Regional supervision collaboration in postgraduate design studies

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ABSTRACT: Teaching and research collaboration between institutions in different regions in the supervision of research students has become more important over recent years. There are significant advantages to collaboration, including the improved use of resources and better quality of supervision, achieved through collaboration with different experts. However, there are also some limitations and difficulties, particularly with the management of teaching and research activities. The requirements for, and trends in, regional teaching and research collaboration in supervising research students are reviewed in this article. Taking a joint-supervision scheme involving design research students in mainland China and Hong Kong as a case study, the author identifies and discusses the advantages and limitations of this kind of regional collaboration. Some possibilities for further development and research that may enhance regional collaboration are also identified and considered in this article.

INTRODUCTION

The quality of graduate research studies (also called postgraduate or higher level research studies in Europe) has received increased attention in recent years [1-3]. In addition to the quality of student intake and the planning and administrative management of graduate programmes, the quality of supervision is also an important and red-hot issue [4-9]. Over the past two decades, teaching and research collaboration in the supervision of research students from institutions in different regions has become a new trend in higher education. There are significant advantages to such collaborations. For example, institutions can use their teaching and research resources more effectively and establish additional collaborative networks. Supervisors can benefit from a wider scope and richer experience in their student and project supervision. Supervisors and students can gain more tangible research outputs, including joint publications. Students can also gain more research experience in and from different cultural and social contexts.

Nevertheless, there are some limitations and difficulties with this kind of collaboration. For example, it is not easy to manage teaching and research activities effectively due to the educational, social and cultural differences in different regions. Geographical constraints are another key limitation to providing instant and continuous supervision. Sometimes, the roles of supervisors are not easily or adequately defined. Disagreements can also occur regarding conflicts of interest and the benefits accrued from research outputs.

Nevertheless, many researchers believe that regional teaching and research collaboration in supervising research students is both, a necessary and useful trend. A joint-supervision (or co-supervision) scheme involving design research students in both mainland China and Hong Kong as a case study is presented in this article. The author identifies the advantages and limitations of this kind of regional collaboration, and also discusses some possibilities for further development and research that may enhance regional collaboration.

NEED FOR AND TRENDS IN COLLABORATION

Changes in the nature and scope of research studies indicate both a need for, and a trend towards, regional collaboration in teaching and research. Due to globalisation and the increasingly close relationships between different regions, more students (and their supervisors) are seeking to conduct comparative studies on regional matters. This situation means that a single supervisor in a particular place is unable to provide sufficient supervision for a student. Joint supervision by supervisors from different regions is, therefore, appropriate and effective [4][10].

In the same way, there is a trend for universities to expect more inter-regional collaboration in research (for justification and success factors related to inter-institutional collaboration, see also [11]). This kind of collaboration can generate more comprehensive findings, together with wider and more sustainable outcomes. It is also the reason for increasingly large-scale research funds provision for the economic and educational collaborations that have emerged among different countries and regions since the 1990s. While research students are an important part of the manpower necessary to carry out research projects, regional joint supervision of research students' studies is both the means of and catalyst for fulfilling this need.

In addition, an increasing number of universities have noticed that the resources provided or secured for the development of teaching and research are not always sufficient, despite frequent claims by governments that they are increasing budgets for higher education [2][10-15][16][17]. In particular, many universities in recent years have wanted to expand graduate level research programmes to produce graduates at higher levels, who will generate higher quality research outputs. Exploring *new* resources is a critical strategy for the sustainable development of universities. Among the many possible ways of accessing new resources, one is to share resources with other universities and, thereby, maximise the use of available resources [7].

CASE STUDY

Since the early 2000s, several joint-supervision schemes have been implemented in Asia, including those in Singapore, Japan, Korea, the Philippines, Thailand, Taiwan, Macau and Hong Kong. One of these regional joint-supervision schemes was initiated by the Hong Kong Polytechnic University (PolyU) in Hong Kong. The scheme encourages and supports regional joint supervision between supervisors in mainland China and Hong Kong. A potential supervisor at the PolyU can apply for university support to work with a supervisor in mainland China to supervise a research student who spends most of his/her time there. The student is required to spend a significant period of time (e.g. one year) in Hong Kong carrying out his/her research. When the scheme was first implemented, joint supervision was limited to collaboration between the PolyU and a small number of universities in mainland China. Several years later, the scheme now extends to most of the interested universities in China that provide good standards for working with the PolyU.

The School of Design at the PolyU has participated in the scheme, allowing design research students in mainland China to apply to carry out part of their research studies in Hong Kong. Supervisors in mainland China and Hong Kong jointly supervise the students. The scope of design disciplines was rather narrow when the scheme was first implemented, but since the mid 2000s, students have come from a wider range of disciplines, including environmental design, industrial and product design, and interactive design.

Between 2006 and 2009, a case study on the joint supervision of design research studies reviewed and identified the advantages of, and limitations to, the joint-supervision of teaching and research. The study was expected to identify possibilities for development and further research on the topic. As the number of students and supervisors involved in the joint-supervision scheme was relatively small compared with other programmes, a qualitative and in-depth study was the most appropriate approach. The research methods included:

- A review of the scheme, with a brief comparative review of other similar schemes in Hong Kong.
- In-depth semi-structured interviews with the supervisors involved in the scheme, covering planning and arrangement, process, and output and experience ($N_{supervisor} = 4$). The questions were about preparation and document matters before supervision (and application), supervision process, evaluation matters, and outcomes of the supervisors and students.
- In-depth semi-structured interviews with the students involved in the scheme, covering overall change of the study, process, and output and experience ($N_{student} = 4$). The questions were about application for the scheme, the study process during the joint-supervision period, evaluation matters, and outcomes of the supervisors and students.
- A review of the research outputs of the supervisors and students involved in the scheme.

FINDINGS AND DISCUSSIONS

Because the findings were based on a case study with a small number of informants, the results should not be considered applicable to an entire generation [18-22]. However, the findings are expected to provide inspiration for further attention and action, and should provide directions for further investigation that could improve the quality of both the supervision and the outputs of design research students.

Advantages

- The universities and departments involved in collaboration can establish more practical collaborative networks.
- The universities and departments can use their teaching and research resources more effectively. This is particularly important, given that there are significant discrepancies between the resources available in different regions (e.g. available grants, amount of education investment, living standards).
- The universities and departments can form stronger alliances or teams for both teaching and research. This type of

collaboration generally confers advantages and increases support when applying for national and international competitive grants.

- The universities and departments can gain experience and support for exploring and developing new teaching and research directions. This situation has become more significant in recent years, because comparative research has become more important and globalisation has made relationships between regions more coherent.
- The universities and departments can generate opportunities and have strong incentives to explore and develop new teaching and research directions.
- The universities and departments can begin collaborating by participating in a trial at a relatively low level and small scale, and then establish higher levels and larger scales of collaboration. This situation is important for inter-institutional collaboration, because universities in different regions are generally constrained by their individual regional contexts and resources for teaching and research.
- The universities and departments can establish a better quality assurance system for teaching and research by harnessing their collective strengths and working together.
- Supervisors can gain wider scope and richer experience in research and project supervision.
- Supervisors can maintain a better quality of supervision in teaching and research with the use of up-to-date approaches, methods and tools, and by exploring new directions.
- Supervisors can gain more tangible research outputs, including publications, which also generates increased opportunities and greater incentives for supervisors to be more active in research.
- Supervisors can explore and establish further collaborations with researchers in other universities.
- Supervisors have an opportunity to work collaboratively or to exchange teaching and research activities with other institutions.
- Students can benefit from research experience in different cultural and social contexts.
- Students have increased opportunities to visit other places that can enrich their research experience, particularly by working with supervisors and students in different social, cultural, and environmental contexts. In the design disciplines in particular, some resources and opportunities are only available in a few locations, which students must visit if they want to carry out specific research. For example, the production industry is declining in Hong Kong. If a student wants to research the design production industry, one of the best places to carry out such research is mainland China, where the production facilities of many international corporations are located.
- Students can gain more tangible research outputs, in particular by co-authoring publications with experts (supervisors) from a wider academic arena.
- Students can explore and establish collaborative networks with researchers and students in other universities. Students themselves often motivate and help other students to seek opportunities for establishing their own networks.
- Students can explore and establish connections to further their studies and research at other universities, for instance in postdoctoral research.

Problems and Limitations

- The planning, reviewing and approval processes often require collaboration. This can often be time-consuming and involve various difficulties in different areas and at different levels, due to the concerns of different regions, universities and departments. These administrative procedures sometimes hinder the operation of well-intended plans and objectives [6][11].
- Among the various considerations, the issue of resources is most likely to become problematic. The situation becomes more serious, if a clear plan for resource management has not been well defined from the beginning. However, some professors and researchers in China are quite traditional, and are not willing to go into detail at the beginning of collaboration, particularly regarding the arrangement of *money*. However, even after a long planning and discussion process, many joint-supervision schemes have not been realised due to long and complicated discussions about resources.
- Different universities and departments may have their own plans and views on teaching and research directions. It is sometimes difficult to forge an alliance or further a collaboration network to take advantage of the opportunities generated by joint supervision.
- Sometimes a supervisor may have his or her own expectations about joint supervision with a supervisor from another university, which may not be what his or her own university intends or plans. Such differences in outlook can sometimes cause serious conflicts and arguments in the university, department and/or among the faculty.
- A joint-supervision project that lacks a good plan for implementation and management at the outset can sometimes produce poor results, which can result in a negative, rather than a positive outcome. In such cases, further collaboration is likely to be hindered and discouraged.
- Different universities and departments generally have different educational objectives, approaches and quality assurance systems. For example, the examination process for PhD study differs between Hong Kong and mainland China. Although a student registered at a university usually follows the regulations of that university, such differences can still cause problems for the student's research work. Sometimes this situation makes students feel confused about their direction and approach to research.
- It is not easy to ensure the effective management of teaching and research activities in the context of the educational, social and cultural differences among different departments, universities and regions (which operate

under different educational policies). More seriously, these differences sometimes generate conflicts that have a negative effect on the collaboration, together with difficulties and embarrassing consequences for students trying to make decisions in the context of the different views of their supervisors.

- Geographical constraints are a key limitation for instant and continuous supervision, particularly if supervisors are in distant locations with differing time zones.
- The quality of supervision may not be guaranteed because of the difficulty of maintaining consistency between different approaches, levels and requirements for both supervision and student performance. Some students prefer to concentrate on the easy (and approachable) tasks required by one supervisor over different tasks required by another supervisor. Because students are always the main medium of communication between supervisors, supervisors do not always notice such inconsistencies in time to correct them.
- It is sometimes difficult to define the roles of supervisors. A few arguments have occurred due to conflicts of interest in, and benefits from research outputs.
- Supervisors may change their overall plans during the course of the collaboration. For example, a supervisor may leave his or her workplace or take on other time-consuming work. Such situations affect the original plan and quality of supervision. If the changes are not handled well, the situation may become serious.
- Credit for outputs that arise from jointly supervised research is an important issue, which may generate serious negative results and cause bad relationships among universities, departments and supervisors. Chinese tradition and culture may be one reason why such arrangements are not well identified at the beginning of the collaboration. However, such issues generally cause problems at the end of the process.
- Students can easily find themselves under pressure arising from the different and sometimes contradictory expectations and requirements of different supervisors. Supervisors may ask a student to finish different tasks or work with a different emphasis.
- Students come under increased pressure, when additional supervisors impose further requirements.
- If students are required to stay in different places to carry out their research, the difference in living standards can often cause difficulties for students, who come from a less affluent location.
- Students may face difficulties in carrying out research, when they are away from their university. They may become homesick, or feel uncomfortable due to the social, cultural and environmental differences.
- Some students may quit their original study (e.g. leave their original supervisor), because they have identified a new and better opportunity with their new supervisor. This situation may have serious consequences that can compromise both continuity and further collaboration. Negative outcomes can sometimes create a ripple effect that may damage future collaborations and relationships between universities, departments and supervisors.

Possibilities

Based on the advantages, problems and limitations identified by the joint-supervision case study, some possibilities and directions for development and further research can be identified. The issues that have been identified affect each university, department, supervisor and student, whose concerns are linked although they sometimes differ. Cutting across these individual concerns are the larger conceptual issues of policy, implementation and management.

What follows is a checklist addressed to those, who are planning and implementing effective jointly supervised research.

- Is there an effective planning, review and approval process?
- Is there a resource management plan that identifies the necessary resources from the start?
- Is there a collaborative alliance that will lead to a growing collaboration network that does not impinge on the particular practices, preferences and considerations of individual universities, departments and supervisors?
- Are the incentives and expectations of particular universities, departments and supervisors consistent or at least without conflicts?
- Is there a plan to ensure that the outcomes of individual joint-supervision do not cause negative and unfavourable consequences to further collaboration and relationship among the universities, departments, supervisors and students involved?
- Is there a mechanism to eliminate or at least reduce students' confusion during the joint-supervision process?
- Are the overall plan, implementation process and requirements for students consistent?
- Is there an effective management process that addresses planning, implementation and quality assurance?
- Is there a process to reduce or eliminate conflicts and negative effects at the level of policy, implementation and management?
- Is there a practical method that will reduce or eliminate supervision difficulties, such as geographical constraints?
- Are there good communication channels between supervisors, and between supervisors and students?
- Are the specific roles of different universities, departments and supervisors agreed upon and documented unambiguously? Are these roles well and clearly defined at the beginning? If there are unforeseen problems, what mechanisms are in place to ensure the quality of supervision roles?
- Are there mechanisms in place to ensure the consistency of supervisors' requirements for students' research?
- Is there a plan to ensure consistency in the running of further joint-supervision activities at the end of the current research students' studies?

- If there are changes (such as a supervisor leaving), what actions will be taken to ensure the quality of joint supervision?
- Is there a well-defined credit acknowledgment system for joint supervision that takes into account any differences in social, cultural and educational matters?
- Are there measures to ensure that joint supervision has a positive effect on students' research?
- Are there specific arrangements that address the needs of students, who have to conduct research in a different location or university, in particular with respect to differences in social, cultural, environmental and financial matters?
- Are there safeguards against the joint-supervision process having a negative personal effect on students?

The interviewees stated that the policy, implementation and management of joint-supervision are not static, but are constantly changing due to societal change and educational development. For example, few people considered regional joint supervision of design research ten years ago. Design research programmes were not popular at that time and developments in design education tended to follow individual and isolated directions [11]. Moreover, design educators and students could not see the advantages and possibilities of regional research collaboration and joint supervision. Over the past ten years, all this has changed. Many educators now believe that without regional joint supervision, design research in China cannot advance in a timely and successful way that will produce design research outcomes that are highly regarded by foreign countries.

CONCLUSION

Teaching and research collaboration in supervising research students among institutions in different regions has significant advantages for the development and achievement of design research. Collaboration offers advantages for policy, implementation and management. The overall education system - universities, departments, supervisors and students - can benefit from joint supervision. Due to its multi-disciplinary nature, design research in particular needs input and support from a variety of sources, and specifically from different supervisors. Because cost-effectiveness is increasingly an issue in education, joint supervision can maximise this aim in terms of quantity and quality.

However, the problems and limitations of joint supervision derive from the advantages that are expected from it. Over-confident and excessive expectations can lead to inadequate planning, implementation and quality assurance processes. In such cases, joint supervision may incur drawbacks that destroy the original goals and generate negative results. For example, without carefully identified roles and pre-agreed sharing of credit among supervisors, joint supervision may lead to bad relationships and disagreements, not only among supervisors and students, but also at departmental and university levels.

Responding to the advantages, problems and limitations discussed above, as well as some possibilities and directions for development and further research are identified in this article. These possibilities and directions aim to realise better organised joint-supervision activities through better planning, clearly stated goals and objectives, well defined roles, establishing ways of sharing credit, and managing the implementation and quality assurance processes. Good, consistent management that may lead to further opportunities can maximise the advantages and minimise the problems and limitations in the joint supervision of design research students in a continuously changing society.

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BIOGRAPHY

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