

Didactics of modern lessons in the modernisation of geographical education

Khorgasbay Yenglik ^{1*}, Abai Kazakh National Pedagogical University, Almaty, Kazakhstan
<https://orcid.org/0000-0001-9046-5204>

Karbayeva Sholpan ², Abai Kazakh National Pedagogical University, Almaty, Kazakhstan,
<https://orcid.org/0000-0003-4135-5740>

Zhandosova Gulim ³, Abay Kazakh National Pedagogical University, Almaty, Kazakhstan, ,
<https://orcid.org/0000-0002-9879-8879>

Ayapbekova Aliya ⁴, Turan-Astana University, Nur-Sultan, Kazakhstan <https://orcid.org/0000-0002-0676-7486>

Ashimov Tazhyhan ⁵, Kazakh National Women's Teacher Training University, Almaty, Kazakhstan
<https://orcid.org/0000-0002-5481-8954>;

Yessimgaliyeva Tlekshi ⁶ Academy of logistics and transport, Almaty, Kazakhstan,
<https://orcid.org/0000-0003-3499-5141>

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Abstract

The aim of this research is to reveal the views of prospective geography teachers on the teaching of modern courses in the modernisation of geography education. Study data were collected with semi-structured interview forms. The sample of the study consisted of geography teacher candidates studying at university in Kazakhstan. In the research, the situation of today's geography education, suggestions for modernised geography education, views on modern approaches in geography teaching and the role of the teacher in modern education were questioned. As a result of the research, among the answers to the question about the state of today's geography education, majority of the participants answered indecisively to the questions. Among the answers given to the question asking geography teacher candidates about their suggestions for modernised geography education, majority of the participants stated material. Among the answers given to the question asked in order to evaluate the views of geography teacher candidates on modern approaches in geography teaching, majority of the participants stated student-centred. Among the answers given to the question asked in order to evaluate the views of the geography teacher candidates on the role of the teacher in modern education, majority of the participants stated attractiveness of the course.

Keywords: Geography, education, modern education;

* ADDRESS FOR CORRESPONDENCE: Khorgasbay Yenglik, Abai Kazakh National Pedagogical University, Almaty, Kazakhstan

Email address: ekhorgasbay@abayuniversity.edu.kz

1. Introduction

Education shows continuous development by being affected by factors such as society, technology and events (Hamid, Meshkat, Rezaee, & Jafari, 2011). Societies that have completed the industrialisation process have begun to transition to the next stage – the information society stage. Transition to the information society can only be achieved by making reforms in areas such as information technology, mass communication and education–training and by catching up with developed and modern states in some basic areas (Klein, 2004). Societies that cannot develop themselves in education–teaching and sociocultural fields and cannot catch up with the modern age in the technological field will lag behind contemporary societies as long as they cannot solve their basic deficiencies and issues that need to be resolved (Meyer & Jepperson, 2000). Even if societies are accepted as modern, they will not be able to progress unless they create and develop their infrastructure in areas such as education and training and solve their basic problems in education (Oelkers, 2002).

1.1. Theoretical and conceptual framework

There is a strong connection between the education levels of countries in the world and the levels of development. While education levels increase in developed countries, the uneducated population rates are high in underdeveloped countries. For this reason, many countries that want to develop attach great importance to education (Bloom & Rosovsky, 2007). Geography education and training, especially in developed countries around the world, is becoming more important day by day in order to offer a better life standard to people and is seen as a way out in terms of providing long-term solutions to the problems experienced throughout the world (Bednarz, Downs, & Vender, 2003). The development of a country and having a say at the level of states depend on young people who know their country's values, capacity and resources very well; who can bring these values together with world values; and who can present them as an alternative and wealth against international values (Morgan, 2001). Since geography education includes all other sciences, it provides many benefits in developing solutions to global problems (Meadows, 2020).

The science of geography is constantly being renewed and developed in terms of method and field equipment. In societies where the perception and application of the science of geography lags behind the developments in the world, there is a distance between the geography taught in schools and the geography needed in real life (Dermendzhieva, 2014).

Efforts are made to provide the best educational environments for students through continuous improvement and innovation in modern education systems. In order to ensure this development, teachers are expected to constantly follow professional innovations, benefit from career development opportunities and improve themselves (Fanreza, 2018). The teacher has an important place in teaching–learning activities because the teacher places the students at the centre together with the environment and the subject. Whether the teacher, who will guide and lead, is contemporary or traditional affects the type and quality of teaching. Today, the preference is the modern teacher type. Because the contemporary teacher is not deficient in his qualifications, he adapts to the world more easily, teaches effectively and is open to innovations (Mukhamadovna, Sharipovna, & Supkhonovna, 2020).

With the effect of technology, students learn better when they move from passive receivers to active receivers in the modern education approach (Bransford, Brown, & Cocking, 2000). Activation of students also depends on the development of student-centred teaching methods (Smeets, 2005). In order to fulfil the requirements of modern geography education, instructors should carry out student-centred education; use computers, Internet, maps and visual materials; and appeal to all senses of students (Campbell, 2007). The use of student-centred and contemporary methods and techniques improves teacher–student relationship, increases permanence in learning and academic success and creates an opportunity for self-evaluation (Kirchberg, 2000; Smith, 2005).

1.2. Related research

When the studies in the field are examined, we see that there is no study that includes the views of pre-service geography teachers on modern education, conducted in different branches and related to geography lessons. Studies on subjects such as professional self-efficacy, technology and education and computer-aided education were evaluated.

Modell (1996) stated that the role of the teacher is not just to convey information to the student, but to help the student learn. According to Harmin (1994), five qualities stand out in a classroom where active learning is used: confidence, energy, self-control, belonging to the group and being sensitive.

Carr, Jonassen, Litzinger, and Marra (1998), in their work, stated that the students who listen to the lesson passively will only be content with the information given, while the student who actively participates in the lesson and learns the content of the lesson in cooperation by discussing it with the teacher and friends will reach more permanent information and tend to research.

Carvalho-Knighton and Keen-Rocha (2007) stated in their studies that the applications in the field of technology and laboratory brought about positive results in developing students' research and analysis skills, defining knowledge and problem solving. According to Juniu (2006), various technologies can be used to increase the efficiency of learning and allow students to explore. With the use of computers and other technologies, students can increase their learning and interact with resources outside the school (Hussain, Niwaz, Zaman, Dahar, & Akhtar, 2010). Sadi et al. (2008) stated that pre-service teachers' use of videos, simulations and projection would increase their willingness to take the course.

Andone and Sireteanu (2009) stated that many teachers have difficulties in developing plans for transition to technology-supported learning environments. In Gorder's (2008) study, it was determined that teachers could not sufficiently incorporate technology into their teaching processes and concluded that teachers need to learn to integrate technology in their classrooms with their teaching practices. Sang, Valcke, Braak, and Tondeur (2010) emphasised the importance of teacher training for teacher candidates to be able to use educational technologies successfully with the use of educational technologies given in lessons. Similarly, Kalioldanovna et al. (2022) stated in their study that primary schoolteachers' training on the use of information technologies would have more positive results.

1.3. Purpose of the research

The purpose of this research is to reveal the views of prospective geography teachers on the teaching of modern courses in the modernisation of geography education. In accordance with the purpose of the study, answers were sought to the following questions:

1. What are the thoughts of geography teacher candidates about today's geography education?
2. What are the suggestions of geography teacher candidates to modernise geography education?
3. What are the thoughts of prospective geography teachers about modern approaches in teaching geography?
4. What are the views of the geography teacher candidates about the role of the teacher in modern education?

2. Methods and materials

2.1. Research method

In order to illuminate the main purpose of the study with a holistic approach, the qualitative research method was used and 'phenomenology' was chosen as the research design. The phenomenological method focuses on what people perceive, understand and experience about the events they encounter in the universe they live in. In phenomenological research, the definitions of

individuals about events are not evaluated as right or wrong. The definitions put forward by individuals about the event to be investigated are divided into categories. Categorising clearly reveals what individuals think (Khan, 2014; Koballa, Graber, Coleman, & Kemp, 2000).

2.2. Participants

The sample of the study consisted of geography teacher candidates studying at universities in Kazakhstan. Table 1 contains data on gender and age demographic characteristics of geography teacher candidates.

In Table 1, the demographic distribution of the geography teacher candidates participating in the research regarding their gender and age are given.

Table 1. Age and gender distribution of geography teacher candidates

Gender	Age				Sum
	18–20	21–24	25–28	29–35	
Female	6	4	4	2	16
Male	4	5	3	2	14
Sum	10	9	7	4	30

In Table 1, the age and gender distributions of the geography teacher candidates participating in the research are given. Of the geography teacher candidates participating in the study, 16 were female and 14 were male. There are 10 geography teacher candidates between the ages of 18 and 20, 9 between 21 and 24, 7 between 25 and 28 and 4 between 29 and 35. When Table 1 is evaluated, it is seen that the majority of teacher candidates participating in the research are women and are aged between 18 and 20.

2.3. Data collection tools

The data to be used in the research were collected through interviews. Information was obtained from each participant through a 'semi-structured interview form'. While creating the interview form, two different steps were followed. In the first step, the studies on the subject in the field were examined and closed and open-ended questions were prepared. In the second step, two faculty members who teach in the field of geography education and have studies on related subjects examined the interview form and the form was given its final shape after necessary arrangements. In the interview form, two questions were asked to determine the demographic characteristics and four different questions were asked to reveal the views of the geography teacher candidates on the teaching of modern courses in the modernisation of geography education. The semi-structured interview form is shown in Annex 1.

2.4. Data collection process

Individuals who received geography teacher training at universities in Kazakhstan were determined and these individuals were reached. Of the 45 participants reached, 30 agreed to participate in the study. The research interviews were carried out in the psychological counselling room and gym of the university where the students were educated. In the interviews, voice recordings were taken with the permission of the participants and also the statements of the participants were noted during the interview. The purpose and content of the study were explained to each participant, and a signed document was obtained from the participants stating that they voluntarily participated in the study. The interviews lasted approximately 35 minutes for each participant. In terms of

confidentiality of the participants' identities, codes were given to each participant in the form of A1, A2, ... A30.

2.5. Data collection analysis

The content analysis method was used in the analysis of the data. The purpose of content analysis is to reach concepts and relationships that can explain the collected data (Hermann, 2008). The answers written by the geography teacher candidates regarding the questions in the interview form were examined and coded as items. Theme titles were created after coding by making use of the literature. The literature and expert opinions were used to determine which theme the coded items were obtained from the analysis of the interview texts. After the themes and sub-themes were determined, the items were determined separately by two academicians working in the faculty of education. The theme created by the experts and the researchers and the items under it were compared. As a result of the comparison, an average of 80% consistency was determined and the differently grouped items were reviewed and adjustments were made. After this process, the frequencies of the items in the themes created were found and shown with tables. In addition, the opinions of the geography teacher candidates are given below the tables with their codes (A1, A2 ... A30).

3. Results

3.1. Geography teacher candidates and their views on the teaching of modern courses in the modernisation of geography education

The views of the pre-service geography teachers, who voluntarily participated in the study on today's geography education, their suggestions to modernise geography education, their views on modern approaches in geography teaching and their views on the role of the teacher in modern education are collected into four categories.

In Table 2, the opinions of the geography teacher candidates regarding the evaluation of modern geography education are given.

Table 2. Opinions of geography teacher candidates on contemporary geography education

Themes	F	%
Very good	4	13.3
Good	8	26.7
I'm undecided	10	33.3
Bad	5	16.7
Too bad	3	10

In Table 2, the views of the geography teacher candidates participating in the research on today's geography education were evaluated. Geography teacher candidates' views on today's geography education were evaluated on a Likert-type scale. 13.3% of the geography teacher candidates answered very good, 26.7% answered good, 33.3% answered undecided, 16.7% answered bad and 10% answered very bad.

Table 3 presents the opinions of the geography teacher candidates on their suggestions for modernising geography education.

Table 3. Opinions of geography teacher candidates on their suggestions for modernising geography education

Themes	Reasons	F	%
Update	Updating geography books	8	26.7
	Updating tutorials and course content		
	Updating websites		
	Latest produced maps		
Material	Computer-aided installations	9	30
	Posters and videos		
Place	Establishment of a laboratory	7	23.3
	Supporting laboratories with materials		
	Technological material usage training		
Instructor training	Current information trainings	6	20

In Table 3, the opinions of the geography teacher candidates participating in the research on their suggestions for modernising geography education are evaluated. Geography teacher candidates' views on their suggestions for modernising geography education were gathered in four categories: 'update', 'material', 'space' and 'tutorial education'. Of the geography teacher candidates participating in the research, 26.7% stated making updates, 30% stated material, 23.3% stated spatial characteristics and 20% stated changes in the teacher education would be effective in modernising the geography education.

Geography teacher candidates' opinions for modernising geography education are given below.

A12 Coded Geography Teacher Candidate: *The keyword in modern education is update. Updating old books, updating old websites, updating teachers and students themselves is key in modern education.*

A14 Coded Geography Teacher Candidate: *Material supply is necessary in modern education. It is necessary to purchase the most up-to-date electronic devices, to establish geography laboratories and to take materials such as the latest maps with the latest features into these laboratories.*

A23 Coded Geography Teacher Candidate: *Since the place where the course is taught is a situation that affects the quality of the course, there should be special laboratories for almost every course in modern education. These classes, which are full of materials specific to that course, are at the top of my recommendations for modern education.*

B28 Coded Geography Teacher Candidate: *It is my suggestion to give importance to the training of the instructors who will teach the course. In other words, education should not be expected only from the teachers at school or from the university. Some of our teachers and educational institutions still continue their education with the old education methods. The thing to do in this case is to educate oneself in different ways.*

Table 4 shows the opinions of prospective geography teachers' modern approaches in geography teaching.

Table 4. Opinions of geography teacher candidates on modern approaches in teaching geography

Themes	Reasons	F	%
Student-centred	Encourages students to explore and learn	14	46.7
	Student wonders		
Active communication	Learner–teacher collaboration	9	30
	Quick response		
	Heterogeneity of class level		
Heterogeneous grouping	Evaluation based on personal performance	7	23.3

In Table 4, the views of the geography teacher candidates participating in the research on modern approaches in geography teaching are evaluated. Geography teacher candidates' views on modern approaches in geography teaching were gathered into three categories: 'student-centred', 'active communication' and 'heterogeneous grouping'. Of the geography teacher candidates participating in the research, 46.7% stated being student-centred, 30% stated active communication and 23.3% stated heterogeneous grouping as modern approaches in geography teaching.

Geography teacher candidates' opinions on modern approaches in teaching geography are given below.

A14 Coded Geography Teacher Candidate: *Unlike traditional education, modern education encourages students to research more and find answers to questions. The tutorial is here as a guide.*

A17 Coded Geography Teacher Candidate: *I think the most beautiful difference of modernisation in education is the active communication. They can easily reach and get information from among students or from instructors and even from experts who are not involved in the education sector on geography.*

A18 Coded Geography Teacher Candidate: *One of the things that comes to my mind when it comes to modern education is to provide education according to the grade level. Each student receives individual training. Individual performance-based training can be obtained even by coming together with those who know a lot about the subject and those who do not know anything at all.*

A26 Coded Geography Teacher Candidate: *Quick feedback and fast communication are the key points of modern education. With the development of technology, communication has become easier.*

In Table 5, geography teacher candidates' views on the role of the teacher in modern education are presented.

Table 5. Opinions of geography teacher candidates on the role of the teacher in modern education

Themes	Reasons	F	%
Student level	Students should know the level	7	23.3
	Teaching appropriate to the level of the student		
The attractiveness of the lesson	Make the lesson interesting by using materials such as photographs	11	36.7
	Must use course materials such as videos and posters		
Interaction	Ask students individual questions	5	16.7
	Lessons supported by current events		

	Should have a mutual discussion		
	Patient		
Personality characteristics	Innovator		
	Self-development	7	23.3
	Love the profession		

In Table 5, the views of the geography teacher candidates participating in the research on the role of the teacher in modern education are evaluated. Geography teacher candidates' views on the role of the teacher in modern education were gathered in four categories: 'student level', 'interesting of the lesson', 'mutual interaction' and 'personality traits'. Of the geography teacher candidates participating in the research, 23.3% stated student level, 36.7% stated attractiveness of the course, 16.7% stated mutual interaction and 23.3% stated personality traits as the role of the instructor in modern education.

Geography teacher candidates' opinions on the role of the teacher in modern education are given below.

A2 Coded Geography Teacher Candidate: *Regardless of modern or traditional education, the fact that the course is interesting is a factor that positively affects the quality of the course and participation in the course. Especially with the development of technology, it has become easier to make lessons interesting. Instructors play a major role in making the course interesting.*

A8 Coded Geography Teacher Candidate: *Making the lesson interesting with videos and posters is among the important roles of the instructors. Although geography lessons are considered in the verbal group, it is a lesson that is very easy to support with visual materials.*

A17 Coded Geography Teacher Candidate: *Interaction questions such as the difference between two photographs should be directed to the student, and these questions should be appropriate to the level of the student. The student should be able to comment on the question and should both encourage his classmates and feel encouraged.*

A23 Coded Geography Teacher Candidate: *The teacher needs to be patient. He/she should answer the questions asked patiently and explain patiently while teaching the lesson. In addition to being patient, the teacher should also give importance to personal development. It should equip itself with up-to-date information and not rely on traditional knowledge.*

3.2. Geography teacher candidates' views on today's geography education, on modern approaches in geography teaching, on the role of the teacher in modern education and suggestions for modernising geography education views

In Table 6, the opinions of the geography teacher candidates who voluntarily participated in the research on today's geography education their suggestions for modernising geography education, their views on modern approaches in geography teaching and their views on the role of the teacher in modern education are evaluated.

Table 6. Opinions of geography teacher candidates on teaching modern courses in the modernisation of geography education

Themes	Sub-themes	Geography teacher candidate	
		F	%

	Very good	4	13.3
Geography education today	Good	8	26.7
	I'm undecided	10	33.3
	Bad	5	16.7
	Too bad	3	10
Total		30	100
Recommendations for modernising geography education	Update	8	26.7
	Material	9	30
	Place	7	23.3
	Instructor training	6	20
Total		30	100
Views on modern approaches	Student-centred	14	46.7
	Active communication	9	30
	Heterogeneous grouping	7	23.3
Total		30	100
Instructor roles	Student level	7	23.3
	The attractiveness of the lesson	11	36.7
	Interaction	5	16.7
	Personality characteristics	7	23.3
Total		30	100

In Table 6, the views of the geography teacher candidates participating in the research on today's geography education, their suggestions for modernising geography education, their views on modern approaches in geography teaching and the role of the teacher in modern education are evaluated. 13.3% of the geography teacher candidates stated today's geography education as very good, 26.7% as good, 33.3% as undecided, 16.7% as bad and 10% as very bad. 26.7% of the geography teacher candidates stated updating, 30% stated material, 23.3% stated place and 20% stated teacher education as being beneficial for modernised geography education. 46.7% of the geography teacher candidates stated being student-centred, 30% stated active communication and 23.3% stated heterogeneous grouping as modern course approaches. 23.3% of the geography teacher candidates stated the level of the student, 36.7% stated the attractiveness of the course, 16.7% stated mutual interaction and 23.3% stated personality traits as the teaching role in modern education.

4. Discussion

In our research, the majority of geography teacher candidates answered 'I am undecided' to the question asked on evaluating the views of geography teacher candidates on today's geography education. Dikmenli and Cifci (2016), in their study on the opinions of high school students about geography lessons, found that they were aware of a part of the objectives of the geography course

and when they compared the geography course with other courses, their level of caring and liking was moderate.

The geography teacher candidates gave the answer 'material' to the question asked on evaluating the opinions of the geography teacher candidates about the suggestions for modernised geography teaching. Roschelle, Pea, Hoadley, Gordin, and Means (2000) stated in their study that computer-assisted education is more effective than classical courses. Al-Bataineh and Brooks (2003) stated that for the use of technology in lessons to be effective, teachers should receive continuous and adequate training on technology and modern education and there should always be a sufficient number of computers in the classroom environment.

In our research, the majority of geography teacher candidates gave the answer 'student-centred' to the question asked on evaluating the views of geography teacher candidates on modern approaches in geography teaching. The responses include an active communication response. Similar to our study, according to Cohen, Manion, and Morrison (2004) and Healey (2003), it was determined that the programmes in geography education should be prepared very well; that there should be cooperation between the preparers and the practitioners; that they should include applied courses; and that they should be student-centred. Ekizoglu and Uzunboylu (2009), in their studies on teachers, stated that they favour student-centred education, but teachers and school administrators do not have enough knowledge about student-centred education and they need in-service training.

In our research, among the answers given to the question asked on evaluating the views of the geography teacher candidates on the role of the teacher, majority of the participants stated attractiveness of the course. According to West (2003), the teacher should be able to prepare his own teaching materials, should not only give information in geography teaching, should establish relationships with life, gain different perspectives, teach learning, should not be limiting but developer and should make people love geography. According to Bednarz (2002) and Sekeres and Gregg (2008), instructors giving geography education should have geography teaching skills and benefit from contemporary methods and approaches.

5. Conclusion

Education is one of the most important issues for the future of society. Even in the areas we care about most, such as health, education appears to be on the road to professionalism. Geography education also allows them to have an idea about the development of societies, to survive in difficult conditions and to grow productive products. Today, there are developments and changes in many areas, thanks to the technology and what the age brings. Education is one of the fields that are trying to keep up with this rapid change and that is on the way to being modernised. With the elimination of the deficiencies of traditional education and keeping up with the pace of the age, it is possible to provide a more efficient and quality education with modern education. In our study, the views of geography teacher candidates on the teaching of modern courses in the modernisation of geography education; the situation of today's geography education; suggestions for modernised geography education; views on modern approaches in geography teaching; and the role of the teacher in modern education are questioned. Among the answers to the Likert-type question about the state of today's geography education, majority of the participants answered indecisively to the question. Among the answers given to the question asking geography teacher candidates about their suggestions for modernised geography education, majority of the participants answered material. Among the answers given to the question asked in order to evaluate the views of geography teacher candidates on modern approaches in geography teaching, majority of the participants answered student-centred. Among the answers given to the question asked in order to evaluate the views of the geography teacher candidates on the role of the teacher in modern education, majority of the participants answered attractiveness of the course.

6. Recommendations

In line with the results of the research, the following suggestions were developed. In modern education, especially, geography teachers who still give education with traditional education should be trained and supported in order to carry out modernised education in the best way. In order to carry out geography teaching more effectively, facilities such as Internet infrastructure and computer laboratories should be increased and all authorised companies and organisations should work together in this regard. All teachers and students should have easy access to the course tools that will be used to carry out modern education in geography lessons. Training should be given to use these tools more effectively. More visual course materials (video, poster, animation etc.) should be included in geography lessons in order to increase the attractiveness of the lessons and to enable students to access information more effectively. The course contents of geography candidate teachers who are studying at the university should be updated according to modern education.

Annex 1. Semi-structured interview form

You are invited to our study to reveal the views of prospective geography teachers on the modernisation of geography education and the teaching of modern courses. Participation in the research is voluntary; you will not be penalised if you refuse to participate at any stage of the research. It is important for the reliability of the research that you answer the questions sincerely. Thank you for your participation.

Geography teacher candidate	
Gender:	
Age:	
1. How do you evaluate geography education in today's conditions? (Check the box next to the statement that suits you)	
1. Very good () 2. Good () 3. Undecided () 4. Bad () 5. Very bad ()	
2. What are your suggestions for modernising geography education in today's conditions?	
3. What are your views on the modern approach in geography teaching?	
4. What are your views on the role of the teacher in modern education?	

Answer 2:

Answer 3:

Answer 4:

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