Factors obstructing the application of student-centered education at schools in Azerbaijan

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ABSTRACT

Involvement of children with special educational needs in inclusive education at schools of general education in the Republic of Azerbaijan is one of the priority issues of the state. Many reforms in the education system, particularly at schools, need to be carried out to promote inclusive education. This research emphasizes the importance of implementing the student-centered education approach in the general education system to make schools inclusive in the country. As a ground for this, the article, having cited from scientific papers of different researchers, points out that, for example, a student-centered education allows a school to meet the different needs of students and take the specifics of each student into consideration. The level of progress of student-centered learning was assessed in the conducted research through studying teachers' instructional methods at schools operating in the education system of Azerbaijan. As a result of the survey and focus group discussions conducted with teachers within this research, it was revealed that although teachers understand the positive impact of a student's learning through student-centered methods, in most classes, they continue teaching lessons in a teacher-centered style due to several school or out-of-school factors. The result is that teacher-centered classes still being conducted at schools are not only the incompetency of teachers, but as a result, it is not possible to achieve the development of student-centered learning by improving only teachers' skills. Many factors obstruct the change from teacher-centered learning to student-centered learning in the classroom. The identification of school culture and the classification of culture-forming factors are also discussed in this research.

1. Introduction

Based on many teaching and learning theories nowadays we have a better understanding on how children learn and that there are different ways for them to acquire knowledge. Socio-cultural and constructivist theories prove that a student realizes his/her potential if he or she interacts with his/her peers and teachers possessing equal rights, while having positive interrelations and being active during the learning process. The fact that a student has the same rights and responsibilities as a teacher in regard to a lesson planning, organization and conduction, in its turn it promotes the transfer of a teacher's methods of instruction to a new level which is a student-centered teaching and learning [1]–[3]. Student-centered learning encourages the individual to master an independent learning and decision-making skills [4]–[8]. In this regards the contemporary society requires that a teacher-centered education which is a traditional teaching style being replaced by a student-centered education.

Estes explain, argues that teacher-centered facilitation is problematic in experiential education and justifies increasing the use of student-centered facilitation practices. Suggestions are provided for: (a) establishing forums for dialog about student-centered facilitation, (b) incorporating more student-centered facilitation practices, and (c) considering student-centered learning during program development and facilitator training. The author concludes that the profession's very commitment to integrity necessitates that we, as experiential educators, take action in order to ensure that our programs become more student-centered [9]. Student-centered learning, Maryellen Weimer compares teacher-centered college teaching practices and student-centered college teaching in terms of (1) the balance of power in the classroom; (2) the content function of the lesson; (3) the role of the teacher versus the role students; (4) learning responsibilities; (5) objectives and evaluation processes. He then gave some advice on how to apply a student-centered approach. Student-centered learning will provide more opportunities for students to explore their knowledge [10], [11].
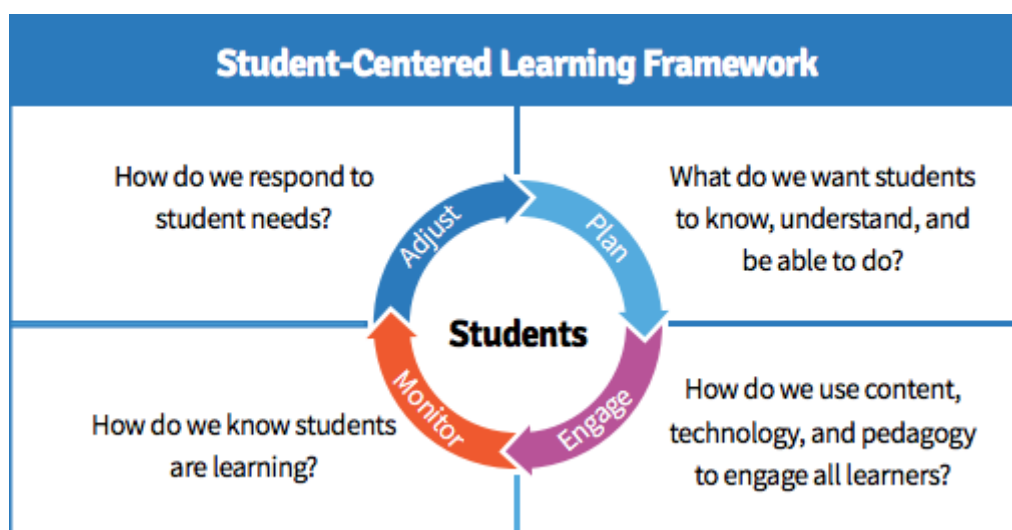

Fig. 1. Student-centered learning framework [12].

Another important part of this model is students. Students, in having a clear picture of their own progress, must also think about what will happen next. Working with the teacher, this might look like being involved again with activities to strengthen learning or to overcome something that might be missed (see Fig 1). Student-centered learning framework. we will have a framework for thinking in implementing this learning model. With student-centered learning will obviously make students active. this must also be balanced with the teacher's teaching ability. This research will describe and explain how the application of student-centered learning models in Azerbaijan. In student-centered teaching and learning students' interests are being emphasized and their views are being taken into consideration. Therefore Hannafin, note that during a student-centered learning process students choose what to learn, how to learn and make judgements on how to evaluate what they have learnt. It is evident that a student-centered learning demonstrates a culture contradicting the format of a traditional education.

In a lesson where a teacher centered teaching and learning is being applied, the teacher acts as "an active educator" and stands on "a leading" position in front of "passively learning" students [13]. In a teacher centered teaching process a teacher himself or herself identifies what students should learn, how to learn and choses how to evaluate what they have learnt. In student centered teaching and learning as Eli states, students have some responsibilities in the organization of lesson and identifying the learning pace and their active participation in this process is being required [14]. As a result, a student-centered teaching and learning emphasizes the interest of each student, their potential and learning style and makes the teacher to be a learning facilitator based on an individual need of a student and not the person who is teaching the whole class in a standard way. As a result of the study Liz Glowa, Jim Goodell, one of the supporters of student-centered learning at schools, argue that student-centered learning reduces student dropout rates, increases the number of students continuing their learning after school, raises the competency of students in Math and literacy (based

on the results of students' centralized assessment), increases students communication among themselves and reduces the number of students moving to other grades [15]. Taking the above-mentioned into consideration, we conclude that because of a student-centered learning to meet different learning needs of students, a school provides an accessibility for learning for each child. A student-centered approach gives an opportunity for creating an environment and a learning process taking the individual characteristics of students into consideration. This also makes it possible for children with special needs who have different potential and limitations to have an inclusive education along with other children at schools of general education.

The Ministry of Education is currently implementing the State Program on the "Development of Inclusive Education for Persons with Disabilities in the Republic of Azerbaijan for 2018-2024". The aim of the Program is "to ensure the rights to education of people with disabilities to be equal with others at all levels of education and create an environment for their learning without any barriers" (State Program for the Development of Inclusive Education for Persons with Disabilities in the Republic of Azerbaijan in 2018-2024 [16]. Several projects are being implemented and studies are being conducted to develop inclusive education in the country which is one of the priority areas of the education system. As mentioned above, to organize inclusive education at schools of general secondary education, the presence of a student-centered approach is one of the important factors. This research has been conducted to evaluate teaching methods of teachers at schools of general education operating in the education system of the country and identify factors that stimulate and obstruct the development of a student-centered education.".

2. Method

Research conducted consisted of two stages with a descriptive research method. The research was conducted at schools such as Ankara Lyceum, Elitar Gymnasium located in the central districts of Baku and a school of general education # 45, and at schools # 95 and 118, which are relatively far from the city center. At the first stage of the research, a survey with the application of "training recipient scale" questionnaire developed by the specialist of Düzce University of Turkey, Zeynep Boyacı was conducted among 244 teachers from those educational institutions. The main reason for choosing the "Training recipient scale" questionnaire for the conduction of this research was that it was much easier to adapt it to the Azerbaijani language and teachers could understand questions more clearly.

The questionnaire served to measure the level of self-assessment of teachers regarding the organization of student-centered classes during the teaching process [17]. According to the results of the questionnaire "based on training recipient scale" teachers of Ankara lyceum got overall 134 points, teachers from Elitar Gymnasium got 133 points, teachers at the secondary school # 45 got 131 points, teachers from school # 95 got 132 points, and teachers from school # 118 got 132 points. Teachers who participated in the "Training recipient scale" research with the 5-levelled evaluation criteria, showed the result of the fourth level of "high student-centered teaching experience".

3. Results and Discussion

Discussions were held in five focus groups which consisted of twelve teachers in each group at educational institutions that participated in the questionnaire in the second stage of the research. Thus, the answers to the survey questions in the first stage were discussed and based on the discussions it was decided whether the questions were correctly understood by teachers or not. In addition, teachers tried to justify their answers during the discussions by providing examples, samples and evidences from their experiences. As a result of discussions, the frequency, and the scope of application of a student-centered education by teachers, as well as reasons of preventing the organization of classes with such style were identified.

Although teachers noted that they had a high level of student-centered teaching and learning experience during self-assessment, it was identified during the discussions that a teacher-centered education was dominating at schools. During the discussions teachers noted that a student-centered teaching and learning was beneficial for the development of children, and that they were partially acquainted with methods and strategies of teaching with this style. However, they did admit that they were usually teaching in a traditional teacher-centered style, and in some special cases they were using student-centered style in their classes. As a result of discussions, it became clear that

there were several factors that promoted a teacher-centered education and factors that obstructed the development of a student-centered teaching and learning. Having analyzed the definition of "an organizational culture" by Schein, Edgar, factors obstructing the development of a student-centered education can be called as "a school culture" agreed by the system of the school and parents together without understanding its correctness, and the application of which can be realized unconscientiously [18]. "A school culture" in a way described above was formed in the education system where a traditional teacher-centered teaching and learning had been applied for many years. As a result of the research, factors preserving "a school culture" of teacher-centered education at schools and thus, obstructing the development of a student-centered education are classified as follows:

3.1. Low level of competency of teacers in student-centered teaching and learning

Teachers note assuredly that it is not possible to organize a student-centered teaching and learning while teaching some subjects. For example, the focus group participants noted that while it is possible to apply a student-centered teaching and learning teaching of such subjects, as technology, life skills, biology, and physics, it is not possible to teach classes of math, chemistry, and the native language with student-centered approaches. As an answer to the question "Do you possibly think so because you have not enough skills for teaching those subjects and topics for a student-centered learning classis?", teachers assuredly tried to prove that they possessed the competency of conducting classes in a student-centered teaching and learning style. One of the main and most obvious issues identified during the discussions was that teachers had low skills in the organization of a student-centered teaching and learning classes in teaching exact sciences. Teachers tried to prove that most of students have no interest in learning sciences like Chemistry, Math and Physics. However, based on the results of the study, we found out that students don't like exacts subjects due to teachers' low competencies in teaching classes of those sciences with a student-centered teaching and learning style. But a more in-depth and detailed study of this hypothesis is needed.

Teachers stated that they had some knowledge about modern teaching methods while studying at university and later learned about them by participating in training sessions while they worked as a teacher at school. At the same time, it became clear that teachers had the knowledge of modern pedagogical approaches and methods, as well as student-centered teaching and learning, but however they admitted that they didn't have enough skills in the application of those methods in practice (at lessons). Teachers, when were asked about the state of the application of a student-centered teaching strategies and methods in practice, they expressed contradicting opinion: for example, one of the teachers stated that as the application of one of the student-centered teaching strategies "supporting students in discovering the knowledge themselves instead of giving knowledge directly to them", he/she explains the ways of making a triangle of a cardboard without telling the name of the figure to students, after he/she asks the name of the figure made by students. After students "discover" the geometric figure prepared by themselves to be a triangle, he/she presents the information about the geometric figure.

The teacher understands this as the case of students' discovering the knowledge. The example provided by the teacher doesn't necessarily reflect student's search (discovery) of knowledge in a learning process. This example proves that teachers have wrong understanding about many modern learning terminologies. Another teacher participating in the survey, noted that he/she perceived students' doing test assignments during classes as a method of a student-centered teaching and learning. Another teacher said that she provided the learning need (differentiation of learning) for a student who was not able to understand the topic in a foreign language class through having him/her drawing a picture on the topic. As many of the teachers don't have the knowledge about "multiple intelligences", one of the theories used in pedagogy and different ways of students' learning (audio, visual, kinesthetic), they don't know the ways to accommodate classes based on students' comprehension skills.

3.2. The ratio of subject-hour of subjects taught is not determined by the teacher.

The subject curriculum (education plan on subjects) is being approved by the Ministry of Education of the Republic of Azerbaijan at the beginning of each academic year. Hours on topics are distributed (based on textbooks) by the local educational authorities and sent to schools. Teachers note that allocation of the topic-hour ratio of many subjects taught is not appropriate. In order to

teach some of the topics based on the educational program, teachers have to change hours of topics to be taught but keep the formal topic-hour ratio based on the documentation as recommended by the local educational authority. In general, when talking about planning of teaching hours to teachers, they said they were careful while doing that action and knew that it was contradicting the rules. Teachers pointed out that if they had planned the allocation of teaching hours themselves based on the topics, that might have a greater impact on students' better mastering of the lesson. One should keep in mind that the adjustment of topic-hour ratio is being accepted as a direct responsibility of a teacher in modern education.

3.3. The size of the classroom is small, but the number of students in classes is high

In discussion with teachers and from examples they have provided, it becomes clear that there is a teacher-student interaction in a teaching process. In some classes, a teacher facilitates a competitive mutual interaction among students, but the group works which are one of the key factors in a student-centered learning creating an opportunity for forming a cooperative interrelation among students, are not being used in classes. Teachers note that one of the major reasons of obstructing the use of group works and other active learning methods in classes is the high number of students in classrooms. The outcome of the survey shows that in 78 per cent of classes where teachers conduct a lesson, while the number of students is more than 30 people, the size of the classroom is 24-30 square meters.

According to the "Standard norms of construction of educational institutions, material and technical provision, general sanitary-hygienic requirements, and normative of provision with student places" approved by the Decree # 171 of the Cabinet of Ministers of the Republic of Azerbaijan dated August 3rd, 2012, lessons conducted in the form of a group, the size of the classroom is calculated 2,5-3,0 square meters per a student. Thus, existing classrooms at schools are designed for 10 to 12 children according to state normative. It is not possible to divide students into groups in small classrooms due to the high number of students. As a result, most teachers participating in focus groups reported that they often used active teaching and learning methods in demonstration lessons or once per week during the teaching process. For example, one of the primary year teachers noted: "There are 40 students in the class, I am not even able to go to the middle of the class. So, how can I divide students into groups in this case?!". Teachers said during the discussion that it was possible to conduct group work activities and take individual characteristics of students into consideration when there were 20-25 children in the classes they teach.

3.4. The presence of noise in the classrooms serves to form negative feedback about the teacher

Teachers also reported that due to use of active teaching and learning methods in lessons, activities conducted in the classrooms cause the noise. Many of the teachers confirmed that the noise in the classrooms is assumed as an indication of a teacher's difficulty with classroom management and the lack of competency. The answer of the head of the school to the question "What do you do when you hear a noise while passing by the classroom in the corridor?" was the same: "I enter the classroom and find out the reason of the noise". Teachers refrain from using active learning methods which can cause a noise at schools where quietness in classrooms is being required.

3.5. The program of subjects is overloaded.

During focus group discussions teachers emphasized that the subject curricular were too overloaded. Teachers noted that according to the education program the subject of Physics is being taught starting as of the 6th grade and Chemistry as of the 7th grade. Only one hour per week is being allocated to teaching of both these subjects in the first academic year and the foundation of these subjects is taught for a year. Most students nowadays are not interested in Physics and Chemistry, as teaching main topics of the subject within one hour of teaching per week in a more interesting and clear way, there is no time left for conduction of lab sessions and carrying out experiments. In teaching other subjects, teachers point out the high number of topics as a factor that creates a barrier to connecting learning with the practice. At the same time teachers note that the sequence of the topics for the courses is broken. For example, if the topic "Combination of Carbohydrate Molecules" in Chemistry was the final topic in grade 11 in the past, now this topic is taught to students in grade 7 which is the first year of teaching. Thus, the sequence of the topics is broken and the systematic comprehension of the subject by students is limited.

3.6. Difficulties in differentiation based on students' learning needs

Teachers pointed out that differentiation of students learning is being regulated by the Rules on the conduction of attestation (excluding final assessment (attestation)) of learners on general education level, approved by the Decision #8/1 of the Board of the Ministry of Education of the Republic of Azerbaijan, dated December 28th, 2018. Students' knowledge and skills, their interest and motivation for the subject taught, is being evaluated as a part of diagnostic assessment at the beginning of the academic year. Through diagnostic assessment and continuous observations of a teacher, the level of students' understanding of topics is being identified and based on those levels they are given assignments. Providing additional time to a child who has the difficulty in comprehension of the lesson is being applied by teachers. Summative assessment of students is carried out based on the level of understanding of topics. Teachers confirm that the conduction of lessons based on differentiation of students' learning and having each of them to become active, has a positive impact on high motivation for learning. In addition, due to a large number of students in classes, teachers' poor lesson planning skills and ability of adapting them to the needs of students, and the number of topics taught within subjects, make it difficult for teachers to take individual characteristics of each child into account.

3.7. School documentation does not serve to improve the quality of teaching

There are a lot of paperwork related to the conduction of lesson that the teacher has to deal with. Most of documents prepared do not support the organization of lessons and take the teacher's additional time. Teachers noted "Teachers' formative assessment book" and "Students book" as examples for that. Teachers noted that the formative assessment in many cases had a formal character and teachers used ready templates of assessment criteria.

3.8. Existence of contradicting criteria in assessment of students' knowledge

Many teachers who participated in the study noted that rules on admission to higher education institutions had a negative impact on the organization of instruction at schools of general education. One of the teachers participating in the focus group discussions noted that "the reason why we use textbooks as the main teaching resource is that the State Examination Center prepares tests for admission to institutions of a higher education based on school textbooks. If we use different teaching resources during our classes, then students will not be able to get enough scores at entrance examinations to institutions of a higher education". In many cases according to teachers topics which are not covered by the curriculum are added to textbooks, or sequence of topics is not followed and based on these data the State Examination Center develops test questions for admission to institutions of a higher education. At the same time, although hours allocated for some topics on subjects taught in specialty groups at complete secondary education were reduced, tests on those subjects for final examinations remain the same for all groups. As a result, students gain low scores in subjects with reduced hours at graduation exams. For example, while 13 hours per week are allocated for "Complex Numbers" in "Algebra" in the 2nd specialty group, teaching of the topic "Complex Numbers" is not considered during 5 hours per week allocated for "Algebra" in the 3rd specialty group, however students prepared for both groups are expected to do assignments with the same level of difficulty in "Complex Numbers" during the graduation examination.

3.9. Difficulties in the use of teaching resources during classes

According to the article 1.0.47 of the Law on Education of the Republic of Azerbaijan, the process of education at the educational institutions is being carried out based on educational programs. Educational programs in themselves include learning outcomes and standards of the content for each level of education, subjects taught, number of hours of classes per week and extra-curricular activities, and the organization of the pedagogical process. The Law doesn't stress the importance of using textbooks as the sole means for teaching the subject. Textbooks are published by the state to support the teacher in teaching the subject. The practice shows that as teachers do not have independent lesson planning skills, they only teach subjects based on textbooks at schools, use information provided in the textbooks and the visual, didactic resources recommended. When the importance of the use of extra-curricular resources in teaching and learning process was explained to them, most teachers stated that they did not have extra time for that. Most of teachers participating in the study didn't search for extra-curricular information on the subject and did not develop teaching materials (didactic materials, visual aids, etc.). As a result, the lesson was being planned and conducted without taking students' capabilities and needs into consideration.

As another reason for the use of textbooks as the main resource, teachers pointed out the lack of opportunities (printer, computer, library, etc.) to access information from other resources. These reasons do not allow teachers to adapt the lesson to the needs of students, their own teaching methods, and mislead teachers to consider using textbooks as the main resource being the easiest and the safest choice. In classes of elementary school either teachers develop or buy didactic materials themselves or sometimes parents of students buy them. They stated that teachers have the knowledge and skills to develop such resources and use them regularly in classes. Teachers noted that the schools were not supplied with the visual aids, equipment, and resources to develop visual aids in order to use them more and effectively in lessons. It is important to provide the school with lots of visual aids and resources (computer, printer, books, etc.) for the organization of teaching and learning process rather than applying "one textbook per subject" approach which plays the instructional role in teaching subjects. It became clear that at schools where the research was conducted, there were no chemicals for conduction of laboratory experiments in Chemistry. There are no shelves in the laboratory for storing chemicals, and microscopes are not available at all the schools, which is important for teaching Botany. Thus, one of the reasons why students are less interested in Chemistry, Biology and Physics, and that classes are usually conducted in a traditional teacher-centered style, is already evident.

There is no room for storing visual aids at schools. Not having all classrooms being equipped with information and communication technologies (computer, projector, electronic boards, etc.) is one of the factors that creates obstacles in conduction of lessons interestingly and with active learning. Schools where the research was conducted there are no other subject-based classrooms in the main, besides of biology and physics. Classrooms are divided according to grades, all subject teachers except for biology, physics, and physical education conduct lessons in those classrooms. In such situation, the use of visual aids and teaching materials which is important in teaching those subjects, becomes complicated. Since teachers conduct lessons in classrooms of grades, but not in the subject-based classes, it is required that the places of desks be changed, and the classroom be prepared so that students can be grouped. Because of the preparation of the classroom in the beginning of the lesson and returning it to the same setting at the end of the course is time consuming, teachers say that they prefer to have classes in a traditional way.

4. Conclusion

As a result of the research, it can be noted that most teachers at schools of general education where the research was conducted accept student-centered education at the level of values are aware of its advantages, and partly incorporate strategies for the organization of learning in this area and sometimes apply them in their classes. However, classes are usually conducted in a teacher-centered style at schools. As in many developed countries, teachers at schools of general education in Azerbaijan teach the same topic to peer groups and children with a comparable level of development. The application of the one-to-one principle in the organization of instruction, setting a standard time frame for lessons, and the lack of differentiated instruction depending on students' needs do not allow the school to take students' characteristics into account. Because children have different learning abilities, different capabilities in different areas, they possess different experiences and knowledge. Thus, the traditional school culture that includes the legislation on education, pedagogical methods applied at classes, school infrastructure, the material, and technical resources, and the teacher's competence should be developed and adapted to the student-centered learning style. To be more precise, the school culture built on a teacher-centered education is not regulated solely by a teacher's competence or the teaching style. For this reason, even if a teacher at any school has the competency to conduct a student-centered lesson, it is clear from the research that the existing school culture will not allow a teacher to conduct a student-centered lesson.

Declarations

Author contribution   :   AK: Conceptualization, methodology, writing, and editing.

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