Improving Language Teacher Education through Project-based Training

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Abstract

Currently our institute offers literature and film-focused research methodology courses; simultaneously, statistics show that students seldom select a topic for their final thesis that is related to teaching methodology or culture. To address this restriction of choices, the introduction of a new course in qualitative research methods is expedient. However, before designing a new course, a needs analysis was conducted. This study primarily aims to investigate the students' attitudes and preparedness to collect data through primary research, thus, attempts to explore the reasons for the low level of engagement in research in the field of education and culture. The method of inquiry was a questionnaire that was distributed to 114 students. The 73 responses received indicate that the students' experience with research methods and tools is limited. The conclusion of the study was that although the students express their interest to explore culture and teaching methodology, due to the lack of training in qualitative methods, their choices are restricted and they seem reluctant to use primary data collection tools for their research. However, understanding and transforming their professional environment would require specific research skills, and without such training, students are insufficiently prepared to enter the workforce. Therefore, the secondary aim of the study is to offer a suggestion for bridging the gap between the students' professional commitment and their current research competencies. According to the findings, it is necessary to design a new framework for a research methodology course that focuses on the creation and use of research tools as a learning outcome and includes the assessment regimen and teaching-learning activities according to constructive alignment. Applying a project-based approach can support autonomous, confident, and open-minded graduates with a solid background in research methodology.

Key words: *qualitative methods in research, project-based learning, questionnaire, students' research skills*

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Introduction

Problem Statement

The Eszterházy Károly Catholic University (Henceforth: University) offers an education in applied sciences including majors in BA in English and American studies and MEd (Master's in Education) in (TEFL) Teaching English as a Foreign Language for mainly domestic students whose first language is Hungarian and a growing population of Erasmus students who usually spend one semester in a program. The BA students are offered language development and content courses in linguistics, culture, and literature, and the MEd programs require the simultaneous taking of two majors. The language of the courses is English. In spite of their motivation and dedication to their future profession, a surprisingly low number of MEd in TEFL students decide to choose education for the topic of their final theses. In 2018, 6 out of 16; in 2019, 4 out of 26; in 2020, 1 out of 22; in 2021, 3 out of 25; in 2022, 1 out of 44; and in 2023, 11 out of 45 MEd students selected English teaching methodology for their thesis. In other words, MEd students tend to opt for their other major when they select the topic for their thesis, while BA students who have no other major, generally select topics in British, Irish, or American literature instead of social science-related topics.

Research Aim

The primary aim of this research was to develop an understanding about the level of familiarity that the students have regarding social science research methods in the BA in English and American Studies and MEd in TEFL programs and to find out whether they consider it useful to master methodological skills that would contribute to their professional independence in conducting research in culture or education related topics. Based on the results of the survey, the aim for these researchers is to design a research methodology course based on the students' needs. Such course can equip the students with research skills through project work where students would learn how to plan a survey and a protocol for observations and interviews, how to record data, and how to code the collected empirical material. Students equipped with the knowledge and the skill set to conduct field work and thus to collect empirical data would be able to identify and solve problems and transform their professional environment.

Suggestion for the Content of the New Research Methodology Course

In adult education, the course content is usually set before the students even enroll in the courses. Therefore, students' academic interests and needs are rarely included in the curriculum (Maróti). Changing the paradigm and tailoring the course material to the needs of the student population is the target of the proposed course and the aim of this research. Creating a new project-based course in research methodology would provide the students with a wider variety of topics they would feel prepared to choose from; thus, this research methodology course would enhance their experience of academic freedom and student autonomy. Training pre-service teachers to conduct research on their own would help them become better teachers (Van Katwijk et al.). Moreover, adding research tools to the existing set provided for the BA students would expand their opportunities to explore the field of culture and civilization. Therefore, the content of this proposed new course will focus on the creation of research tools, while it will use project-based instruction for its methodological approach.

Based on the survey results, to meet the needs of the students, the new course in research methodology should prepare students to design a research plan, to select and create the appropriate research tools, and to analyze and interpret their data. A pilot course will be designed and offered for MEd students who wish to conduct research in teaching methodology, and based on the success and the student feedback, it will be expanded and adjusted to the needs of BA students who wish to engage in culture-related research pertaining either to the United States or Great Britain.

The primary research tools to be introduced as course content are interviews, observations, and surveys. To explain the purpose of such tools and to design a guide for interviews and observations, constructivist Grounded Theory will be employed. Levitt argues that GT supports novice researchers, and the process of developing structure allows researchers to clearly articulate their theory and GT can be used to analyze a variety of forms of data. GT as a methodology is widespread in educational research, mainly because by the end of the 20th century, the constructivist approach became dominant in the social sciences, including education and educational research. The advantages of the method include the possibility to explore the experiences and perspectives of teachers and students in educational settings, from which conclusions and further generalizations can be made. In the following, the paper will briefly describe the different areas in which this method is used and why educational researchers believe it is beneficial. Some of the research conducted since the 1970s have emphasized that one of the major shortcomings of works focusing on education is that they do not collect

inductive empirical data from the respective area. In contrast, the GT method enables the improvement of teaching and learning processes by interpreting the experiences and perspectives of teachers, students, and different actors in the world of education (Hutchinson) and has since then played an important role in making education research more relevant and transformative (Du Plessis and Van der Westhuizen). In addition, the method has been used for many other reasons and in many other fields, for example, in workplace education settings, where it can be used to understand learners' perspectives in a context with many variables that make the learning process very complex (Bytheway). It can also be used to investigate teachers' attitude development and its impact on students' learning (Lee). Another research highlights that the data collection method allows the use of video; and because of this use, GT can be used to better understand how teachers solve educational problems in the classroom setting (Riordan et al.). In addition, this interpretive method can also be deployed to gain a deeper understanding of gamification in the educational environment. According to Szabó and Szemere, well-chosen games and game elements can promote student motivation and thus better learning outcomes in higher education environments. Others discuss gaming and gamification as a tool that can encourage social and motivational inclusion of at-risk students (Hanghøj et al.). In this new field, GT can help researchers to map students' learning experiences more thoroughly, thus providing feedback and opportunities for improvement in the gamification process.

The course introduces students to two main empirical research methods that they can use to conduct classroom research, these are participant observation and interviewing. The advantage of participant observation in terms of data collection is primarily related to the context of the research: the student researcher can develop a better understanding of the background. In addition, this method enables the student researcher to develop a closer relationship with the research subjects, which also contributes to a better understanding of the research problem. The observer can collect more accurate data. For example, it is possible to record verbal and non-verbal communication, to capture the network of relationships between students, and to characterize teacher-student communication dynamics. In principle, the method is advantageous because it raises the quality of the research, allows other data to be checked, and gives access to the cultural context of the teachers and students. The definition of participant observation itself can be illustrated by two quotations: "The systemic description of events, behaviors, and artifacts in the social setting chosen for the study" (Marshall and Rossman 79, cited in Kawulich). Also, a shorter but more expressive definition: "written photograph" can be applicable (Erlandson et al. cited in Kawulich). The student researcher's task is thus to capture the research setting in a manner as detailed and

vivid as possible by means of a dense description. This technique of data collection allows researchers to articulate interconnections that are specific to their cases. During observation, there is the possibility to refine the focus — in some cases, if there is no precise research question, to develop one, although the disadvantage is that if everything is observed and described, one can get lost in the details — which makes the method very flexible and necessary as students arrive at the field after their theoretical studies. In addition, during the preparation the researchers must plan the observation work and for this it is necessary to design an observation guide (or observation protocol). In this observation guide, researchers can list all those things that they want to place emphasis on during the fieldwork: the physical environment, the members, interactions, the length and the frequency of interactions, formal or informal conversations, and/or other elements in the setting.

It is useful to supplement this method with interviews because interviews enable the researcher to deepen the insights gained from participant observation (Fontana and Frey). Different types of interviewing may be useful to the researcher depending on the size of the community they wish to work with. For a larger community, structured interviewing (face-to-face or online) may be the most useful. The disadvantages of this type of interview are pre-written questions and limited response options (often along categories or numbers for ease and speed of analysis), and it is important for the interviewer to ask the questions in the same way so as not to introduce variables into the research, as this may lead to different results. Moreover, this type of interview is primarily used in quantitative research. The other two types of interviewing methods are semi-structured and open-ended interviewing. These are preferred by qualitative researchers. Semi-structured interviews can be face-to-face (with a single subject) or group interviews. This is determined by the focus of the research, the situation, and the time available for the interview. The type of interview to be used for research in the educational context should also be chosen based on the specific case. However, whatever our choice is, interviewing allows — especially qualitative interviewing — to incorporate the research subjects' perspectives and interpretations into the research, thus deepening and clarifying the analysis. To ensure that students arrive at the research site prepared and able to conduct a high-quality interview, it is important to teach them the tools they can use to prepare. It is important to consider that when the researcher wants to enter a school for research, they need to position themselves and be able to briefly present the purpose of their research. Therefore, it is advisable to conduct a pilot interview with a person who they assume will understand the context of the research and can help them fine-tune the research questions. Of course, it is worth preparing from the interviewees' work — if they are also planning to interview teachers — and it is worth preparing from

the students' cultural habits and possible interests to get the most accurate picture possible by using this method.

Proposed Methodology of Teaching

Action research

The term "action research" was first used by Kurt Lewin in 1947 (Adelman). Based on Lewin's conception, action research is a process where the practitioner identifies a problem and collects information to be tested, rather than formulating the hypothesis first (Noffke). This process is different from literature review-based research that is currently in the focus of research methodology courses at the University. Learning to design, implement, and interpret the results of the research tools that are necessary for action research is equally important for teacher trainees and BA students with English language and culture majors.

When MEd students enter the workforce in the twenty-first century, it is mandatory that they are equipped with the knowledge that helps them improve their teaching environment. This knowledge is only possible if their training promotes lifelong learning and produces practitioner researchers who can address the respective concerns; i.e. identify the problems that arise during their teaching (Cochran-Smith et al.). Thus, teacher-practitioners will be able to improve their practices and transform their teaching environment to accommodate the needs of their students. The same applies for BA students. Without the proper research skills, their learning stops at graduation, and they become passive observers of the social phenomena, utilizing only their linguistic skills.

Constructive alignment

Creating tools to conduct action research has been identified as the intended learning outcome for our proposed course; therefore, we applied Bigg's constructive alignment theory for course design. The phrase was coined by John Biggs in 1996. The theory describes curriculum design that aligns teaching and assessment to intended learning outcomes:

Constructive alignment is a design for teaching in which what it is intended students should learn and how they should express their learning is clearly stated before teaching takes place. Teaching is then designed to engage students in learning activities that optimize their chances of achieving those outcomes, and assessment tasks are designed to enable clear judgments as to how well those outcomes have been attained (Biggs 5-6).

Biggs' model utilizes an insight from the psychology of constructivism: learners construct their own knowledge through actively engaging in teaching-learning activities. Students learn what they believe they will be assessed on, and constructive alignment provides a clear path for the students about what they need to accomplish and how their achievement will be measured. When constructive alignment is used in course design, the focus is on the active learning of the student since this design recognizes that "knowledge is constructed by the activities of the learner" (Biggs).

Project-based learning

To explain why project-based learning (PjBL) is selected as the instructional approach for our proposed course, the definition, characteristics, and benefits of PjBL must be considered. The term "project," has evolved from its initial meaning. It originated in the 16th century, in the architectural schools of Europe. In the eighteenth and nineteenth centuries, it was adapted in America as a regular teaching method, and it was rediscovered by European educators in the 1960s (Knoll). The reform movement was spearheaded by John Dewey, a leading advocate of pragmatism and constructivism in American education who believed that "Education is not preparation for life; education is life itself" (Dewey). The term "project" was initially defined in education as a 'hearty purposeful act" by Kilpatrick in 1918 where the students used their motivation and experience to independently create a product to satisfy their own curiosity (Kilpatrick). Dewey, however, believed that projects are products of the collaboration between teacher and student where the teacher's task is to lead the student through the "complete act of thinking". Therefore, finding the problem, creating a plan to solve the problem, and performing the tasks to achieve the result becomes a collaborative and exploratory process student and teacher engage in together (Knoll).

According to Adderley and his colleagues projects provide the solution to a problem that was encountered by the students themselves. Projects are initiated by students, and the solution is reached through a variety of educational activities. The product may be a thesis, a report, or design plans that the student works on for a period with the help of an advisor who does not act as an authority figure (Adderley et al., as cited in Helle et al.). Krajcik and Shin offer six key features to describe PjBL: (1) students find a driving question, (2) students identify learning goals, (3) students engage in scientific practices, (4) students practice collaboration, (5) students use technological tools, and (6) students create an artefact. This approach improves student engagement over traditional methods where knowledge is simply passed down from teacher to student (Alorda et al.).

Providing students with a skill set that is different from teaching is also necessary for them to be able to understand and solve problems while applying multidisciplinary approaches (Vasquez-Martinez et al.). Skill related goals, however, cannot be achieved by traditional learning. However, PjBL simultaneously improves students' knowledge and skills (Guo et al.). In addition to gaining knowledge and developing skills, PjBL improves student engagement because it focuses on real-life issues and helps solve other stakeholders' problems (Lee et al.). The PjBL approach added to research methodology content is especially beneficial since it supports learning based on curiosity and critical thinking, thus developing twenty-first century metacognitive, cognitive, and social skills such as research planning and reflecting on the process of inquiry. Examples of cognitive skills project-based learning supports are data-collection, analysis, and interpretation. Social skills are also developed through collaboration with instructors and research participants (Blumenfeld et al. as cited in Žerovnik and Šerbec). In addition, project-based learning improves students' higher order thinking skills, such as analysis, evaluation, and creation (Marifah).

Research Design

Participants

The authors managed to involve three classes of full-time and part-time students and sent out the questionnaires to 114 students. From this population, 73 responses were received. Regarding the background of the students, the goal was to identify their majors, their research interest, and their familiarity with empirical data collection and analytical methods. The sample of respondents is representative of the University's student population since 23,6% freshmen, 22,2% sophomore, 16,7% junior, 20,8% senior, and 16,7% MEd students responded.

Both BA and MEd students were involved in the needs analysis. Even though the students in the two different programs have very different skill sets, for their thesis writing preparation, the training in the use of qualitative research tools would open new opportunities for both majors. Also, during their first three years of study, their required courses are generally the same both in language development and content-related studies, therefore, it is supposed that their experience in the use of research tools is similar. Thus, the BA and MEd student responses were not separated by major.

All but one respondent, were Hungarian speakers, one student was from the USA who is currently living in Hungary. The students generally completed their secondary education in Hungary where the curriculum for secondary level traditionally does not incorporate studies for student conducted research. Two

students indicated that they have transferred from a different university where they have already gained some understanding of qualitative research methods. The students willingly participated in the survey, and some of them even attached personal notes expressing their gratitude for the research being a step towards investigating what is important and necessary for them.

Instrument and data collection

A survey was designed to yield both quantitative and qualitative results. The language of the survey was English, and it was distributed via the email list that was obtained from the registry of the University. Google Forms was used to create the survey, the Google link was sent out to the participants in June 2023, and responses were collected until early August of 2023. The survey was divided into three main sections: in the first part, four questions were asked to identify the respondents' demographic background; in the second part, 10 questions were asked concerning their experience in using social science research methods; and in the third part of the survey, students were asked to elaborate on their experiences in 150-word responses.

The first section's questions identified the students' major, current year in the degree program, probable field for theses, and research interest. In the second section, the questions focused on students' general experience conducting research by relying on social science methods and their experience regarding interviews and surveys. The questions also investigated whether the students had any experience conducting participant observations or self-reflective journals and whether they knew how to construct an observation guide. Finally, the questions targeted the students' analytical experience, such as skills regarding the analysis of images and other visual items, analyzing written sources and empirically collected materials. The survey used a four-point Likert scale in order to avoid a neutral response. In the third part of the survey, the students were asked to choose three methods that they are most familiar with and discuss their experience with these methods in 150 words per method. This question aimed to investigate the students' understanding and level of familiarity with the methods, and the intention was to get limited, albeit qualitatively meaningful data as well. The second question of the third section investigated whether there was any point that the students did not answer, and an elaboration on their reasons for not providing a response was requested.

Results

According to the responses, students are interested in four major fields when it comes to thesis writing: literature (28,2%), linguistics (8,5%), teaching methodology (28,2%), and cultural studies (35,2%). This data does not seem to support the actual number of theses in cultural studies and educational methodology. The percentage of students who indicate their interest in social sciences is much higher than the number of theses written in these fields. Since a large majority of students are interested in teaching methodology (28,2%) and cultural studies (35,2%), there is a need to address questions related to social science methods. Their answers regarding familiarity with social science methods show that they do not know how to use these research tools to gather data. Also, 74% (54/73) of the respondents claimed to have no or hardly any experience conducting research by relying on social science methods. Only half of the students had experience in designing surveys (49%), the results are a little worse concerning their experience in informal interviews (63% has no, or only minimal experience). Even worse were their answers regarding formal interviews (74% has no, or minimal experience). When it comes to participant observation most of the students do not know how to design observation guides (63%) and similarly most of them do not have experience conducting observations (60%). Consequently, it would be useful to follow up this discrepancy with another research specifically targeting much more explicit understandings on their side.

The responses are a little better when it comes to reflective journals: 56% of the students learned what these methods are used for and how to employ them as a form of data collection. Regarding the use of visual materials, most students (56%) have some familiarity in interpreting their relevance for academic work. Not surprisingly, most of the students have experience in analyzing written sources (59%). More striking is their response to the last question, that inquires about their experience in analyzing empirically collected data. A little less than half of the students responded positively (48%), yet this is contradictory, given their lack of experience collecting empirical materials. However, this result can be attributed to their interpretation of empirical data. Students may understand written sources, visual images, and self-reflective journals as empirically collected materials. However, the survey anticipated some degree of misinterpretation; therefore, in the final two questions, the students were asked to elaborate on their experience with these methods. The responses that they gave imply that a certain level of discrepancy exists between the language used to identify the methods in the survey and the students' own understanding of the methods.

This discrepancy requires a closer reflection. Out of the 73 participants, only 53 answered these questions, and from the 53 responses two claimed to have no

experience with any of the methods. Five participants clearly misunderstood the task and provided answers that were incomprehensible in the context given. Three participants confused research methodology and teaching methodology. One participant felt confident to find on-line tools. One participant had experience with sociograms and another one with observations. While eight participants claimed to have some experience with surveys, most of them have referred to surveys that they did not create, but rather they completed as participants. Similar situation was observed concerning the participants' experience with interviews: eight of them claimed to have experience, yet they also referred to being interviewed rather than creating the tools. Seven participants had experience with interpreting images and thirteen participants with interpreting data or statistics. The largest number of participants, fifteen, were familiar with analyzing and interpreting textual materials. Finally, ten students claimed to have gathered some experience writing reflective journals during their university freshman year in courses for language development. The survey did not inquire about the students' experience with recording and coding data. At this point in the research, their basic research competencies were addressed regarding the creation of primary research tools. Had their answers revealed an in-depth understanding of creating such tools, a second needs analysis survey would have focused on the next steps of research that include recording and coding.

Conclusions

Adebisi recommends adding research methods and processes to second year curriculum believing that such courses can bolster university education. Teacher trainee students need to be trained to monitor their practices and use tools to make their teaching more effective (Buzás et al.). Based on the results, the authors of this study also strongly believe that teacher trainee students in the MEd program would benefit from gaining a deeper understanding of research methods. While the students' responses revealed some familiarity with the research tools, learning how to create them, use them, and interpret their results will greatly enhance their ability to understand and transform the educational environment in which they will work. According to Žerovnik and Šerbec: "The responsibility of education is always to cultivate the human being." If students become active participants and become creators of knowledge rather than the passive consumers of information, education has fulfilled this responsibility. The authors intend to conduct further studies to investigate whether the introduction of the new research methodology course impacts the students' thesis topic selection. In addition, surveys and interviews will be triangulated with numerical data indicating the students' mastery of the

material to measure the success of the course and the effectiveness of the content and methods of instruction.

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