

Good teacher education – an exploratory study

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ABSTRACT

Good or effective education of prospective teachers in traditional higher education settings seemingly differ from educating them in Open Distance Learning (ODL). The literature was reviewed with reference to 'good teacher education' in traditional higher education and that in ODL contexts. Content analysis was done with the responses to two open-ended questions, e-mailed to staff members of the Department of Teacher Education in the College of Education at an ODL institution, namely 'What is good teacher education?' and 'What is good teacher education in ODL?' Since the researcher is part of the College of Education, she made use of convenience sampling. In comparing literature with the empirical findings it seems that good teacher education contains many of the same elements in ODL and traditional higher education settings. The context in ODL teacher education is different, but all student teachers need particular generic skills and competences. Interactive digital communication technologies are, however, more extensively used in ODL. Recommendations on how teacher education in both settings can be improved are made.

Keywords: digital technologies, good teacher education, higher education, social media, teacher education

INTRODUCTION

According to Perraton (2010) in a report on teacher education for the Commonwealth of Learning, the world needs more effective teachers in the classroom. There is a shortage of teachers worldwide; teaching methods are in some instances old fashioned; and teachers in practice are often unqualified for the job (Perraton, 2010). Although countries in Sub-Saharan Africa have a greater need for more well-trained teachers, there is also a shortage in many western countries such as Ireland, Spain, Sweden and the USA (Lindqvist, Nordanger & Carlsson, 2014). Teacher training institutions worldwide, thus, have a responsibility, not just to train more teachers, but to give good or excellent teacher education and training to prepare student teachers for practice.

Ball and Forzani (2009) quote Grossman et al. (2009) in discussing effective education in higher education institutions in general. They are all in agreement that good education does not merely imply learning through experience, but includes carefully designed learning with lecturers as facilitators and with the

integration of theory into practice. It is not about the training of skills alone, but education in a specific context with the global world and its innovations in mind.

Concurring with the above notion, teacher educators must teach subject content and pedagogy, but the academic part of teacher education must be linked to practice in a specific context. Student teachers need to experience practical teaching whilst in training. Mathewson Mitchell and Reid (2016) see practice as the source for professional development and the art of reflection. They believe that teaching is 'embodied work' that 'may hold significant potential for ongoing development of an integrated theory of practice for teacher education' (2016: 43). The notion of 'practice theory' is about application in everyday life. The carefully designed learning referred to above by Ball and Forzani (2009) should thus include emphasis on learning through practice.

In this study, the researcher studies literature to see what good teacher education entails and listens to viewpoints of lecturers in the field about what is important in teaching prospective teachers to become effective teachers. The answers to two open-ended questions from lecturers at an ODL institution about what good teacher education entails are interrogated. The research, thus, focuses on what effective teacher education in higher education and ODL institutions is and how it can be improved.

THEORETICAL FRAMEWORK

The researcher worked from a **constructivist, student-centred approach** in this study. A student-centred approach emphasises self-motivation, self-reflection and learning as a reflective and interactive process with the lecturer as facilitator. Dumford, Cogswell and Miller (2016) summarise constructivism as the integration of new knowledge and understanding into existing knowledge frameworks through the use of real-life scenarios for better understanding and the application of problem-solving skills.

Cheng, Chan, Tang and Cheng (2008) maintain that the preparation to engage in effective classroom practices in schools is critical in student teacher education. They believe that a constructivist approach should be taken where interaction between students or students and lecturers would create the necessary knowledge and skills in a specific context through practical application of theory. Carneiro (2007: 160) reiterates the above notion by indicating that constructivism '... sheds new light on the role of intersubjectivity vis-a-vis social learning: knowledge is elevated to the category of a personal and social construct, indivisible from cultural conditionalities and their forceful interplay'. In this research good teacher education *inter alia* involves education of prospective teachers in line with the newest developments globally, including the use of innovative technologies, but with acknowledgement of the specific context of the students being educated.

GOOD TEACHER EDUCATION IN HIGHER EDUCATION

In this discussion the concepts 'good', 'effective' and 'excellent' education are used interchangeably, because different authors use different descriptions. **Effective or good education at tertiary institutions** is a 'contested concept' (Skelton, 2009; Trigwell, 2001) with 'varying definitions' (Devlin & Samarawickrema, 2010). Kreber (2002) clarifies excellence in education as educators teaching with a sound disciplinary knowledge; motivating their students, conveying concepts clearly and helping students with learning difficulties. Effective teaching in higher education is broadly defined by Devlin and Samarawickrema (2010: 112) as 'teaching that is oriented to and focused on students and their learning'. Student-focused education with the inclusion of particular situations, as referred to in the previous discussion, is part of good teaching, which implies that lecturers recognise the importance of student context and adapt their teaching and real-life scenarios accordingly. Ball and Forzani (2009, 2011) contend that carefully designed learning and teaching are necessary for 'good education' with theory and practice combined to enable students to apply theory in their specific contexts to make it relevant.

Two broadly accepted components of effective education according to Devlin and Samarawickrema (2010) are the teaching of particular skills and practices, with cognisance of the context of teaching. Tertiary education is thus a scholarly activity, including extensive professional skills and practices, high levels of disciplinary knowledge and contextual expertise. Students should be educated with emphasis on the inclusion of critical thinking skills, problem solving skills and a problem-based approach to education and teaching.

All of the above also applies to **good teacher education** for prospective teachers. Dumford et al. (2016) contend that learning strategies should be adapted to teach students new skills for classroom application, for instance problem-based learning to enhance metacognition. Self-regulating learning will make students more independent, whilst cooperative learning with peers also enhances learning without the direct input of the lecturer.

Hoban (2007 in Beauchamp & Thomas, 2009) sees good teacher education as a 'multi-linked' conceptual framework including 'conceptual, socio cultural, theory-practice and identity' aspects. Ball and Forzani (2009) explain a practice-focused curriculum in teacher education as a curriculum requiring specific content, in other words specific knowledge and skills that teachers need to learn to educate their learners in particular contexts. In addition, Reid (2011 in Mathewson Mitchell & Reid, 2016: 45) proposes a 'practice turn' specifically for teacher education with theory integrated into practice bringing together '*...pedagogies of observation and pedagogies of reflection with pedagogies of enactment*' with specific contexts of particular students in mind. The more time students spend in an actual classroom, the easier theory will become applicable in practice. 'The practical sense is what allows new teachers [and student teachers] to more consciously incorporate their "theoretical" knowledge (about learners, teaching and learning), into what they do and say' (Mathewson Mitchell & Reid, 2016: 46).

Teaching in schools is very complex requiring many skills that cannot only be acquired through academic knowledge, nor acquired merely from practical experience, but a combination of the two. Classroom practice involves more than subject knowledge, because teachers are decision makers, reflective practitioners and relations experts in today's classrooms. Teacher education for prospective teachers should thus move away from only being curriculum focused to a practice where knowledge, skills and professional identity are developed for actual teaching practice (Grossman et al., 2009; Ball & Forzani, 2009). Everyday practice in the classroom context should be taught in order for student teachers to stand in front of a class with confidence knowing that they have theoretical and practical knowledge. According to Ball and Forzani (2011) teaching is complex in the sense that it requires specialised knowledge as well as expertise and skills. It requires the ability to work successfully with many different learners from a variety of backgrounds and contexts. The focus in teacher education should thus become an integration of theory and practice – in other words a combination of knowing and doing.

Teacher educators have to develop programmes that will undo the separation of theory and practice. Grossman et al. (2009: 277) suggest that the curriculum should be re-organised around a set of core practices to help novices to '...develop professional knowledge, and skill, as well as an emerging professional identity around these practices'. Practical application of teaching practice could include micro-teaching, mini courses, competency-based teacher education and computer simulations (Ball & Forzani, 2009). The use of, for instance, videos, DVDs, podcasts or vodcasts in the lecture room can explain practice with examples. Students can also play video recordings of their own practical teaching to peers for constructive critical reflection. All of the above examples indicate knowledge of digital technologies which is very important in knowledge production and transmission (see Schneckenberg, 2009).

Student teachers should, thus, be trained to use technology for educational purposes and not just for personal reasons, because good teachers need content knowledge, as well as knowledge about pedagogy

and technology to keep up with the new generation of learners (Kim, Kim, Lee, Spector & DeMeester, 2013).

GOOD TEACHER EDUCATION IN ODL

All of the above mentioned requirements for good teacher education also apply in ODL settings, but the use of ICTs is more important in ODL than in traditional settings. 'The emergence of digital technologies and their penetration into all levels of education ... has challenged higher education institutions to redefine their teaching ... and to redesign their organisational infrastructure' (Guri-Rosenbilt, 2009: 105). The discussion that follows focuses on advantages for teacher educators to get to know how to use digital technologies when teaching prospective teachers. The main issue in ODL and teacher education is the transfer of practical skills and competences to enable students to become effective teachers without face-to-face contact.

Web 2.0 technologies such as blogs, wikis, social tagging, and clouds as well as MP3, instant messaging, MySpace, Flickr, Twitter, You Tube, Wikipedia and Facebook are used by students (Juwah, 2010) for personal reasons, but not for formal learning purposes. They need to learn the benefits of using these for educational purposes. Lecturers, in general, are not comfortable using electronic technologies and media for teaching - they need to learn how to apply these in learning environments (Chen & Bryer, 2012). Formal and informal learning environments can be connected with social networks; it 'enables innovative and collaborative interactions, connects textbook knowledge to real-world problems, and facilitates personalized constructive learning' (Chen & Bryer, 2012: 6). Educators at higher education institutions need to take cognisance of the importance of including social networks as teaching tools in their curricula to motivate the younger generation towards learning in a new way.

Digital technologies and social media assist in the development of skills such as the selection of relevant information, the critical interpretation and analysis of socio-cultural contexts, to work collaboratively and for sharing information. It is important for students to learn to share their ideas and points of view, as well as to critique viewpoints of others in an academic environment (Arquero & Romero-Frias, 2013).

Bawane and Spector (2009: 383) explain that competencies required by lecturers in face-to-face - and online settings are not substantially different from one another. They refer to the ICT framework of UNESCO (2005: 12) for **teacher education** where four competency areas are highlighted:

- (1) *Content and pedagogy – refer to instructional practices of teachers and their knowledge, that require them to apply ICT for teaching and learning*
- (2) *Collaboration and networking – utilize the communicative potential of ICT to extend beyond the classroom for development of new skills.*
- (3) *Social issues – understand legal and ethical codes, and use of ICT for the promotion of a healthy society.*
- (4) *Technical issues – establish technical proficiency and support ICT integration.*

Computer-based technologies are becoming more and more important in teacher education worldwide. Perraton (2010) indicates four functions of ICTs in teacher education, namely, to distribute teaching materials without unnecessary costs; to allow for two-way communication between a lecturer and student teacher; for direct communication between a lecturer and student and to download and use open educational resources (OERs). Using advanced ICTs in ODL solve many problems in the field such as providing interaction between lecturer and students, as well as between students; providing access to libraries and information resources; and updating study material on a regular basis (Guri-Rosenbilt, 2009).

The use of ICTs for good teacher education is the same in both online and traditional higher education environments. Lecturers and students must embrace the use of digital technologies to keep up with global innovations in teaching and learning. Social media such as blogs, wikis, media sharing tools (audio, photo, video and text), networking platforms like Facebook and virtual worlds should become part of effective student teacher training to enable them to use these media in the classroom as well.

In the empirical study that follows the researcher tried to deduce what lecturers at an ODL institution think good teacher education in general and more particularly in an ODL environment entails.

RESEARCH DESIGN, APPROACH AND METHODOLOGY

Research design and approach

A qualitative exploratory research approach was used in this study to explore the notion of good teacher education. According to McMillan and Schumacher (2001) qualitative research extends the understanding of a phenomenon. In this research the researcher tried to extract viewpoints from lecturers about what they think good teacher education entails to understand the phenomenon better and to contribute to educational practice.

Data collection – research instruments, participants and sampling

Research instrument

‘Digital communication technologies ... enable new interviewing strategies’ – e-mail, Skype and texting can be used for interviewing purposes, without face-to-face encounters. There is evidence that respondents often engage in ‘higher levels of personal disclosure’ when there is no direct communication (Pascoe, 2012: 78-79). Two open-ended questions were e-mailed to members of staff in the Department of Teacher Education in the College of Education at an open distance institution, namely, ‘What is good teacher education?’ and ‘What is good teacher education in ODL?’

Sampling and sampling method

The above questions were e-mailed to 25 staff members of the Department of Teacher Education in the College of Education at an open distance institution. Fifteen lecturers responded to the open-ended questions on the e-mail and those were used as respondents in this study.

Since the researcher is part of the College of Education she made use of convenience sampling. Creswell (2002) maintains that convenience sampling is used when the researcher selects participants because they are willing, available and accessible.

Data analysis

The researcher made use of content analysis by studying the answers of lecturers to two questions about good teacher education. The content of the responses on the collected written e-mail data was studied (Henning, Van Rensburg & Smit, 2009) to identify and describe units of meaning of how different lecturers see good teacher education. The researcher did the coding manually by using colours to indicate themes and categories (Henning, et al., 2009). Categories and themes were identified and discussed in narrative format. The researcher formed a good idea on how lecturers define good teacher education.

Credibility and Trustworthiness

According to Henning et al. (2009) to validate collected data involves checking

(for bias, for neglects, for lack of precision ...), to question (all procedures and decisions – critically) to theorise (looking for and addressing theoretical questions that arise throughout the process – not just

towards the end) and to discuss and share research actions with peers as critical in-process reviewers (2009: 148-149).

The researcher tried to interrogate the data collected, she presented the data at conferences to get feedback from peers and she did an extensive literature review to triangulate the data presented.

Ethical considerations

The ethical considerations included gaining informed consent from lecturers to use the data from their responses in an anonymous way. The responses the researcher received were compared for similarities and differences of opinion, but the findings were presented without identification of any individual respondent. The respondents were assured of confidentiality and voluntarily participation.

FINDINGS

Lecturers responded in much the same way as what the literature indicates. The categories deduced from the question **‘What is good teacher education in higher education?’** result in the questions **What?** (content) and **How?** (lecturers’ role) of teacher education.

Themes resulted mostly in **skills, values and content knowledge combined with practical teaching skills**. The responses of the 15 lecturers will be indicated by R for respondent and a number.

Content (What needs to be taught?)

According to literature good lecturers know their students and interact with them; they know their subject content, as well as general pedagogical principles of good teaching (Trigwell, 2001). Saroyan et al. (2004) also suggest a good grasp of content knowledge and presentation skills which includes good preparation and organisation of content/subject knowledge and the ability to apply knowledge practically and to stimulate student interest as very important for good teacher education. The empirical research focuses on the same skills, values and content knowledge.

Skills

R15 indicates that the education programme followed should be holistic in the sense that it develops ‘knowledge, skills ...and appropriate values’. Other respondents indicate that prospective teachers need to ‘master a range of skills and competences in addition to content knowledge’ (R5) and the necessary content knowledge should be combined with ‘reliable and convincing examples of HOW a good teacher should behave’ (R8). The findings of the empirical study concur with the notion of the importance of the integration of theory and practice in the literature review (Grossman et al., 2009; Ball & Forzani, 2009, 2011).

Respondents are of the contention that specific skills should be taught: ‘Lifelong learning should be encouraged’ by emphasising research skills (R8), as well as skills like ‘critical reflection’ (R10). Other specific skills mentioned are ‘didactic skills’ e.g. ‘to create relevant lessons’ (R7), and ‘to set assessment tasks’ (R3). The competences that student teachers should learn include knowledge of ‘different learning styles’ of learners (R9) and knowledge of the inclusion of learners with barriers to learning in classes (R4). ‘Knowing subject matter is not enough. The teacher must know how to convey the content effectively and efficiently’ (R8) when standing in his/her own classroom in future.

Values

Responses of lecturers indicate that values in good teacher education should be to ‘enhance teaching and learning that works towards educational change and professionalism’ (R2). Lecturers need to give

adequate feedback in various ways to prospective teachers so that their learning can be optimised (R2). 'Good teacher education results in teaching that facilitates learning' (R2). According to one of the respondents (R7), content is not the most important element in good teaching, but the person who transfers the knowledge. 'To be able to demonstrate that to the student (future teacher), the lecturer has to be the perfect example (role model) of a good teacher' (R5).

Role of the lecturer (How should content be taught?)

In recent times lecturers need to learn how to use technological changes to their advantage with a new learner generation. Content cannot merely be taught in the traditional way, but innovation is very important to keep students' interest (Devlin & Samawickrema, 2010). The student educators thus need to become comfortable to teach with the use of digital technologies to motivate students towards learning. But the combination of theory and practice is also of great importance. Technology can be of assistance to show student teachers how to apply theory in practical day-to-day situations.

Content with practical examples

According to respondents (R6 and R4) content should always be combined with practical examples. Student teachers should be empowered by giving them the 'newest and up to date contents (theory, methodology, etc.) based on sound research and experience' (R6). Grossman et al. (2009) also emphasise the importance to teach student teachers about possible problematic situations in school and prepare them to handle issues in a practical way with theory as background knowledge. 'Subject didactics' knowledge should help with the actual practical teaching in the class (R7). The practical part of teaching should get special attention and prospective teachers need to be 'prepared for the practical teaching situation' (R7). Students should not just 'learn about theories, [but] the value of these theories for classroom implementation should be emphasised' (R12). Good teaching is about 'mentoring'. 'Student teachers should be mentored by good teachers – not mediocre teachers' (R15). Student teachers or novices need opportunities to try out knowledge, skills and competences with lecturer/mentor teacher support and examples to enable them to apply theory in practice (Ball & Forzani, 2009: 504). 'Quality education prepares teachers for optimal performance in the classroom' (R10). Content is not enough – the student teacher should be given 'reliable and convincing examples of HOW a good teacher should behave' (R3).

The question '**What is good teacher education in an ODL context?**' seemed to be more difficult to answer, although all the lecturers partaking in the research were situated in an ODL setting. Many of the lecturers (R1, R6, R9, R14) indicated that there is little difference between a general higher education setting and ODL context in the content, values and skills being taught. Practical teaching can be an issue in an ODL context. This concurs with literature findings. The categories again seemed to be about **what** is being taught and **how** lecturers can do the teaching of prospective teachers in an ODL context in the best possible way. One of the respondents (R12) asks the question: 'How does good teacher education occur under normal circumstances? Is it the practical component that makes the difference or is it the cognitive aspects?' Another respondent (R14) explains that good teacher education is all about What? Why? How? and Where?, but in the ODL environment the emphasis will be on the How? whilst the What? and How? can never completely be separated from each other. Themes again resulted mostly in **skills, values and content knowledge combined with practical teaching skills**.

Content (What needs to be taught?)

Skills

Skills mentioned by respondents are *inter alia* 'technology for promoting ... independent study through extended access and interactive communication' (R5) as well as the ability to work in groups (R10). Students need to create their own content, but then they need to share it with others (Arquero & Romero-Frias, 2013) through collaborative teaching or by means of digital technology. The younger generations

prefer active, engaged learning in self-directed, independent as well as interactive environments (Barnes, Marateo & Ferris, 2007), therefore the importance of the use of ICTs. 'A structure needs to be in place that provides structure and support for students – e.g. regular timetable of video conferencing, blogging – following up students who are not participating to encourage them' (R3).

Another respondent (R4) reiterates the importance of communication in ODL between students and academic staff, as well as engagement with the subject matter. It is important for students to have computer and internet access in an ODL setting to communicate with each other and with their lecturers. 'Although no direct contact, students benefit from the conversation contained in pre-produced courses and from interactive communication with their lecturers' (R6). 'The transactional balance is dependent on proper communication media, the design of courses, the selection and training of lecturers, and the learning styles of students' (R10).

Values

According to the respondents (R2, R7, R9 and R5), values important in ODL are, for instance, student-centredness regarding student choice about 'content, time, place, pace of learning, method of instruction and nature of assessment'. Lecturers need to do reflective thinking to improve student support in a creative way, because learning especially in ODL should be student-centred (R1). The context of the learners is an important factor in educating ODL students, because practical examples must talk to the real world of the student. Good teacher education in an ODL context emphasises teaching and learning at a distance whilst providing 'support and supervision in order to enhance transformation' (R1), especially in an age where digital technology is important.

Role of the lecturer (How should content be taught?)

Content and practice

The content of study materials should not just include subject knowledge, but must be on 'such as level that the student understands it and be able to apply it in practice' (R11). Student teachers need to be exposed to good practice and must have the opportunity to practise it themselves (R2). 'Good teacher education in ODL should be more practical than what it is currently' (R5). Student teachers should get an opportunity to present lessons that are observed (R13). Students could videotape a lesson and then answer questions on their practical skills as self-assessment (R4).

Students need to learn to do research and how to use the library system (R1), but also how to use the internet to do searches. Ball and Forzani (2009: 497) define good teacher education as the integration of 'broad cultural competence and relational sensitivity, communication skills, and the combination of rigor and imagination fundamental to effective practice ... This integration ... depends on opportunities to practice and to measure one's performance against exemplars'.

RECOMMENDATIONS AND CONCLUSION

In response to both research questions, respondents have indicated that particular skills and values are important for good teacher education whether in higher education institutions in general or ODL institutions. Findings from the literature review indicate the same, therefore recommendations will be made taking both settings into consideration. Kember and McNaught (2007 in Devlin & Samarawickrema, 2010) propose some principles of effective teaching mirroring what has been researched in literature and found in the empirical study. Ideas in Kember and McNaught for good teacher education are discussed below with reference to other sources as well:

The most important aspect of good teacher education is the integration of theory and practice (Grossman et al., 2009; Ball & Forzani, 2009, 2011). The responses to both research questions also emphasise

the notion of teaching being a practical profession with a need for a good theoretical basis. Theory and practice can only be interlinked when students know their subject properly, so subject knowledge is of utmost importance for practical application. Practical application can be either in real classroom situations or through real-life scenarios, taking the context of the students into consideration. Examples of good teaching should be given to students by either doing real teaching in a classroom setting, making recordings to show to other students for critical evaluation or by doing micro teaching in a studio, uploading it on the institutional platform in the case of ODL. Video conferencing or satellite recordings can be useful for ODL students in teaching constructive, evaluative and critical skills. Lecturers can also upload examples of good teaching through the campus portal by means of podcasts or vodcasts.

Good interactive communication skills are important in face-to-face contexts and in ODL contexts according to literature and respondents. Even if the interaction does not entail face-to-face contact, human elements must be present in some form. The feeling of belonging to a group is important for successful teaching and learning (see Tatkovic, Ruzic & Tatcovic, 2006). The World Wide Web, the use of ICTs and Web2.0 technologies provide opportunities for synchronous and asynchronous interaction between lecturers and students sharing resources and promoting collaborative learning (Panda & Mishra, 2007; Schneckenberg, 2009). According to Casey (2008) the development of podcasts, blogs, the webcam, and video blogs and Facebook pages enhance social presence in computer mediated communication especially in ODL contexts.

Effective teacher education should be student-centred. Students' contexts, but also their knowledge base, should be taken into consideration in the development of learning and teaching materials. Students need to learn how to learn independently and work towards becoming good teachers with the guidance from lecturers. A variety of teaching methods and approaches should be used to accommodate different students' needs.

In conclusion: the ability to combine practice and theory, to use digital technologies and to develop skills and competences like critical reflection and problem-based thinking with real-life scenarios in mind, is very important to educate student teachers towards becoming effective teachers.

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