in doing educational research, that will give more credibility to the University, as an institute of higher learning. And the basic aim of education may not be to make our students get jobs. Will not be for them to find jobs, basically, but... to make students able to do well in whatever they may choose to do. They want to start their own business. Very good. They want to collaborate, and work on some projects... fantastic. But as of now, what we see is that the students are mostly looking for government jobs. So, if we can do some such research... it may lead to some policy modifications or changes, or new policy adoption. Ultimately, the university as a whole will be seen as an institution that promotes a learning of [a] higher standard."</i>

With respect to enhancing learning and teaching, there was a strong focus on factors relating to student motivation and engagement, for example: *"That sounds very broad, but generally, everybody seems to have [the] feeling [that the] students have a low level of motivation to learn because... they fail to read, some fall short of attendance, some they fail to submit their work on time"*, and *"most of the students in the classroom they are reluctant to speak up. So the students who are confident and who are active ... they respond to our questions. Whereas there are bright students who are just sitting idle..."*. Supporting students to improve their use of academic writing conventions, including referencing, was also to the fore.

The perceived expectations and benefits of engaging in educational research were reflected in the range of qualitatively different motivations that the academics expressed in relation to their own desire to engage in educational research and the CHORTENS project. Table 2 provides a condensed example of one of the final 'Categories of Description' that emerged in the conclusion of the thematic analysis. Here the analysis led to the identification of what were then categorised as 'intrinsic' and 'extrinsic' orientations. Within this particular example, there is evidence of intrinsic motivations related to learning and

developing new knowledge and skills relating to learning and teaching and research, and extrinsic orientations around applying educational research to changing practice and experiences, and around transformation of the university.

**Table 2** Motivations to engage in educational research

<b>Intrinsic orientations</b>
<i>"I did my undergraduate as Bachelors electrical engineer...And then, when I was recruited as an assistant lecturer, to teach the electrical engineers, I don't have any teaching techniques. Whatever teaching techniques that I use is just copied from what my tutors were doing. So, I thought that this will be an opportunity for me to learn something about our teaching pedagogies."</i>
<i>"So, far, in my college, we don't do any higher education related research. So when I came for this workshop I expected, I would be learning, actually, what are some relevant such practices, or some that could be relevant to higher education. That's what I expected...Some research skills, and some knowledge. How to go about research."</i>
<b>Extrinsic orientations</b>
<i>"Before I go to sleep I will think what are the things I did today? What are the things I did wrong? What are the things I did right? What am I going to do tomorrow? But in a formal way, I never did a reflection. Now if we have actually a method of writing the reflection...I think I'm going to improve upon what I usually do. And then this improvement in me is actually going to reflect as an improvement in the students, because those are the things that I'm going to deliver to the students. So, in the end, what we want to see is the improvement in the learning that happens in our students. And this can be accomplished mainly when we are improved."</i>
<i>"The top students, or the people, [their] first priority should be choosing RUB, rather than going India, or other countries. So now here, in this case, if there is research we conduct, and the faculty has a culture of conducting this kind of research, this is where I think the capacity of the faculty can be improved by time. The competency levels can also be improved. And then this competency of the faculties is being seen by others. That means that there is a potential that other top students may come into our colleges."</i>

In relation to the challenges associated with engaging in educational research, time to engage and time to engage alongside teaching was to the fore: *"...one barrier I can point out is that there's workload. We are getting more teaching hours. We have to take on more on teaching hours, and we are not getting adequate time for research. So, that is one barrier I experience, because I feel my primary responsibility is teaching, and then research. And that is actually creating this problem. And then when I am given more class, then I have more commitment towards teaching and then I spent less time in my research activity. But if we... if I get less class, and then more time, then, then I could actually carry out more research"*.

Availability of funding for educational research, and equity across the colleges with respect to availability of funding, professional development events including workshops and networking opportunities were also seen as barriers.

With respect to enablers, then in relation to 'the self' having a frame of reference for thinking about and conducting action research was perceived as central to being able to engage: *"The model that the two of you actually presented, is really easy for the beginners in research. I mean, for action research, getting started. This is something I learned very much. That I could actually now implement what actually I have learned. The simple steps. And anybody can do this research by going through these steps. This is what I actually understood, not necessarily get into the terminologies and technicalities of research"*. Other frames of reference related to the concepts of curriculum alignment, reflective professional practice, and 'deep learning', all of which were perceived as providing a locus for thinking about educational research.

The importance of sustained, longitudinal collaboration between RUB and UHI to build educational research capacity was also foregrounded through the analysis: *"And if we have workshops going on for the three full years, continuously, then I think this would really help the individual, the faculty as well...I believe that the faculty will share among the colleagues and that would be really helpful and that would widespread through the university....So that we have the connection from the previous [workshops], and you had the [same] contributions, you would have that link, and with that link, we could disseminate this idea among the faculty and that would really help us as a whole, at the Royal University of Bhutan"*.

The need for strong mentoring structures and interventions also emerged clearly, relating to mentoring within RUB, and of mentoring between the two universities, to support the action research projects to be taken forward, begin establishing an institutional foothold for educational research, and taking forward the subsequent activities of the CHORTENS project.

### **Towards a holistic understanding**

The 'outcome space' that synthesises and articulates the main findings of the benchmarking study of motivations and perceptions relating to educational research, and the development of educational research at RUB, is presented in Table 3. The outcome space summarises the various categories of description identified, and presents qualitative differences and

corresponding foci or factors in relation to: 'Motivations to engage' (intrinsic and extrinsic, with associated 'intentional focus'), 'Transformational aspirations' (learning and teaching, being an educational researcher, institutional change, aligned to associated 'dimensions of change') and 'Capacity building' (self and institution, aligned to enabling factors).

**Table 3** Motivations and perceptions relating to the development of educational research

<b>Motivation to engage</b>	<b>Intentional focus</b>
<i>Intrinsic orientation</i>	Development of knowledge; Development as teacher; Development as teacher-researcher
<i>Extrinsic orientation</i>	Development of learners and learning; Development of educational research culture; Development of the institution
<b>Transformational aspirations</b>	<b>Dimensions of change</b>
<i>Learning and teaching</i>	Student motivation; Breadth of learning; Classroom engagement; Academic writing; Student achievement
<i>Being an educational researcher</i>	Disseminating good practice; Contributing to the field; Supporting others to engage
<i>Institutional change</i>	Valuing and supporting educational research; Expanding engagement in educational research; Reputation and standing of university; Contributing to social and economic development
<b>Capacity building</b>	<b>Enabling factors</b>
<i>Self</i>	Developing a frame of reference; Peer support and networking; External and internal mentoring
<i>Institution</i>	Sustained interventions; Parity in professional development support; Reconfiguring teaching research balance; Distribution of funding

While it is common to use the 'outcome space' of a phenomenography to theorise about the links and potential relationship links between different categories of description identified, often to construct a hierarchical structure based on a potential inherent order of increasingly more sophisticated perceptions, as Brew (2001) observes this is not always desirable or meaningful to impose. In the case of the outcome space presented above, a relational order can be observed to at least some extent. However the main intention was to arrive at a rich, holistic picture of the current position, at the commencement of the CHORTENS project, with respect to educational research at RUB, the experience and aspirations of the participating academics, and the issues to be considered and addressed in seeking to further develop capacity for educational research. The outcome space represents a moment in time for RUB and the participating academics, and reflects (particularly in the 'Transformational aspirations' dimension) the enhancements to learning and teaching that are a priority for RUB. It also reflects several of the factors the previously discussed Ridley (2011) and Heng et al. (2020) studies found were required in developing research capacity and culture, although our own findings are specifically in relation to the development of educational research and what that also means with respect to learning and teaching practice and enhancement.

### Application of the outcome space

There was an immediate concern with how the findings of the benchmarking study, captured in the outcome space, could inform the progression of the CHORTENS project, including support for academics to develop their educational research practice, in the period following the year one workshop. To this end, a number of practical steps were agreed. The main objective for the academics was to conduct the action research projects they designed at the year one workshop in the intervening time between the first and second workshop, and to summarise their findings in formal research poster presentations that were circulated in advance of the year two workshop and then presented at that workshop.

This activity supported a further exploration of approaches to data analysis, and an exploration of the scholarship-research continuum (using an adaptation of Braxton, Luckey & Helland, 2002) to illuminate the key differences between educational scholarship and formal educational research. These explorations were structured to lead into the substantive activity of producing a synopsis for an educational research paper that would articulate in detail each of the research projects undertaken, including underpinning theory and literature, methodological approach, data collection and analysis, findings

and lessons learned. The second residential workshop also saw agreement to work towards the production of a jointly published book that would be produced in the period up until the third residential workshop to be held in 2021.

Drawing upon the findings of the benchmarking study, the second residential workshop in 2020 also featured a number of facilitated sessions to explore mentoring techniques and support mechanisms, and to reach joint agreement on the mentoring interventions that could be put in place following the second workshop so as to (i) advance the wider work of the CHORTENS project including to support women academics at RUB, and (ii) to support the academics in the authoring of their chapters for the proposed book. The mentoring arrangements subsequently introduced included an initial online 'mentoring circle' event that explored writing for publication, and connected RUB colleagues to UHI mentors who were experienced in writing and disseminating education and social science based research. Thereafter, online digitally facilitated mentoring was sustained to support RUB colleagues in producing their chapters including responding to peer review feedback and preparing the final manuscript. The mentoring arrangements put in place are described in full by Walker (2020) in one of the chapters for the forthcoming open e-book 'Bhutan: Ways of Learning and Teaching' (Rennie, 2020). This joint publication between UHI and RUB articulates both the ethos and approach of the CHORTENS collaboration, and also carries the chapters authored by the academics at RUB that have been involved in the project across years one and two. The educational research reported within those chapters address topics including 'the impact of class participation on the performance of students', 'motivating students to read instructional materials', 'the maintenance of a reflective journal as a tool for the active engagement of students' and 'improving the class test performance of mathematics through remedial classes'. The nine educational research projects reported in the book represent the first published educational research for the RUB authors, as well as a means to openly share and disseminate their educational practice and research within and beyond RUB.

### Conclusion and recommendations

As previously noted, we recognise the limitations and dangers of introducing research and educational interventions that are informed by the prevailing norms and perspectives of one culture without due consideration as to how they may challenge the purpose and integrity of education in the culture to which they are being introduced (McBurnie and Ziguras, 2009). As a consequence the CHORTENS project, as with previous collaborations between RUB and UHI, has been conceived and co-developed to ensure that we mitigate against this in the joint endeavor of building educational research capacity and collaborative educational research at, and between, both RUB and UHI. We have found phenomenography to be, and would recommend it as, a valuable qualitative research method for benchmarking and identifying perceptions, motivations, and potential challenges and enablers related to the practice and development of educational research in contexts where there are aspirations to further develop this. Specifically, our use of phenomenography provided not only a rich illumination of a range of perspectives and issues, it also pointed towards the approaches and interventions that may assist moving forward in the specific context of RUB. Adhering to the concept of 'bracketing' within the phenomenographic interviews and analysis (Ashworth and Lucas, 1998) also helped us to mitigate against and limit our own perceptions and assumptions in relation to the academics' experiences and perceptions concerning educational research, and also in relation to our existing knowledge and assumptions about RUB and the Bhutanese context developed through our previous experience and research.

Typically, in phenomenographic research, the concern is with the researcher bracketing or compartmentalising their own knowledge of the phenomena of interest, and of the field of research in which it sits within. In our work we have found that a cultural bracketing is also critically important within the research process, and the selection of a method that allows for such bracketing would be a recommendation for those who are researching similar issues or phenomena concerning the development of educational policy and practice within cultural contexts that are different to their own.

A critically important finding of the phenomenography related to the significance of helping academics new to educational research to develop a 'frame of reference' that would enable them to begin thinking about, designing and engaging in educational research. The fundamentals of action research were found to provide a useful frame of reference, and allow engagement in the educational research process that, with peer support including input from more research-experienced colleagues, could be refined iteratively. It is in this context that we should note a potential limitation to our research. We conducted the phenomenographic interviews towards the end of the first residential workshop and having already explored action research as a method for educational research. It is therefore not surprising that action research was identified as a useful 'frame of reference' for beginning to engage with educational research. Had we conducted the interviews at the very outset of the project we would have established a somewhat different understanding of the collective experience of and perceptions related to educational research, at least in relation to frames of reference. However conducting the interviews at the point we did enabled us to sense check that action research was viewed as a feasible and reasonable basis on which to collectively move forward with the development and implementation of the participants' research projects.

Although we appreciate this is not always possible, we found that having a concentrated but still substantial period of time to engage in collective professional development activity is beneficial to developing shared understandings and approaches to educational research practice and capacity building. This need not necessarily be in the form of residential workshops. However taking an iterative approach which combines task-focused face-to-face sessions with tangible activities to be taken forward in between such sessions, supported by follow-up online communication at key points, provided a structured, scaffolded pathway to move from initial exploration of key concepts in educational theory and research, through to the design and conducting of educational action research projects and on to the writing up and dissemination of those projects.

Mentoring support and interventions are essential, and working in transnational collaborative contexts the digitally distributed mentoring approaches that were subsequently devised and implemented following the second workshop (Walker, 2020), were pivotal to maintaining contact and momentum in the work RUB and UHI subsequently took forward to produce the forthcoming joint book (Rennie, 2020). In terms of immediate next steps, the CHORTENS project is now establishing new mentoring initiatives between women engineers at RUB and UHI, as an initial pilot in supporting developmental pathways for women academics at the respective institutions. Both this and the other mentoring interventions introduced will be a key focus for evaluation and research at the third residential workshop in 2021. Between now and the final residential workshop we will also be undertaking further phenomenographic analysis, this time related to interviews conducted with senior academic leaders during the second residential visit, and which explored their experiences of developing the university and their priorities for how the university should further develop going forward. This, we hope, will help to identify and subsequently inform future collaborations between RUB and UHI beyond the CHORTENS project.

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