Challenges of applying a student-centered approach to learning in the context of education in Kyrgyzstan

Roxane de la Sablonnière [a,*], Donald M. Taylor [b], Nazgul Sadykova [c]

[a] Université de Montréal, Département de psychologie, C.P. 6128, succursale Centre-Ville, Montréal, Qué. H3C 3J7, Canada
[b] McGill University, Department of Psychology, 1205 Dr. Penfield Avenue, Montréal, Qué. H3A 1B1, Canada
[c] American University of Central Asia, Department of Psychology, 205 Abdymomunov St., Bishkek 720040, Kyrgyzstan

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ABSTRACT

The challenge of maximizing student learning has been paramount in many societies. This issue has become especially salient in the context of drastic social and political changes that have taken place in countries such as Kyrgyzstan. Since the collapse of the Soviet Union, teachers and students are confronted with new ways of thinking, which are challenging their understanding of how to promote efficient learning. In this paper, the challenges of applying and developing a new approach to learning, the student-centered approach, will be discussed within the framework of a Normative Theory of Social Change.

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Confucius said: to learn without thinking is labour in vain. To think without learning is desolation.
The Analects of Confucius

1. Introduction

Best educational practices have been a center of intellectual inquiry for centuries. Predating contemporary research, philosophers, ranging from those of ancient Greece to the 20th century, have made education a central preoccupation. For example, Socrates (470–399 BC) believed that true knowledge was only accessible through dialogue, and he continuously questioned and challenged accepted ideas and assumptions. Today, education continues to be debated, and not only by philosophers, but also by lay persons, and through the mass media, including newspapers, television and radio (e.g. see The Education Debates by CBC radio, 1999). The vast number of scholarly publications devoted to this topic internationally clearly illustrates the central place education occupies among society's intellectuals.

The articulation of the most desirable philosophy of education remains a hotly debated issue often expressed in the form of a conflict between two prevailing teaching orientations: the teacher/expert approach versus the student-centered approach. According to the first approach, the teacher is the main source of knowledge. The learner is expected to follow the instructions of, and information provided by, the teacher in order to learn material. By contrast, according to the second approach, education should be centered on the needs and abilities of the learner. The teacher's role is that of a facilitator in the learning process rather than a provider of knowledge.

In Western societies, teachers and students have been exposed to both the teacher/expert and student-centered approaches from public debates and also real-life experiences in classrooms. For example, the United States, Canada and the European Union spend significant resources to promote a student-centered approach at all levels of education. A variety of different approaches have been developed under the umbrella of the student-centered approach. These include cooperative learning, student-centered instruction and hands-on learning.

In contrast to Western countries, the controversy surrounding the teacher/expert versus the student-centered in Central Asia is radically different. This difference is due to the fact that people in Central Asia were suddenly exposed to a new way of conceptualizing education. Specifically, it is only recently that teachers and students have been exposed to this debate between the two approaches. This is not surprising given that the background for the debate is the context of dramatic and rapid changes that have impacted Central Asia, including education. Consequently, the debate between these two approaches becomes especially pronounced in societies experiencing fast paced political, economic and social changes, because the question of what should be taught and how it should be taught becomes a matter for the very future survival of the society.

* Corresponding author.
  E-mail address: roxane.de.la.sablonniere@umontreal.ca (R. de la Sablonnière).

The aim of the present paper is to consider these two contrasting pedagogical approaches as they apply to the contemporary educational systems of one of the most politically and economically dynamic regions of the world, Central Asia. At the time of the Soviet Union, Central Asia inherited from the Soviet Union a pedagogy that focussed predominately on the *teacher/expert approach*. However, the recent openness to Western values, promoting a predominantly *student-centered approach*, is now challenging the foundations of the traditional Soviet-based educational system. For example, the influx of non-governmental organizations (NGOs) after the collapse of the Soviet Union, as well as the arrival of foreign teachers and institutions in Central Asia raises the issue of the possible benefits of replacing the *teacher/expert approach* with a more *student-centered approach*.

In this theoretical paper we present a conceptually novel perspective to help us understand the dynamics of these changes. The clash between the *teacher/expert* and *student-centered approach* will be analyzed within the framework of a Normative Theory of Social Change (Taylor and de la Sablonnière, 2009). We propose that the existing normative structure in Central Asia makes it problematic to promote a *student-centered approach*. Despite the fact that the value of the *student-centered approach* is widely acknowledged among educators in Central Asia, the majority of teachers, students and institutions are nevertheless not adhering to it. We theorize that efforts devoted to promote a *student-centered approach* will be successful only if the minority, who supports this approach, adopts a new strategy and becomes more vocal, organized and confident.

Although our normative approach can be applied to a variety of countries that are facing dramatic social change (e.g. Kazakhstan, Russia, Mongolia), we will focus exclusively on Kyrgyzstan. Kyrgyzstan was chosen for two main reasons. First, Kyrgyzstan shares similarities with other former Soviet Union countries in terms of challenges associated with education that were manifested after, and because of, the collapse of the former USSR (Shamatov, 2005; Joldoshalieva and Shamatov, 2007). These problems include insufficient resources for academic institutions, insufficiently qualified colleagues, high rate of student drop-outs, constantly changing curriculum, severe lack of textbooks, as well as low salaries with frequent delays and deductions (Shamatov, 2005). Second, Kyrgyzstan was chosen because of the dynamic educational reforms that are currently being introduced that are leading to some improvement with regards to education (Shamatov, 2005; Joldoshalieva and Shamatov, 2007). Therefore, we argue that in the long-term, Kyrgyzstan could become an example of a successfully implemented reform for other countries that face similar challenges. Specifically, the education system in Kyrgyzstan is becoming a focus of attention among Kyrgyz as well as the international communities (Heyneman and De Young, 2004). A number of publications have been devoted to changes that have evolved in the system of education in the country (e.g. Anderson, 1999; Heyneman and De Young, 2004; Sharshekeeva, 2001). Based on these developments, Kyrgyzstan represents a unique template for applying a Normative Theory of Social Change toward a *student-centered approach* to education.

2. The teacher/expert versus student-centered approaches in current pedagogy

2.1. The teacher/expert approach

The underlying principle of the *teacher/expert approach* to education is rooted in the psychology of behaviorism and of positivism philosophy. Behaviorism understands learning as a system of behavioral responses to physical stimuli, driven by reinforcement, practice and external motivation. Applied to the educational sphere, educators devote their time and resources to deconstructing subject matter into its constituent parts and developing a sequenced, well-structured curriculum. This method is based on the Mastery-learning Model (Bloom, 1976), which assumes that just as wholes can be broken into parts, skills can be broken into sub-skills. In this context, successful learning is associated with the mastery of specific designated skills and behavior.

With this *teacher/expert approach,* learners are viewed as relatively passive, and their behavior needs to be shaped by external reinforcement controlled by teachers (Skinner, 1953). Learners need an "expert" to fill them with information: they are "empty vessels to be filled with knowledge" (Garfield, 1995; Moore, 1997). Knowledge is defined as an entity that can be given or transmitted and absorbed by students. Popper, for example, labelled this "the bucket theory of knowledge" (Popper, 1986). A good teacher is therefore someone who transfers information clearly and at the right pace (Moore, 1997). Learning is viewed as a linear process, progressing steadily from "not knowing" to "knowing".

The *teacher/expert approach* is characterised by the predominant use of traditional methods of teaching such as formal lectures, seminars and examinations. The teacher provides structured material during lectures, where students listen while taking notes. Then, during seminars, the teacher asks students the extent to which they understood this material. Finally, received knowledge is tested by administering examinations several times during the term. This approach is relatively efficient since it allows educators to teach many students within a rather short period of time. Unfortunately, in most situations such conditions may promote a "surface" rather than "deep" level of understanding and orient students towards performing only at the minimal level required to obtain a good grade in the course (Biggs, 1999).

The *teacher/expert approach* is also rooted in the positivist philosophy, which refers to the theory that knowledge can be acquired only through direct observation and experimentation, and not through metaphysics or theology (Giddens, 1974; Mises, 1951). The concept was first coined by Auguste Comte, the first modern sociologist in the 19th century, and was followed by other scientific and philosophical thinkers such as Émile Zola, Emile Hennequin, Wilhelm Scherer, and Dimitri Pisarev (LeGouis, 1997). In the context of education, positivism implies that learning emphasizes observable facts while excluding metaphysical speculation about origins or ultimate causes. This would serve as an explanation for how children learn, and how reality is perceived through discourse of knowledge, by which teachers are providers and experts. Hence, this doctrine contends that perception through the senses is the only admissible basis of human knowledge where the figure of authority transmits precise thoughts.

2.2. The student-centered approach

Practices associated with the *teacher/expert approach* are opposed by the school of "constructivism" (Piaget, 1973; Vygotsky, 1978), that we refer here to as the *student-centered approach*. Constructivism proposes that people have no veridical access to objective reality, but are constructing their own version of reality while at the same time transforming it, and themselves in the process. Concept development and deep understanding are given priority over specific skills and behaviors as the goal of instruction. It is a theory of learning, not a description of teaching, and hence not a "cookbook teaching style" (Fostnot, 1996).

The theorizing of Piaget, whose main goal was to understand the mechanism of learning, is fundamental to constructivism. Piaget's contribution to the learning process has been applied extensively in education (Panofsky et al., 1990). Piaget's core idea

was that children are active thinkers, constantly trying to construct a more advanced understanding of their world. He focused on the development of logical or systematic concepts through social exchange. Similarly, Vygotsky (1978) considers the articulation of systematic concepts to be developmental. Emphasis is placed on the social environment surrounding children as a model for the development of many of their thoughts, beliefs and behaviors. According to scientists (Cobb et al., 1992), the individual's cognitive structures cannot be understood without observing the individual having commerce with their social environment. From a constructivist perspective, students are actively and individually construing their own social knowledge, rather than merely copying knowledge (Garfield, 1995).

In the educational context, ideas and concepts of constructivism led to the development of a *student-centered approach* to learning. Learning is considered to be a complex process that is not possible to deconstruct into logical parts. The learner is not a passive receiver of knowledge but, rather, an active participant. The learner has the responsibility to accommodate the learning process to his/her own unique learning style in order to structure his/her own learning. The teacher's role is that of a guide who assists the learner in the difficult process of constructing his/her individual system of knowledge. For instance, teachers will need to show students how to become responsible for their learning by giving them opportunities to frame questions effectively on their own, to see how problems can be represented, and to determine how to gather information relevant to these problems (Burbules and Linn, 1991). Another example highlighting the role of the teacher in the *student-centered approach* ensures that children operate within their zone of next development. More precisely, teachers need to shape expectations so that students can recognize relevant information as it emerges, as well as to interpret new data in constructive and organized ways. These actions will contribute to their capacity to retain knowledge over time (Burbules and Linn, 1991; Reif, 1987), and to have an active role in it.

2.3. Proposed benefits of the student-centered approach over the teacher/expert approach

According to researchers in the field of education, there is evidence to support the view that a *student-centered approach* has positive consequences to learning (Darling, 1994). Specifically, the *student-centered approach*, or what Darling (1994) refers to as the Child-Centered Pedagogy (CCP), promotes class participation. This new approach allows students to become more open and more efficient at making decisions on their own, and it also recognizes that interactions between teacher and student are natural, thus breaking the psychological barrier whereby students see their teachers as experts (Darling, 1994). Another important consequence of the *student-centered approach* is the notion of cognitive processes. What is to be learned is determined by the child's understanding at the precise moment and knowledge is build upon and constructed on what the learner already knows (Darling, 1994).

When comparing evaluation methods, the *student-centered approach* is more successful than the former traditional teacher/expert structure since students engage in "real-world" tasks rather than multiple-choice tests. Specifically, the *student-centered approach* allows teachers to evaluate students according to criteria that are important for actual performance for their future instead of their memorizations skills (Wiggins, 1989). Consequently, the *student-centered approach* supports the development of higher order thinking, both cognitive and metacognitive, as well as performance skills which are based on a constructivist perspective building upon learners' strengths and needs (Darling-Hammond, 1994; Frenay et al., 1998; Piaget, 1973).

In fact, the *teacher/expert approach* is criticized with regards to traditional standardized testing, more precisely for placing students in a passive, reactive role, instead of engaging their capacities to come up with ideas, solve problems or structure various tasks (Darling-Hammond, 1994; Garfield, 1995) which greatly fail to measure acquired knowledge and stimulate learning. Therefore, "the quality of education made available to many students has been undermined by the nature of the testing programs used to monitor and shape their learning" (Darling-Hammond, 1994, pp. 12–13).

2.4. Moving from a teacher/expert approach to a student-centered approach

Although an educational shift, from a *teacher/expert approach* to a *student-centered approach,* maybe associated with positive consequences, it nonetheless requires teachers and students to respectively modify their thinking and actions towards education. First, teachers will need to change their role as professionals, to develop competence programs, to adapt their lectures to include interactions with the class, to consider students' prior knowledge and background (impact of cultures), as well as orient and guide students in their learning process (Frenay et al., 1998). In other words, teachers will need to accept that the relationship between teaching and learning is now different (Tagg and Barr, 1995). Second, students will be required to participate in their own learning process; that is become active learners, and focus on transferring information and knowledge to other disciplines and to real life situations (Frenay et al., 1998).

In sum, a change in approach signifies that both teachers and student change their attitudes and behaviors to education. The already existing normative structure in terms of education needs to be modified in order to support a new way of conceptualizing education. This is precisely what our Normative Theory of Social Change attempts to do. First, our Normative Theory of Social Change offers a theoretical framework for understanding people's reaction in face of dramatic social change that affects the normative structure of a group. Second, our Normative Theory of Social Change proposes a concrete solution designed to facilitate the shift from a *teaching/expert approach* to a *student-centered approach*: minority influence.

3. A Normative Theory of Social Change

The core postulates of our Normative Theory of Social Change (Taylor and de la Sablonnière, 2009) are based on the often referred to 80:20 rule. Any group, organization, or institution, seems to experience the same imbalance. Instead of every member of a group receiving an equal share of resources, 20% of the members require an inordinate percentage of the group's resources, be they attentional, financial, human, or emotional. The same 80:20 rule seems to apply to organizations at all levels from units as small as the family, to companies, to nation states. Every organization or group is comprised of socially defined formal and informal norms, to the point that we accept, as a given, that organizations have a "shared culture". The entire social organization ideally requires strict adherence to the norms in order to maximize the smooth and effective goal-directed functioning of the group. For example, if we take a classroom of 100 students, the majority (80%) of them will know that it is important to arrive on time to class and that success depends upon their preparation for the class, their attention during class, and follow-up revisions of material. A minority (20%), however, will be dysfunctional, constantly arriving late to class, missing classes and being unprepared for exams.

If the majority of members in any social organization adhere to the norms (e.g. 80%), the organization or the university has a

reasonable chance of surviving and indeed achieving some, if not all, of its goals. If the majority of group members do not adhere to the socially defined norms, ineffective social interactions and chaos will be the inevitable result and the goals of the group will not be achieved. Therefore, the 80% who follow the norms by conforming to them, play a crucial function in supporting and encouraging the attention given to the 20% who do not follow the norms. Acting as role models, the 80% define "normal" and provide a visible example for appropriate behavior to the non-normative minority (20%). In this manner, the 80% pressures the minority to show up on time to class and stop talking when the teacher is explaining important information to the class.

In contrast, the minority (20%) that do not adhere to the norms, are the ones that require attention. They require attention, first because by not following the norms, they disrupt any collective effort that a social organization undertakes to achieve its goals. Second, individuals themselves will suffer by being "out of step", and thus may be in need of assistance. The end result is that disproportional resources will be allocated to these non-normative individuals. The aim of the 80% is to bring these individuals "back in line" so that they integrate into the normative structure of the social organization, and thereby contribute to the organization's collective goals.

The power of the 80% majority, to bring the minority "back in line", is based on principles of social influence. That is, the 80% can put inordinate pressure on a non-normative individual. Classic social psychology experiments initiated by Asch (1956) clearly demonstrate how apparently normative members of a group can influence an individual member to comply with the group, even when compliance contradicts the individual's common sense. Milgram (1974) further illustrated how an individual member of a group will conform to the request of a legitimate authority figure, even when that authority figure may be violating universally defined moral behavior. Finally, Zimbardo's experiments (1982) underline the extent to which individuals will conform to the normative expectations of a role defined by the group. Together, these experiments demonstrate the power of social influence when a number of group members, or a consensually defined authority, wish to pressure an individual group member to conform to the group's norms. The majority (80%) can indeed induce inordinate influence on the minority (20%). The non-normative 20% are routinely targeted to at least ensure that the percentage remains at 20% and does not rise to 30% or 40% which would seriously compromise group functioning.

The Normative Theory of Social Change is not based on absolute numbers. Ideally, 100% of a group's members would conform to the norms, but such an ideal is never reached. However, if at least 80% conform, the group will function effectively. The group becomes compromised when the percentage of normally functioning group members falls to 75% or 70%. For example, it is possible that at the time of the Soviet Union, 80% of the people, both students and educators, were conforming to the norms in place in terms of education and thus adhering to a *teaching/expert approach*. At the fall of the Soviet Union, because of the initial enthusiasm related to the introduction of new reforms promoting a *student-centered approach*, it is possible that the normative structure was more confused resulting in a 50:50-normative structure. Now, almost 20 years after the fall of the Soviet Union, it is possible that the normative structure has moved back to 70:30 where 70% are adhering to a *teaching/expert* approach. Because the new reforms promoting a *student-centered approach* might not have had the support of the majority (80%) during its implementation at the fall of the Soviet Union, it is possible that people reverted back to the *teacher/expert approach* as they remembered it as a successful one during the Soviet Union. However, because there is a minority that continues to promote the *student-centered* approach, it has never

reached the functional proportion of 80:20, as was the case during the Soviet Union, but a 70:30. The numbers may not be exact, but they clearly are not at the 80:20 structure needed for effective functioning.

4. Apply a Normative Theory of Social Change to the student-centered approach in Kyrgyzstan

The Normative Theory of Social Change has already been successfully applied to other contexts where dramatic social change has occurred (Taylor and de la Sablonnière, 2009). Thus, we believe that the Normative Theory of Social Change may be a useful tool for analyzing the successful implementation of educational reform in Kyrgyzstan. Specifically, the 80:20 normative structure of a group is prototypical for most functioning groups or societies. In Kyrgyzstan,[1] the former Soviet teacher/expert 80:20 normative structure has changed rapidly and dramatically, challenging the normative structure to its core.

4.1. Education during the Soviet era

Although Kyrgyzstan has been politically independent from the Soviet Union for almost 20 years, education in Kyrgyzstan remains a legacy from the Soviet system of education. Soviet education was a highly centralized and unified system, where the Ministry of education strictly determined curricula, textbooks and methods of teaching. In fact, in the former Soviet system, there were limited opportunities for input from civil society and international organizations, as education was strictly controlled by socialist states (Silova and Steiner-Khamsi, 2008).

In terms of our Normative Theory of Social Change, the majority of educators (the 80%) endorsed a *teacher/expert approach* to education. Rather than a facilitator of the learning process, the teacher was considered to be an expert who is a provider of knowledge. This system tended to promote "reproductive knowledge", i.e. the knowledge that should be memorized for further reproduction (Sharshekeeva, 2001), rather than productive knowledge that might be used creatively.

Because of the strict and coercive structure of the Soviet Union, the 20% might well have been on even smaller number (maybe 1% or 2%). We speculate on this because the minority would not have had any opportunity to engage alternate methods in education. Specifically, the alternative way to conceptualise education, the *student-centered approach*, was non-existent at the time of the Soviet Union.

At a more conceptual level, the Soviet system of education was based on Marx and Lenin's philosophical approach, an approach that was considered to be the ultimate truth (Reeves, 2005). For example, students were led to believe that there were categorically right and wrong answers even in the interpretation of events in society. Reeves (2001) captured the essence succinctly by observing that:

> High education here (Kyrgyzstan) is having to deal with the legacy of an education system that was not just highly prescriptive in terms of the *content* of what was taught, but, perhaps more importantly, in terms of the interpretative lens through which reality was permitted to be understood [...] Each of these dimensions of higher education – the content, the theory and the mode of transmission – was ultimately oriented

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[1] Although our paper focuses mostly on higher education, a few sources are taken from the literature concerned with schools. We argue that these sources can be applied to the context of higher education since they touch upon similar problems (e.g. lack of resources both human and material). Even if schools have had more input from international agencies, and perhaps more open to change, a lot of normative problems are remaining.

toward demonstrating that "truth" was unitary rather than plural, absolute rather than relative (p 20).

There is no doubt, that the Soviet system was highly effective within the economic and cultural context at that time. Impressive results, such as literacy levels rivaling those of Western countries, were not surprising considering that the philosophy of education during the Soviet area was conformed to societal norms defined by the majority (80%). Applying and adhering to a *teacher/expert approach* was not only normal but also expected.

4.2. The current situation

With the collapse of the Soviet Union, Kyrgyz teachers were challenged by new demands. They were asked to provide, as a matter of survival for the entire society, a form of education that would best fit the fast paced changes that were, and are, confronting Kyrgyz society. The contemporary job market in Kyrgyzstan requires people to have an elevated and flexible level of cognitive and creative thinking skills. In 2006, a report from the El-Pikir Center for Public Opinion Studies (2006), a Kyrgyz organization, underscored the need for educators to teach such skills to children even in primary schools. In order to achieve this goal, the report recommended modern learning approaches similar to the *student-centered approach*. However, today, the majority of teachers in Kyrgyzstan, still use traditional teacher/expert methods of teaching inherited from the Soviet Union, and consequently, are not capable of developing these skills in students (Manohina, 2004). For instance, in Kyrgyzstan, there is a "tremendous surplus of college educated graduates who were unemployed and also that employers were dissatisfied with the skills of their new college educated workers" (Drummond and De Young, 2004, p. 229).

The problem in education is precipitated by the on-going economic and political crises, and lack of funding for education in the country (Agvanyanc, 2003; Botoeva, 2001). In the last decade there have been attempts to implement changes in education in Kyrgyzstan, especially to make a shift towards a *student-centered approach*. For example, the foreign presence in the Kyrgyz education sector is rather significant. Moreover, attempts to make a shift have been witnessed in public schooling, more precisely with investments in the social contract whose benefits are believed to increase students' experience of learning while influencing the wider society (Heyneman, 2000). This highlights the importance of the shift towards a *student-centered approach* and its significance in examining the challenges associated with the educational system in Kyrgysztan. The post-Soviet reform in education is more student-centered and now mirrors pedagogies and specializations available in Western societies. Unfortunately, these reforms were not well received by educators as it only impacted those few who were able to adapt to it. "Given the universal resentment that grew out of the history of treating children as ideological conduits, the speed and certainty of these reforms is understandable" (Heyneman, 2000, p. 180).

The country is presently at a crossroads of educational traditions from many Eastern and Western countries. Indeed, many foreign universities are subsidized (e.g. American University of Central Asia, the Kyrkyz – Turkish Manas University). Reforms in education are supported by foundations such as Soros and the Asian Development Bank. His highness the Aga Khan also contributes to these changes in the educational system, especially through his involvement with the University of Central Asia whose main goal is, in part, to promote a student-centered learning approach in Kyrgyzstan (University of Central Asia, 2008). In terms of educational reform in Kyrgyzstan, organisations, such as UNICEF (United Nations Children's Fund), UNDP (United Nations Development Programme), USAID (United States Agency for Interna-

tional Development), Academy of Education Development (AED), as well as Asian Development Bank, all significantly influenced both socio-political and educational development in the region. The collaboration of these various NGOs and international agencies led to important improvements in local policy, such as de-monopolization and enhancement of teacher training in Kyrgyzstan (Silova and Steiner-Khamsi, 2008). Kyrgyzstan is one of the countries in Central Asia with the most international agencies. However, this recent openness to Western values was based, partially, on the involvement of international organizations working to further develop Kyrgyzstan in the early post-Soviet period (Silova and Steiner-Khamsi, 2008), suggesting that their current involvement might not be adapted to the current normative structure in promoting a shift from the *teaching/expert teaching* to a *student-centered approach*.

4.3. Challenges and solutions

All the social changes occurring in Kyrgyzstan have thus created an enormous disruption in the educational system. The 80–20 normative structure inherited from the Soviets is being challenged and norms defined by the majority doubted. For example, the presence of foreign aid where teachers implement their "student-centered approach" values has led to a major disruption of the normative structure. The *teacher/expert approach* preferred by Soviet leaders is being challenged and is no longer considered by many to be appropriate within the new social context. By the same token, the *student-centered approach* has not been adopted by the majority; only a minority of teachers, students and institutions have attempted to implement it, or engage in it. For example, creating creative tasks for school children, in order to maximize their intellectual development, is still one of the least used teaching strategies (El-Pikir Centre for Public Opinion Studies, 2006). The minority (20%) favouring the *student-centered approach* have faced ongoing resistance from the majority (80%) that is no longer securely established and that no longer has the unchallenged power to define what is normative. At this point, despite many attempts to promote reform, the majority (80%) of educational establishments in Kyrgyzstan still adhere to the traditional Soviet teacher/expert approach that is based on reproductive knowledge and memorization. For example, a majority of courses in universities within Kyrgyzstan are still taught in the same way as in the early years of the 1990s, and educational programs have not been greatly modified according to new approaches (National Tempus Offices, 2007). At present, like anyone facing dramatic social change, the majority of Kyrgyz educators are reluctant to change. This is explained by of one or a combination of the following reasons: the lack of motivation, the reluctance to compromise their privileged position, the need for facilitating conditions, and the paucity of resources.

The challenge of moving from a *teaching/expert* to a *student-centered approach* is enormous as it involves a minority (20%) influencing the majority (80%). A concrete solution that can be applied to education in Kyrgyzstan is "minority influence" (Moscovici et al., 1994; Moscovici and Personnaz, 2001).

The strategy of minority influence focuses on how a minority influences the majority. While majority influence is rooted in the power of numbers, minority influence is governed by a totally different process, but research suggests it is only possible for a minority to influence the majority under optimal conditions (Taylor and de la Sablonnière, 2009). The minimum requirement is that the minority stays unified, vocal and consistent (Moscovici et al., 1994). Because the minority (20%) of people promoting the *student-centered approach* do not have the benefit of widespread support, they have to be acutely aware of their message compared to those favouring the traditional *teacher/expert approach* who try

to exert influence on them. In Kyrgyzstan, this issue is exacerbated by leaders of the traditional *teacher/expert approach*.

In order to be persuasive, the minority proclaiming the *student-centered approach* must be doggedly vocal, unified and consistent in their arguments. Faced with such a determined minority, the majority who may feel no pressure to comply, may begin to engage in what theorists label a "validation process" (Moscovici et al., 1994).

The validation process involves members of the majority beginning to question and perhaps even doubt their own views. When a majority influences a minority, the power of the majority is such that the compliant minority may do little other than superficially comply. In contrast, the validation process provoked by the process of minority influence may be more difficult but, when it succeeds, it stimulates genuine attitude and social change. That is, the change is not superficial compliance in the face of overwhelming numbers, but the genuine internalization of change. Once the validation process is set in motion, majority group members will be motivated to carefully review their position compared to that advocated by the minority. The result will be more creative. According to some researchers, divergent and creative thinking will be stimulated (Mucchi-Faina et al., 1991; Peterson and Nemeth, 1996). Even if the minority's position is not immediately and automatically adopted, critical thinking will be activated and a careful review of alternatives will be considered. For example, if the 20% is sufficiently unified, vocal and consistent in arguing that the *student-centered approach* is the most efficient way for learning and teaching, it is possible that parents will start insisting that their children attend universities which promote such an approach.

Minority influence, lacking the power of numbers, has no guarantee of success. But when successful, changes that are promoted will most often be for the long-term and internalized which makes it possible for Kyrgyzstan's educational system to have increased hope for applying a *student-centered approach*. Although challenges faced by the minority favoring the student-centered approach (20%) are enormous: not only must the minority resist the norms as defined by the majority, but they must also impose their will on the majority 80%. In our opinion, obstacle to education reform is the fact that the reform-minded minority is not unified, vocal and consistent. To be unified, vocal and consistent, a reform-minded group needs to be supported by organizations of its country. By organizations, we refer to those groups of individuals bound together for a common purpose, and as we can see, there are many types of organizations currently involved in Kyrgyzstan (Heyneman, 2000). The main ones are political, economic, social and educational. However, when we review educational reform in Kyrgyzstan, one question remains: what are the educational contributions from those NGO's and international agencies? So far, they all have been making their individual contribution to the country (Heyneman, 2000). Thus, there is no collaboration among them, no groups of individuals bound together for a common purpose. It seems that organizations compete and undermine each other while giving the impression of misusing funds from international donors (Silova and Steiner-Khamsi, 2008). For instance, the World Bank has a strong interest in privatization and cost-sharing, UNICEF focuses on the importance of global education, and SFN mostly works on fostering a civil society (Silova and Steiner-Khamsi, 2008). However, these NGOs ignore fundamental education issues relevant to the local needs of the country since they do not work together. The reason behind this non-collaboration, non-unification, is based on the principle that they each have their own agendas.

We argue that educators need to be more aware of the different reforms taking place within the country. This is consistent with the point of view of specialists who argue that in order for reforms in Kyrgyzstan to be efficient, a greater involvement from the population is needed in terms of decision-making and monitoring (Kuichumanov et al., 2005). Presently, not only is there a low unification between the NGOs and international agencies, but there is also a lack of communication among universities and schools within the country. There are not enough conferences, symposia, and workshops that would bring together educators from different schools and universities. There are a limited number of Kyrgyz professional associations or programs that might unify representatives of similar pedagogical orientation representing different professional communities. As an example, only a minority of primary schools are eligible to participate in regional programs or projects that could bring teachers together (El-Pikir Centre for Public Opinion Studies, 2006). Then, in general, information about the status of various reforms across the country is very limited. There is very little exchange of ideas and experiences among Kyrgyz. For instance, while writing this paper, the authors found it very difficult to obtain clear information about various reforms throughout the region. In addition, even if those are few Kyrgyz publications to inform educators about the reforms in education, low salaries make educators unable to access these publications (Education for All Forum, 1999).

To achieve successful social change in terms of education, there are two necessary steps in order to maximize the likelihood of constructive change in education. First, a student-centered approach needs to be clearly and simply articulated. Second, mechanisms are needed that allow for every stakeholder in the education process to be fully informed about the processes arising from educational reform. For example, schools, institutes and universities need to develop a common identity and sense of belonging to the broader reform-minded community. Since traditionally the Ministries of education have been the major source of power in education, they need to take a leadership role by publicizing new programs and emphasizing a unified philosophy of education. Ministries of education could bring together various governmental agencies, foreign sponsors and individual local initiatives, with a view to solidifying a well-defined policy. Foreign agencies, schools and universities would thereby become more unified and consistent in implementing educational change. Otherwise, in the best-case scenario, the real changes in education will take place sporadically and be met with overwhelming opposition.

5. Conclusion

The biggest challenge facing the educational system today in Kyrgyzstan, as in the rest of Central Asia, is the lack of a normative structure in the educational system. The former Soviet Union states moved from the well-established *teacher/expert approach* to being disrupted by social changes that operated in the region. In spite of all the changes in the educational system in the region during the last decade, we cannot say that there has been a significant shift toward a *student-centered approach* where the learner plays a more active, constructionist role. Because clear norms are no longer promoted by a majority favoring one approach over the other, it is not surprising that the educational system is chaotic and inefficient. If institutions in Kyrgyzstan, and in the overall region of Central Asia, choose to commit to a *student-centered approach* rather than a *teacher/expert approach* more resources need to be provided to the minority who are championing such changes. Their task is a daunting one since it flies in the face of a well-established traditional normative structure. It is never easy for the 20% to change the 80%.

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