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Action-oriented research for master's level dissertations: an opportunity to improve practice

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Abstract

As academic staff become familiar with the qualifications framework of the UAE and work towards demonstrating alignment between learning outcomes, teaching/learning strategies and assessment, this is an opportune time to revisit traditional masters' dissertation guidelines and methodologies to ensure students demonstrate mastery of a topic via achievement of a capstone project. Such a project is an opportunity to demonstrate both a contribution to knowledge and an improvement in practice.

This discussion document takes the view that formal master's level programs can miss this opportunity to use rich experiences of working professionals to produce knowledge and learning. An action-oriented approach to research is proposed as contributing to level 9 learning by its capability of generating practical learning and producing actionable knowledge. One example is outlined of a successful action-oriented project in the UAE, which formed part of a master's program.

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1. Introduction

Healthcare professionals generally undertake master's programmes part-time as they try to balance work and study commitments. They demonstrate the key characteristics of adult learners, as described by Knowles et al. (2005):

- The need to know (Why do I need to know this?)
- The learners' self-concept (I am responsible for my own decisions)
- The role of the learners' experiences (I have experiences, which I value, and you should respect)
- Readiness to learn (I need to learn because my circumstances are changing)
- Orientation to learning (Learning will help me deal with the situation in which I find myself)
- Motivation (I learn because I want to)

In many respects universities have an ideal student profile, ready and willing to learn because learning will help deal with situations they find themselves in practice. Taking on a postgraduate course at level 8 and 9 on the QF framework means that they need to demonstrate cognitive learning of application, analysis, synthesis and evaluation, as per Bloom's taxonomy (Bloom et al., 1956). In addition students are expected to demonstrate skill and competence at master's level. Without implementing a research project it is difficult to assess research competence.

2. Aim

The aim of this paper is to support and recommend an action-oriented approach to research at master's level. Such an approach can help demonstrate alignment with competence in carrying out research that can affect and improve practice.

3. Action-Oriented Research

Traditionally, research addresses the audience of the community of scholars, and applied practical research addresses an outside audience in reports and recommendations. Typically the former starts with a research question or topic of interest, proceeds with a literature review, data collection, analysis and recommendations of the findings. In contrast, action-oriented research begins with an opportunity for improvement or experienced problem in an organizational setting and proceeds via actions taken to plan, implement and evaluate the improvement. This results in personal and organizational learning. It is therefore practitioner-centered research which is context based so that any new knowledge created comes from the wider community of practice. Action-oriented research can be located in a critical theory paradigm or in pragmatism. As with other research this is determined by the context of the study.

The most common action-oriented research, as defined by Reason and Bradbury (2001) is: "a participatory, democratic process concerned with developing practical knowing in the pursuit of worthwhile human purposes,

grounded in a participatory worldview which we believe is emerging at this historical moment. It seeks to bring together action and reflection, theory and practice, in participation with others, in the pursuit of practical solutions to issues of pressing concern to people, and more generally the flourishing of individual persons and their communities." (p.1)

Having developed from the work of Kurt Lewin, it involves cyclical processes of diagnosing a change situation or a problem, planning, gathering data, taking action, and then fact-finding about the results of that action in order to plan and take further action (Lewin, 1946). It is a suitable method for postgraduate students who are integrating their learning with the workplace and improving their management and leadership competencies in researching an action, which will both benefit the organization, and develop them personally as innovators and negotiators.

According to Bourner and Simpson (2005) there are generally four ways of knowing: (i) through reason, 'i.e. through deduction or logic'; (ii) via received knowledge, 'i.e. knowledge that is received from other people through words…'; (iii) through empiricism, 'i.e. knowledge gained through sense-based data'; and (iv) through introspection, 'i.e. knowledge from an inner source'. Coghlan and Pedlar (2006) highlight that most academic dissertations require demonstrated competence in the first three of these, whilst action oriented research equally values the fourth way of knowing and the knowledge produced thereby. This is because of the primacy of action and of learning from experience, which leads back to Revans' (1980) central tenet of co-locating learning and practice. This is reflected in his motto of 'no learning without action' and 'no action without learning'. The quality of the project is influenced by the systematic capturing of events, the dynamics that occurred during the project, the content and process of dialogues, the methodological implications triggered and the outcomes which they generated (Coghlan & Shani, 2013).

4. Introducing a 'Resident as Teacher' Workshop to Residency Training at Sheikh Khalifa Medical City

4.1 Objectives of the Project

We set out to introduce a change to the basic curricular design and local culture of medical education by enhancing the residency-training curriculum with formal instruction on how to teach. The intent of the change was to empower residents in their role as teachers by giving them a 'resident as teacher' module, enhance the learners overall learning experience in clinical practice, and improve patient satisfaction.

The Family Medicine Residency Program at Sheikh Khalifa Medical City (SKMC), Abu Dhabi, was established in 2007. The program's capacity of 10 new residents every year was filled through a merit-based, countrywide matching system assisted by the National Residency Matching Program (NRMP). The residents are young Emirati medical graduates who are inspired to exceed and excel by numerous ambitious and enthusiastic government

initiatives that devote vast financial resources to revamp the healthcare infrastructure with a focus on building excellence in the future workforce.

The project's objectives were to:

- Develop and introduce a module into the residency program that will train residents how to teach in SKMC, and empower them in their role as teachers.
- Enhance the learners overall learning experience in clinical practice after residents receive training on how to teach.

4.2 Framework Guiding the Project

It was recognised that in introducing a module for residents that the attitudes and abilities of the faculty would require buy-in. In reviewing the literature in managing such projects it was decided to draw on the change models guided by Kotter (1996), Lewin (1946) and the model adopted by the Health Service Executive (HSE) in Ireland. The change model chosen to guide our project was that developed by the HSE. This model was developed in 2008 to improve the experience of patients and service users by providing a consistent and effective approach to change across the Irish healthcare system. The model focuses on engaging all stakeholders to contribute to the change process taking into account that change is not linear, but rather a continuous and adaptive process where all the elements are interrelated and can influence each other. The model is dynamic, focuses on a whole system approach, encourages collaboration as its main core principle, promotes organizational learning with regular feedback and evaluation, emphasizing sustaining long-term change to improve the effectiveness of the organization (HSE, 2008).

The HSE model comprises 4 essential stages of initiation, planning, implementation and mainstreaming and includes questions, resources and templates on how to implement the change for each stage. The process is very concise, detailed and takes into account the possibility of resistance so allowing the user (in this case, the writer, who was leading the project in SKMC) to return to any stage to renegotiate, allowing recovery without losing momentum. We initiated the change process by identifying the drivers for change, developing a power interest grid and conducting Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis to highlight the urgency and feasibility of the project to a multitude of stakeholders.

5 Planning the detail of the change

The project received the necessary approvals through layers of governance and leadership in SKMC including the Program Evaluation Committee, Graduate Medical Education Committee, Medical Executive Committee, and relevant Abu Dhabi Government bodies. The plan was subsequently rolled out to secure buy-in and commitment on the part of the immediate stakeholders including the faculty

A procedure to guide the development of resident teaching skills was put in place detailing that the ‘Resident as Teacher’ module would become a permanent item in the family medicine residency program introductory course which is delivered yearly for the new residents during the first month of their training. On reviewing the course design, the Program Evaluation Committee additionally suggested that faculty should also receive training on the adult learning principles, one-minute preceptor (Neher et al., 1992) and giving effective feedback.

In response to this suggestion three additional steps were added to the change project. The first was to invite faculty members to the ‘Resident as Teacher’ module Details of this module are contained in Table 1 below. The second was to distribute a Clinical Supervision Handbook, which was prepared for the ‘Supervising Healthcare Professional’ module of the Masters in Leadership in Health Professions Education program. The handbook included five micro skills (Neher et al., ibid.) as well as tips on giving effective feedback. Third, a web-based resource called ‘Teaching Physician. Org.’, a comprehensive program that provides faculty with on-line videos, tips, answers to frequently asked questions, and links to information on precepting topics, including micro skills and feedback which would be purchased for all family medicine residency faculty.

Subsequently, a monthly clinical teaching unit schedule was prepared and published and essentially rotated a member of the faculty who would supervise the teaching methodology with a senior resident who will be developing their teaching skill and a junior resident who will be at the receiving end of the experience. The bi-annual family medicine continuity clinic evaluation was revised to include resident supervision and teaching. This is to allow faculty to evaluate the residents semi-annually on their supervision and teaching skills.

Table 1 'Resident as Teacher' Workshop

Course Title:	**Residents as teachers- "Teaching residents how to teach"**
Course objectives- By the end of the workshop participants should be able to:	1. Understand the importance of the role of residents as teachers 2. Become familiar with the principles of adult learning 3. Know how to use the 5 Micro skills to teach 4. Give effective feedback
Target Audience	All residents of the family medicine residency program
Setting	Al Bateen Family Medicine Center Auditorium
Constraints	
Number of Students	40 Participants (auditorium capacity)
Date	Tuesday 18th June
Total Hours	2 hours
Educational Background	None Required
Resources:	
Funds	1000 Dhs (Printing of clinical supervision handbook)
Personnel	Program Coordinator
Equipments	Computer, Overhead projector, Speakers
Participant Assessment	1. End of workshop quiz 2. Pre and Post workshop self assessment questionnaires 3. Monthly evaluation of residents by their students 4. Bi-annual faculty evaluation of resident on supervising and teaching skills 5. Monthly feedback from patient satisfaction questionnaire
Program evaluation	1. Pre and Post workshop questionnaires 2. End of workshop quiz 3. Monthly evaluation of residents by their students 4. Bi-annual faculty evaluation of resident on supervising and teaching skills 5. Monthly feedback from patient satisfaction questionnaire

6. Evaluation and Discussion of Findings

We chose Kirkpatrick's (2006) four-step evaluation model to assess the results of our project (Table 2). These included pre and post module questionnaires for students and faculty, a quiz, student and faculty evaluations and a patient questionnaire to complete level four evaluation.

The pre workshop questionnaires demonstrated that residents were enthusiastic about teaching although none had received prior training. The majority were not sure what was expected of them regarding teaching and confidence was average. Results suggested that residents demonstrated improved preparation, enthusiasm and confidence to teach. Residents also felt they were more aware of what was expected of them as teachers and felt less anxiety towards teaching.

The post workshop questionnaire also evaluated the resident's perception of learning after receiving the instruction. Almost all the residents reported a huge amount of learning at the completion of the workshop.

Table 2 Kirkpatrick's Levels Applied to Change Project

Kirkpatrick Level	Outcome Evaluated	Objective Addressed	Evaluation Tool
1	Reaction to the program	• Introduce a structured module on teaching residents how to teach in SKMC residency programs • Empower residents in their role as teachers after receiving a residents as teachers module	1. Pre and post workshop questionnaire
2	Attitude, knowledge and skills change		1. Pre and post workshop questionnaire 2. Quiz
3	Behavior Change	• Enhance the learners overall learning experience in clinical practice after residents receiving training on how to teach	1. Student questionnaire 2. Faculty Evaluation if Residents
4	Resulting change in organizational practice, change among the participants' learners, patients.	• Enhance the learners overall learning experience in clinical practice after residents receiving training on how to teach • Enhance the residents communication skills using residents as teachers training to improve patient satisfaction	1. Student questionnaire 2. Patient questionnaire

The quiz was announced at the beginning of the workshop to drive the residents to focus and learn more during the session. The quiz consisted of ten questions that were based on the content of the workshop. Residents were split into three groups of five and one group of six. Subsequently each group was given a buzzer. Questions were asked and the first group to buzz would be allowed to answer. The final winning team was given a prize. Residents were quickly able to answer the questions and this made the end of the workshop more enjoyable for the residents.

The post-workshop questionnaire additionally allowed residents to write comments and suggestions. Results included the following comments:

- "Looking forward to practice what was learned today"
- "More time for the role play"
- "The videos were very good and informative"
- "I am more confident"
- "The idea of the buzzer was really fun"
- "More videos"
- "I am going to try the one minute preceptor"

The 'Resident as Teacher' project is essentially about change. After careful searching of the literature, followed by implementing an improvement in practice, an essential concept in graduate medical education was introduced successfully into a program. The project has a far-reaching impact on the learning experience of the residents, the effectiveness of the faculty and safety and quality of patient care.

7. Alignment with Qualification Framework Emirates (QFE)

The QFE (Commission for Academic Accreditation, 2012: 4) guidelines to writing learning outcomes states that

> The framework introduces a new approach to the meaning of a qualification in that it recognises learning outcomes – what a person with an award knows, can do and understands – rather than content or time spent on a programme.

Taking on a postgraduate course means that this course is located on a specific level on the QFE framework. Each of these levels is defined by a set of learning outcomes, which are categorised into three strands (Table 2), knowledge and skill, and competence. QFE further divides competence into three sub-strands, autonomy and responsibility, self-development and role in context, which make up the framework. It focuses on program learning outcomes, which need to be addressed. Without implementing a research project it is difficult to assess research competence. This paper argues that an action-oriented research is the optimal way to assess these learning outcomes.

Table 3 Focus of the learning outcomes under knowledge, skills and competence (Commission for Academic Accreditation, 2012).

Strand	Sub-strand	Description
Knowledge	Breadth	How broad is the learner's knowledge?
	Type	What characteristics and quality of knowing has the learner engaged in?
Skill	Range	What is the breadth of the physical, intellectual, social and other skills acquired by the learner?
	Selectivity	How does the learner select the skills learned to address a range of problems? What is the nature of the complexity of the problems and how does the learner engage with them?
Competence	Autonomy and responsibility	How does the learner demonstrate the taking of responsibility personally and in groups? How does the learner deploy skills acquired in managing interactions with others and working on their own?
	Self-development	To what extent can the learner operate in new environments, acquire new knowledge and skills; and assimilate these to their existing body of knowledge and skills?
	Role in Context	Can the learner apply/deploy their knowledge and skills in a range of relevant contexts?

An action-oriented dissertation is certainly well equipped to assess all strands above.

8. Conclusion

This paper suggests that formal master's level programs can miss this opportunity to use rich experiences of working professionals to produce knowledge and learning. An action-oriented approach to research is proposed as contributing to level 9 learning by its capability of generating practical learning and producing actionable knowledge. Based on this premise one example of a successful project in the UAE is outlined.

For too long traditional scientific research has abounded, leaving little opportunity for the social sciences to influence this academic patch. This has created a closed paradigm of one best way. However, with the need to interact and engage with the QFE the time is right to open up opportunities to introduce action-oriented research, which will encourage leadership

development of our graduates. The importance of the dissertation as a capstone of the master's programs suggests the need to make this a meaningful project which will help develop many competencies in the learner.

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