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# The Implementation of Student-Centred Instructional Strategies in Schools in North Cyprus

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## Abstract

The aim of this study is to examine the extent to which student-centred instructional strategies are implemented in schools in North Cyprus. Explanatory mixed-method design, where both quantitative and qualitative data were sought, was employed in this study. The quantitative data were collected via the administration of Student-Centred Instructional Strategies Scale (SCISS) to 309 high school teachers. The qualitative data, on the other hand, were gathered through employing semi-structured interviews with 33 teachers. The results of the study demonstrated inconsistencies regarding quantitative and qualitative data collected. While the results obtained from the SCISS indicated that instructional strategies are implemented at a moderately high level, the interviews clearly demonstrated that traditional methods and techniques still dominate high schools in North Cyprus.

## Keywords

Student-centred learnig

Student-centred instructional strategies

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## Introduction

Recently, there have been educational reforms and developments all around the world with the aim to improve the quality of instruction provided in schools. Today, it is important to develop and implement instruction to foster students' skills to communicate, think and reason effectively, make judgments, solve complex problems and work collaboratively (Gijbels, Van de Watering, Dochy, & Van den Bossche, 2006). Teacher-centred teaching (TCT), where teacher dominates the instruction while students passively receive the knowledge transferred by the teacher (Özer, 2008; Vighnarajah, Luan, & Bakar, 2008), has long been criticised for encouraging rote memorization and loading students with excessive information that can hardly be used in real life. Therefore, adopting a new teaching and learning approach, that would foster required skills, is deemed important.

Student-centred learning (SCL) has emerged as a reaction to TCT to enhance the quality of instruction offered in schools. SCL is a teaching and learning approach that places students at the centre of instruction rather than the teacher and/or the content. It considers the needs, characteristics, abilities, interests and preferences of students, involving students in decision making process and encouraging active participation (Attard, Di Iorio, Geven, & Santa, 2010; Blumberg, 2009; Loyens, & Gijbels, 2008; Özer, 2008; Weimer, 2002). SCL is a completely different teaching and learning approach implying different instructional strategies, roles for teacher and students, power relationship,

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motivation and assessment in classroom teaching and learning (Blumberg, 2009; Brandes, & Ginnis, 1986; Doyle, 2008; Lea, Stephenson, & Troy, 2003; UNESCO, 2002; Weimer, 2002).

*Instructional strategies,* being the most important component of SCL, are composed of teaching and learning methods and techniques used to enhance student learning. Today, students are expected to be equipped with skills and abilities that would enable them to think analytically and critically, solve real-life complex problems, reflect what they think and know, work in collaboration with others, monitor their own learning and make effective use of the technology. Instructional strategies play an important role in this respect and thus, should be selected and implemented in a way to enhance the aforementioned skills and abilities of students. The main aim of instructional strategies in SCL is to make students take active role in learning, make them aware of what they are doing and why they are doing it, focus on transferable skills, foster students' higher-order cognitive and affective skills, increase two –way interaction between students and teacher, activate students' prior knowledge and experience, help students develop independent learning skills, encounter students with real-life problems, provide students with multiple representations of the content and make students take responsibility for their own learning (Attard et al., 2010; Blumberg, 2009; Boyopati, 2000; Kember, 2008; Özer, 2008; Schunk, 2004).

SCL does not rely on a single method/technique; rather, emphasizes the use of various methods/techniques. The most widely used methods are problem-based learning, project-based learning, cooperative learning, task-based learning, resource-based learning, computer-based learning, discovery learning, and cognitive apprenticeship. The most commonly used techniques, on the other hand, include open-ended problems which require critical and creative thinking, simulations, role plays, discussions, projects/assignments, portfolio assignments, field work, case study and information gap (Attard et al., 2010; Boyapati, 2000; Ellington, 1996; Felder, & Brent, 1996; Ingleton, Kiley, Cannon, & Rogers, 2000; Kember, 2008; Özer, 2008). As Boyopati (2000) states, the main function of these methods/techniques is to get away from the traditional teacher dominated classrooms and enhance student involvement with greater participation. The core of teaching methods/techniques is to enable students to demonstrate what they are learning and also how they are learning. Another essential ingredient is to start from what is already known by the students and then move to what is not known. This allows students to "construct and climb a scaffold of understanding" through building on what they already know (Ingleton et al., 2000). On deciding which method/technique to use, the teachers need to bear in mind that not all students are motivated to learn in the same way, therefore, they may be required to use one or the other or a combination of them in different cases based on their students (Attard et al., 2010).

Despite educational reforms and developments, current research has indicated that TCT is still the main method of instruction in many developing countries. The results of a study conducted in 46 schools in Jordan by Mustafa and Cullingford (2008) demonstrated that teachers are stuck to lecturing as their main method of teaching. Hardman, Abd-Kadir and Smith (2008) found that instruction in primary schools in Nigeria is based on rote learning with little student participation. Similarly, Saito, Tsukui and Tanaka (2008) reported the actual teaching practice in primary schools in Vietnam as traditional, fostering competition among children. The study conducted by O'Sullivan (2004) in Namibia reported that although the teachers claimed to be implementing SCL, interviews and classroom observations indicated that traditional teaching is still the major teaching method used. The study carried out with teacher candidates in Malawi revealed that teacher candidates tended to apply SCL only at a surface level such as using group work activities where students sit in groups but work individually (Mtika, & Gates, 2010). Chiu and Whitebread (2011) found out that despite receiving in-service training on constructivist methodologies in teaching mathematics, none of the teachers fully implement these methods in their classroom in Taiwan. The two studies conducted in primary schools in Turkey indicated that the use of SCL is problematic in practice caused by serious issues such as poor teacher training, large classes and parental over-involvement in projects (Altinyelken, 2011; Güneş, & Baki, 2011). Yilmaz (2009) also found that Turkish teachers consider themselves as the main

transmitter of knowledge with traditional conceptions of teaching and learning. Ocak (2012) also reported that teacher candidates perceive teachers as inadequate in creating constructivist learning environments in classrooms. Moreover, a very recent meta-analysis consisted of research studies carried out in 72 developing countries illustrated that SCL is too challenging to be implemented in developing country contexts, and thus traditional TCT is still very common in schools (Schweisfurth, 2011).

Despite the presence of various educational opportunities including professional development programs and technological resources, studies in developed countries display similar results (Kember, 2008; Weimer, 2002). As Toh, Ho, Chew and Riley (2003) state "Many teachers have switched over from overhead transparencies to PowerPoint and other web based links as their medium of delivery … however this has not altered the fact that teaching is still very much teacher-centred" (p. 196). Murphy (2006) examined the Irish School Curricula and found that most teachers are implementing traditional lessons rather than activity-based child-centred approach. A very recent study conducted by Deed (2010) in Australia indicated that students were reluctant to be self-regulated learners, preferring to remain dependent on the teacher. A number of studies (Eberly et al., 2001; Hoyt, & Perera, 2000; Lammers, & Muphy, 2002; Liu et al., 2005; Nunn, 1996) conducted in the United States of America have pointed out the fact that knowledge transmission is the main focus with little attention given to skills and attitude development despite the call for a paradigm shift to SCL. The studies conducted both in developing and developed country contexts clearly demonstrate that there are problems in the implementation of SCL, and TCT is still used extensively.

In North Cyprus, the major educational reform that started in 2005 has necessitated the implementation of SCL in schools (The Cyprus Turkish Education System, 2005). Through its implementation, the Ministry of National Education aims to equip students with necessary competencies to access, evaluate and generate knowledge, with the use of lifelong learning skills that enhance critical thinking, effective communication, collaboration, creativity, productivity and problem solving. The adoption of SCL in schools has led to some modifications in the Cyprus Turkish education system. Initially, minor changes were made to the curricula used in primary and secondary education. Hence, instead of a teaching philosophy that puts teachers in the centre responsible for transferring knowledge presented in course books, the new curricula are based on SCL that considers students as active participants who are responsible for their own learning enabling them to reach knowledge through the use of various sources. In addition to minor modifications made to the curricula, some course books were revised to better suit the principles and characteristics of SCL putting more emphasis on higher order cognitive skills including critical and creative thinking and problem-solving. Moreover, student-centred assessment methods including portfolio and projects, and their benefits over traditional tests were introduced to the teachers (Ölçme ve değerlendirme yöntemleri, n.d.). In-service training programs that consisted of theoretical knowledge on characteristics and principles of SCL together with student-centred teaching and learning methods such as discovery and cooperative learning were also offered to the teachers by the Ministry of Education to ensure the effective use of SCL in schools.

According to the Ministry of National Education (2005) in Norh Cyprus, SCL is implemented in classroom practices in schools. However, the extent to which it is implemented is an area of concern for many educators, researchers and also for the Ministry of National Education. The fact that no research has been carried out to examine the implementation of SCL as a whole or any of its components emphasized the necessity to conduct research, which would enable further improvements on the use of SCL.

The purpose of this study is to examine the use of student-centred instructional strategies in high schools in North Cyprus. The study addressed the following two research questions:

1. To what extent do teachers implement student-centred instructional strategies in classroom teaching and learning in high schools in North Cyprus?
2. How does teachers' implementation of student-centred instructional strategies vary regarding their personal characteristics including gender, subject taught, teaching experience and teacher training program completed?

## Method

### *Research design*

Explanatory mixed-method design (Creswell, & Plano-Clark, 2011) where quantitative strand is followed by qualitative strand was employed in this study. The extent to which student-centred instructional strategies are implemented and whether teachers' use of these strategies vary, based on their characteristics, were described via the use of both quantitative and qualitative data. Within the framework of the reserach design used, the quantitative data were collected through the administration of Student-Centred Instructional Strategies Scale (SCISS) to high school teachers. The qualitative data, on the other hand, were collected through employing semi-structured interviews with 33 teachers. The findings obtained from both quantitative and qualitative data were integrated and discussed at the end of the study.

### *Participants*

The population of the study included all general high school teachers (n= 430) working for the Ministry of National Education in the 2010-2011 academic year. Since the study included the collection of quantitative and qualitative data, different sampling techniques were employed. Regarding the collection of quantitative data, the researchers tried to reach all general high school teachers due to the small size of the population. Out of 430 high school teachers, 370 of them volunteered to participate in the study, however, 61 of the scales were disregarded because of missing data. Consequently, the data gathered from 309 teachers were used in the study. Out of 309 teachers, 66.3% of the participants were female and 33.7% were male. With respect to the subject taught, 43.7 % of the participants were teaching social sciences, 27.8 % science, 17.5% foreign languages, and the remaining 11.0% fine arts. Regarding experience, 45.6% of the teachers had 1-10, 39.8% 11-20 and the rest had 20 or more years teaching experience. In terms of teacher training program completed, half of them were graduates of teacher education programs and the other half were graduates of other departments with teaching certificates.

With respect to the qualitative phase of the research, the sample was drawn using nested sampling strategy (Collins, Onwuegbuzie, & Jiano, 2007) in which the sample in the qualitative strand is a subset of the sample in the quantitative strand. The participants were selected purposively (Fraenkel, & Wallen, 2006) with the aim of constituting a sample that would best represent the characteristics of the teachers who participated in the quantitative part of the study. In total, there are 11 general high schools in North Cyprus so the researchers decided to interview three teachers from each school. Consequently, the sample for the qualitative phase consisted of 33 teachers out of 309 of them.

***Instrumentation***

Two different data collection instruments, Student-Centred Instructional Strategies Scale (SCISS) and Student-Centred Instructional Strategies Interview Form (SCISIF), were developed and used in the study.

The SCISS was used to find out the extent teachers use student-centred instructional strategies in their classrooms and also to further examine whether teachers' use of these strategies vary with respect to their gender, subject area, teaching experience and teacher training program completed. Since the participants were native speakers of Turkish, the SCISS was designed in the Turkish language. The content and face validity of the SCISS were established through obtaining expert opinion from 10 faculty members which resulted in some modifications such as rewording, omission and addition of some items. Exploratory factor analysis was conducted with the collected data from the population to ensure the construct validity of the scale with 18 items and some of those items were disregarded. The exploratory factor analysis included a principal component analysis with Varimax rotation. The criteria of factor loadings of at least 0.30 and variance explanation rate of 0.40 or over were used in factor analysis. Kaiser Criteria were adopted and the items with an Eigenvalue of over 1.00 were included. Then, the factors were rotated by using Varimax rotation. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was calculated as 0.81, which was well above the commonly recommended value of 0.60, and Barlett's test of sphericity was found significant ($X^2$ (78) = 870.24, $p$<.01) indicating that the data are suitable for factor analysis. The results of exploratory factor analysis are given in Table 1.

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**Table 1**. Results of Exploratory Factor Analysis of the SCISS

| Factor | No of items | Factor loads and *Item-test correlations | Eigen value | % of Variance | Cronbach Alpha Coefficients | % Total variance explained |
|---|---|---|---|---|---|---|
| Considering student characteristics in choosing strategies | 7 | 0.44 – 0.72 (0.38 – 0.55) | 3.806 | 29.280 | .78 | .51 |
| Independent learning strategies | 3 | 0.57 – 0.77 (0.53 – 0.60) | 1.714 | 13.206 | .74 | |
| Traditional teaching methods/techniques | 3 | 0.70 – 0.78 (0.64 – 0.68) | 1.078 | 8.295 | .80 | |

**Note**: *Item-test correlations are given in parenthesis.

As shown in Table 1, the SCISS had a three-factor solution. The total variance explained for the scale is 0.51%. Factor loads of the items ranged from 0. 44 to 0.78. Factor 1 included 7 items related to "considering student characteristics in choosing strategies". Factor 2 included 3 items related to "independent learning strategies" and factor 3 also included 3 items related to "traditional teaching methods / techniques". The Cronbach Alpha internal consistency values (Hair et al., 2009) for the three sub scales ranged from 0.74 to 0.80 exceeding the minimum alpha of 0.6. Based on the results of the analysis, it can be concluded that the SCISS is proven to be a valid and a reliable to be used in this study. The final version of the SCISS (Appendix) consisted of 13 items on a 6-point Likert Scale ranging from 0 to 5 where (0) refers to never, (1) almost never, (2) seldom, (3) frequently, (4) almost always and (5) always. Out of 13 items, 10 were in the affirmative and the remaining 3 in negative. The negative items were coded reversely before data analysis.

In addition to SCISS, Student-Centred Instructional Strategies Interview Form (SCISIF) was prepared and used to complement and elaborate the results obtained from the scale. The interview questions were prepared parallel to the items used in the scale and contained questions such as "Which instructional strategies do you usually use in your classrooms? Why?", "What factors do you consider when choosing strategies? Why?", "Which teaching and learning methods/techniques do you

think are the most effective? Why?", "Do you use student-centred teaching methods/ techniques? Why?/why not?", "Do you do group work activities? Why?/why not?". Expert opinion was sought to ensure the validity of SCISIF, followed by pilot interviews (Silverman, 2004) with five high school teachers and necessary amendments were made. To further ensure validity and reliability, procedures that include 'audit trail' (Miles, & Huberman, 1994) and 'coding checks' (Cohen, Manion, & Morrison, 2007; Miles, & Huberman, 1994) were utilized. The inter-coder agreement (Miles, & Huberman, 1994) was found to be in the 90% range.

***Data collection and analysis***

The required data for the current study were gathered from the teachers teaching in 11 general high schools through SCISS and SCISIF. Before the study, the teachers were informed about the purpose of the study and their consent was sought. The teachers were also told that their participation in the study is of crucial importance in examining the use of student-centred instructional strategies in classrooms.

Initially, the SCISS was administered to volunteered teachers in staff rooms of schools which lasted about 20 minutes. After the administration of the SCISS, the SCISIF was employed. Semi-structured interviews took approximately 40 minutes each, were conducted in Turkish to avoid language barriers, and tape recorded. After the collection of the qualitative data, all interviews were transcribed verbatim. The study protected the anonymity of the teachers throughout the study by using pseudonyms. Both instruments were administrated by the researchers.

Data collected via the use of SCISS were analysed using statistical tests on the SPSS program. To find out the extent student-centred teaching strategies are used, descriptive statistics were applied and means and standard deviations were calculated. Regarding how teachers' implementation of instructional strategies vary with respect to gender and pedagogical knowledge, independent samples *t* test was utilized, and for subject area and teaching experience one-way ANOVA test was administered. The data gathered from the interviews, on the other hand, were analysed through the use of thematic analysis (Gibson, & Brown, 2009) with a focus on commonalities, relationships and differences across data. Regarding the analysis of the qualitative data, apriori codes, adapted from the SCISS which consisted of "real-life contexts," "prior experiences," "interaction," "group work," "autonomy," "individual abilities," "lecturing," "individual work" and "one basic teaching method" were used to form a basic outline for preliminary categorization. In addition to apriori codes, empirical codes were also generated inductively. Following coding, two main categories that include "traditional teaching and learning methods/techniques" and "student-centred teaching and learning methods/techniques" were developed.

## Results

***The extent to which student-centred instructional strategies are implemented***

In order to find out the extent to which student-centred instructional strategies are implemented, firstly the means and standard deviations were calculated. In addition to that, teachers' opinions gathered through the interviews were analysed. The analysis of the data as well as the findings obtained is discussed below. The results obtained from the analysis of the data gathered through the scale are presented in Table 2.

**Table 2**. Statistical Values Regarding the Instructional Strategies and Its Factors

| Instructional strategies | Min | Max | M | 95% CI | SD | Frequency |
|---|---|---|---|---|---|---|
| Considering student characteristics in choosing strategies | 11.00 | 35.00 | 25.22 | [24.69, 25.76] | 4.73 | High |
| Independent learning strategies | 2.00 | 15.00 | 10.87 | [10.59, 11.15] | 2.49 | High |
| Traditional teaching methods/ techniques | .00 | 15.00 | 7.63 | [7.30, 7.96] | 2.96 | Heterogeneous |
| Instructional strategies total | 22.00 | 62.00 | 43.73 | [42.93, 44.53] | 7.18 | Moderately high |

As displayed in Table 2, the results revealed homogeneity among the teachers in implementing student-centred *instructional strategies* at a moderately high level. The two factors, c*onsidering student characteristics in choosing strategies* and *independent learning strategies* received a high level of usage. *Considering student characteristics in choosing strategies* factor includes items related to using authentic tasks/problems, considering student prior knowledge, needs and abilities in choosing strategies and using student-centred teaching methods. *Independent learning strategies* factor contains items about helping students relate new learning to their prior experiences, giving students the opportunity to learn at their own pace and encouraging autonomy. Unlike these two factors, the reported frequency level for the factor of *traditional teaching methods/techniques* was moderate. About this factor, the obtained results revealed heterogeneity among teachers. Based on these findings, it can be concluded that some teachers perceive themselves as using these methods/techniques whereas some do not. This factor includes the use of a single teaching method, lecturing, and encouraging individual learning rather than team work items.

As a result of the analysis of the interviews with 33 teachers, *traditional teaching and learning methods/techniques* and *student-centred teaching and learning methods/techniques* categories emerged from the data.

Regarding the *traditional teaching and learning methods/techniques*, traditional teaching methods and techniques were reported to be used extensively in all subjects. Teachers stated that they mainly use lectures, question and answer, giving examples and whole class discussion in their classes:

> At the beginning of the lesson, I always write the rules on the board and explain everything very clearly. Then I give examples, I try to give a lot. I also encourage them to ask questions. This is the best way to teach a new topic, I believe. (Selma, an English language teacher)

> I want complete silence from my students when I present a new topic. First I explain them everything. I write the rules on the board or ask them to underline it in their books. I solve problems on the board. Then I give them some questions. If they have problems in answering the questions, I explain everything once more. (Tuna, a math teacher)

According to these teachers, who voice many others, lecturing is the most effective and also the most widely used teaching method, particularly in presenting new topics. The teachers stated that they mainly lecture to explain the rules, give examples and then ask questions as they believe that this is the most effective way to teach a new topic. The data clearly demonstrated that teachers use traditional approach where they impart necessary knowledge and skills, and students are not expected to discover anything on their own.

Most teachers (29) also stated that they prefer students to work individually rather than in groups. There is a common consensus among teachers that it is better for students to work alone than in groups. The teachers also said that they can easily monitor each student and provide extra support when they work on their own. This is reinforced when Azra, a physics teacher, summarized her ideas in the following way:

> I don't prefer students to work in groups. I think it's much better for them to work on their own. That's more effective I think. I can also check whether they have understood the topic or not. If I ask them to work together, it will be much more difficult for me to control them and see who has problems in answering questions.

The above quote reveals Azra's concern that she wants to be in control of everything that happens in class. This is a common concern among the teachers that does not have a place in SCL (Attard et al., 2010; Brandes, & Ginnis, 1986; Beaten, Kyndt, Struyven, & Dochy, 2010; Kember, 2008). In SCL, the teacher is in control only for a temporary period of time and the students are the owners of the learning process. Moreover, in SCL, the students do not only learn from the teacher but also from each other through group work activities.

The qualitative data also revealed that homework is assigned regularly to individual students with the aim of reinforcing previously covered topics.

With respect to the *use of student-centred teaching and learning methods/techniques*, there was absolute unanimity among teachers that student-centred teaching methods are time consuming, difficult to be used in the classroom and not very effective in preparing students for nationwide exams with multiple choice questions. This is reinforced by Burak's, a Turkish language and literature teacher, comments:

> I know student-centred methods such as discovery learning, but to be honest, I don't use them because they're time consuming and very difficult to use. … I said difficult because in discovery learning, you need to get students work on examples until they formulate the rules themselves. I have too many topics to cover .... I also have to prepare these children to university exams. That's more important I think.

Burak's comments clearly indicated that teachers have concerns regarding the university exams. They feel the pressure to prepare students to exams and thus tend not to use student-centred teaching methods which are considered as time consuming. Only few teachers (6) mentioned using discovery and/or cooperative learning methods.

There was a consensus among teachers that pair and group work activities are not very effective compared to individual work. Moreover, pair and group work activities are avoided because of time constraints. Most teachers (23) stated that students tend to make too much noise and disturb each other when they work in groups:

> Group work activities just don't work. They [students] work very slowly. It takes too much time. Some do nothing and disturb the others. I want everybody to participate but it's very

> difficult. ...They speak very loudly, sometimes they argue. So, I want them to work on their own. (Irmak, a chemistry teacher)

Irmak's ideas, also highlighted by many others, clearly showed that teachers do not prefer to do group work activities because they have some concerns such as time constraints and noise.

***Teachers' characteristics and their perceived use of student-centred instructional strategies***

In order to find out whether high school teachers' use of student-centred instructional strategies vary depending on their characteristics including gender, subject taught, teaching experience and pedagogical knowledge, independent-samples *t* test and one-way analysis of variance (one-way ANOVA) were conducted.

With respect to *gender, subject taught* and *teaching experience,* the test results were non-significant (p>.05). However, regarding *pedagogical knowledge,* the result of the independent-samples *t* test was significant $t(295) = -2.23$, $p = .03$ only for the *traditional teaching methods/techniques* factor. The findings revealed that the teachers who have teaching certificates (M = 8.08) implement traditional teaching

## Discussion, Conclusion and Suggestions

In this study, it is aimed to find out the extent to which student-centred instructional strategies, an important component of SCL, are implemented. For this purpose, both quantitative and qualitative data gathered from high school teachers are used.

Although the data regarding instructional strategies used in classroom practices indicated that student-centred instructional strategies including its two factors, considering student characteristics in choosing strategies and independent learning strategies, are used at a moderately high level, the same data demonstrated that traditional teaching methods/techniques are still present in high schools. In other words, the qualitative results gathered through in-depth interviews, displayed a completely different picture from the quantitative findings. While the quantitative data demonstrated that the student-centred instructional strategies are used at a moderately high level, the qualitative findings showed that traditional TCT still dominates instruction in classes. The interview results demonstrated extensive use of lectures, question and answer, individual work and whole class discussion. Student-centred teaching methods/techniques that includes discovery learning method and group works are not preferred to be used as they are considered as time consuming and difficult to be used in classroom practices. Teachers also stated that they do not prefer to use student-centred teaching methods/techniques because there are too many topics to cover and they need to prepare students to university exams. In other words, it can be said that traditional approach is preferred as it is found to be more effective in presenting new topics and preparing students to exams. This finding is consistent with the findings of the studies conducted both in developing and developed countries indicating that traditional instruction still dominates the teaching and learning process in schools (Chiu, & Whitebread, 2011; Eberly et al., 2001; Hardman et al., 2008; Hoyt, & Perera, 2000; Lammers, & Murphy, 2002; Liu, Qiao & Liu, 2005; Mohammad & Harlech-Jones, 2008; Mtika& Gates, 2010; Murphy, 2006; Mustafa, & Cullingford, 2008; Nunn, 1996; O'Sullivan, 2004; Saito, Tsukui, & Tanaka 2008; Schweisfurth, 2011).

On the other hand, based on the findings obtained related to the teachers' personal characteristics, no significant difference was found in the use of student-centred instructional strategies regarding *gender* (p>.05). This finding contradicts with what Lammers and Murphy (2002) found out in their study indicating that male instructors tend to lecture more compared to female instructors in classroom practices. Similarly, no significant difference for the teachers' *subjects taught* (p>.05) was reported. This finding is in line with the studies of Kember and Gow (1994) and Stes, Gijbels and Petegam (2007). However, there are also studies indicating significant differences (Lindblom-Ylanne, Trigwell, Nevgi, & Ashwin, 2006; Lueddeke, 2003; Singer, 1996). The results showed that teachers teaching "hard disciplines" such as maths, chemistry and biology tend to use

teacher-focused approach more compared to teachers teaching "pure soft disciplines" and "applied soft disciplines" like history and education. With respect to *teaching experience*, no significant difference was found in teachers' use of instructional strategies in their classes ($p>.05$).This resonates with the findings of a study conducted by Stes, Gijbels and Petegam (2007) who pointed out the fact that there is no relationship between teaching experience and teaching approach. *Undergraduate program completed*, on the other hand, seemed to have an effect on the use of instructional strategies, demonstrating that teacher education program graduates implement student-centred instructional methods/techniques more compared to graduates of other faculties. The results of descriptive statistics also showed the heterogeneity of the teachers indicating that traditional methods/techniques are used alongside student-centred ones in classrooms. This finding may be explained by the fact that teacher education program graduates are better equipped with respect to the implementation of student-centred instructional strategies in classroom teaching and learning.

The following conclusions are drawn at the end of this study examining the extent to which student-centred instructional strategies are implemented in high schools in North Cyprus.

Although the new education system requires and supports the implementation of student-centred instructional strategies in classrooms and teachers consider themselves as using these strategies at a moderately high level, it has been found out that these strategies are not favoured as they are reported to be time consuming, difficult to use and not very effective for exam preparation. Besides, lecturing was found to be the most widely used teaching method in high schools with the methods/techniques of SCL such as problem-based learning, project-based learning, task-based learning, discovery learning, open-ended problems, role plays, field work and case study method being excluded.

On the other hand, since there are no significant differences in the frequency level of teachers' use of instructional strategies regarding gender, subject taught and teaching experience, these variables do not seem to have an impact on the implementation of student-centred instructional strategies. With regards to undergraduate program completed, the teachers who are graduates of teacher education programs were found to implement student-centred methods/techniques more than graduates of other faculties. Hence, it can be said that undergraduate program completed affects the implementation of instructional strategies in classroom teaching and learning which is probably related to the fact that their educational background better equips them with the necessary skills and knowledge to use student-centred instructional strategies.

As a result of all the findings obtained from the study, it can be concluded that although SCL has been in practice in schools since 2005, student-centred instructional strategies are not implemented at a sufficient level, and traditional methods/techniques still dominate the teaching and learning process in high schools in North Cyprus.

Based on the findings of this study, the following recommendations are made to enhance the use of student-centred instructional strategies by the teachers in high-schools in North Cyprus:

- The results of this study emphasized the urgent need for more professional development programs for teachers with respect to the implementation of methods/techniques of SCL. The findings obtained from the interviews indicated that teachers still prefer to use traditional methods that include lectures, question and answer, and individual work as they believe that these are the most effective methods and techniques to be used. Therefore, professional development programs should be designed in a way that changes teachers' beliefs about teaching and learning. Current research (Borg, 2011; Lin, Chuang, & Hsu 2014; Tam, 2015; De Vries, Van de Grift, & Jansen, 2014) provides evidence of the effectiveness of alternative methods such as observations, reflections and action research essential for updating and changing teachers' beliefs providing them with opportunities to put theory into practice.
- Teacher candidates studying in teacher education and teacher certificate programs at universities in North Cyprus should be equipped with knowledge and skills essential for effective use of student-centred instructional strategies. Particularly the ones studying in teacher certificate programs seem to need more guidance and support. Another fact is that, teacher candidates are usually educated through the use of traditional lectures (Haser, & Star, 2009; Onurkan Aliusta, Alasya, & Özer, 2011; Schweisfurth, 2011; Struyven, Dochy, & Janssens, 2010). As a result of this, since they tend to teach in the way they are taught they fail to implement student-centred teaching methods/techniques effectively in their classrooms.
- Content load and university exams were reported to be important factors that inhibit the use of student-centred instructional strategies. In-depth interviews indicated that student-centred teaching methods are not used as they are found to be time consuming. High school curricula used in high schools in North Cyprus should be analysed by the curriculum developers working for the Ministry of National Education and if found necessary, certain amendments should be made. In terms of assessment system, the qualitative data revealed that teachers feel the need to prepare students to exams rather than allocating time for student-centred instructional strategies. Methods used to assess students' performance have a direct impact on instruction offered to students. Consequently, student-centred assessment methods such as portfolios and projects that focus on process rather than product should also be introduced in high schools and teachers should be assisted in using them.
- The aim of this study was to investigate the extent to which teachers implement student-centred instructional strategies in high schools. The data gathered indicated inconsistencies regarding the implementation of student-centred instructional strategies in classroom practices. Consequently, further research is required to uncover what actually goes on in classrooms regarding the use of instructional strategies. This could be achieved through conducting direct and systematic classroom observations.

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**Appendix 1.** Content of the Student-Centred Instructional Strategies Scale (SCISS)

| Factors | Items |
|---|---|
| Considering student characteristics in choosing strategies | I use tasks, problems and exercises based on real-life contexts.<br>I consider my students' prior experiences in designing learning activities.<br>I use teaching methods that make students active in class.<br>I consider individual abilities of my students' in choosing instructional strategies.<br>I choose instructional strategies based on the needs of my students.<br>I encourage interaction among students through group work activities in class.<br>I make my students aware of what they are doing and why they are doing it in learning. |
| Independent learning strategies | I help my students relate new learning to their prior experiences.<br>I allow each student work at his/her own pace in class.<br>I guide my students to be autonomous learners who are responsible for their own learning. |
| Traditional teaching methods / techniques | I encourage individual work in my class.<br>I use one basic teaching method in class.<br>I use lecturing for presenting my subject material to my students. |