Improving the reflection process: A multi-case study of CAS implementation in six IBDP schools

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Executive Summary

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Abstract

The Creativity, Action, Service (CAS) program is a required experiential learning element of the International Baccalaureate Diploma Programme (IBDP) curriculum. This study examined the ways in which CAS program reflection was implemented at six IBDP schools in Turkey. Using multi-case study, data was collected and analyzed from interviews with students, teachers, and administrators, as well as with some document analysis of sample reflections from students. The findings show that schools relied on varied forms of reflection, with some examples of authentic reflection, such as periodic essays or verbal interactions between advisors/teachers and students. Recommendations based on this research include improving the pre-reflection process, integrating more authentic timing for reflections, using a variety of means for reflections, clarifying the importance of reflections with students, giving students more regular feedback, and closing out the CAS program with greater emphasis on post-reflection.

Introduction

This study focuses on reflection practices within the Creativity, Action, Service (CAS)[1] program as it is implemented at six schools in Turkey. CAS is a central component of the International Baccalaureate Diploma Programme (IBDP) for which students are mandated to pursue creativity, physical activities and service learning outside the purview of traditional academics. In addition to planning and executing various relevant activities, students are required to reflect on these activities as a means of actuating, integrating, and internalizing their learning experiences, and thus supporting their social-emotional—and sometimes intellectual—development. The present research suggests that there are existing reflection practices which are not necessarily effective, as revealed by comments from students, teachers, and administrators.

This executive summary is a shortened version of my MA thesis in curriculum and instruction, completed at Bilkent University (Perry, 2015). For the more complete details, you may request the full thesis, by emailing me at: stirling.perry@gmail.com.

Background

The IB is a decidedly idealistic curriculum, with a mission that includes the "aims to develop inquiring, knowledgeable and caring young people who help to create a better and more peaceful world through intercultural understanding and respect." At the core of the IB curriculum are three essential components: the Extended Essay—an original research thesis of 3000-4000 words; Theory of Knowledge—a course on epistemology, examining what a person knows and how she knows it; and Creativity, Action, Service—a broad category which encourages students to pursue activities outside the classroom. According to the CAS curriculum guide:

> Creativity encourages students to engage in the arts and creative thinking. Action seeks to develop a healthy lifestyle through physical activity. Service with the community offers a vehicle for a new learning with academic value. The three strands of CAS enhance students' personal and interpersonal development through experiential learning and enable journeys of self-discovery (CAS Guide, 2008).

Students engage in CAS activities throughout the course of the DP curriculum—during (typically) the final two years of high school. Common activities include painting or music (Creativity), playing sports or participating in regular physical activity (Action), and community service programs working with less-fortunate individuals or other under-serviced community partners (Service). Students are encouraged to see these activities not as

[1] The title of the program changed in 2015 to "Creativity, Activity, Service" (CAS Guide, 2015).

separate from academics, but as another component essential to their education—extending and complementing what they learn within the classroom:

> CAS enables students to enhance their personal and interpersonal development through experiential learning. At the same time, it provides an important counterbalance to the academic pressures of the rest of the Diploma. [It] should be both challenging and enjoyable, a personal journey of self-discovery. Each individual student has a different starting point, and therefore different goals and needs, but for many their CAS activities include experiences that are profound and life-changing (CAS Guide, 2008).

Furthermore, it is important that students attempt to balance their activities more-or-less equally across the three categories of Creativity, Action, and Service. Athletically talented students, for example, are encouraged to participate in artistic and service activities, and students who already participate in the Arts are encouraged to pursue physical development.

The CAS Guide (2008, 2015) delineates outcomes for students to achieve in order to pass CAS. The initial outcomes (based on the 2008 CAS guide) were as follows: students are expected to have "increased their awareness of their own strengths and areas for growth," "undertaken new challenges," "planned and initiated activities," "worked collaboratively with others," "shown perseverance and commitment in their activities," "engaged with issues of global importance," "considered the ethical implications of their actions," and "developed new skills" (CAS Guide, 2008). As of 2015, these were condensed into seven outcomes—combining the *undertaking of challenges* with *developing new skills* into a single outcome.

The intended outcomes are broad in scope, and purposely ambiguous. These are outcomes that many typical school curricula pursue implicitly through extracurricular activities (sports, service learning, etc.)—most of which would be considered suitable as CAS activities. However, the IB is very conscientious in emphasizing the importance of CAS to support the intellectual and holistic development of each student: CAS is not intended merely as a checklist of activities but a means of encouraging students to realize and value the kinds of learning that go on outside the classroom.

Simply planning, executing, and attending CAS activities regularly—and maintaining a record of the activities—is not sufficient: the IB requires that students *reflect* on their experiences to recognize and internalize the lessons and identify skills that they developed during the course of the activity. Indeed, research suggests that reflection is essential to turn service into learning (Wilczenski & Cook 2009). Reflection allows a person to establish cognitive connections, to make explicit the lessons that would otherwise be implicit, to have realizations about the value of such experiences, and to recognize how one has grown and developed.

Dewey (1910, p. 209-210) also wrote of the importance of reflection:

> The working over of a vague and more or less casual idea into coherent and definite form is impossible without a pause, without freedom from distraction. We say "Stop and think"; well, all reflection involves, at some point, stopping external observations and reactions so that an idea may mature. Meditation, withdrawal or abstraction from clamorous assailants of the senses and from demands for overt action, is as necessary at the reasoning stage, as are observation and experiment at other periods… A silent, uninterrupted working-over of considerations by comparing and weighing alternative suggestions, is indispensable for the development of coherent and compact conclusions.

Dewey is here discussing reflection specifically as a part of the "formal steps of instruction," in a classroom, but it is no less true for the lessons that one learns in their daily experiences. Simply playing sports or volunteering—while admirable activities in themselves—are less likely to yield insights when such activities are not accompanied by some form of reflection. Reflection need not be anything as formal as a diary: merely stopping and thinking actively about the activity is a type of reflection; or sitting around with one's teammates and discussing the dynamics of a match; or writing a blog entry about a volunteering experience.

There is a common refrain among these reflective activities: they allow one to consider *what* happened, along with *why* and *how* it happened. The *whys* and *hows* are key to developing insight into how certain methods, perspectives, or relationships can lead to different outcomes in a given situation.

According to the guidelines established by the IB, the basic reflective questions to be asked of any CAS activity are the following: What did I plan to do? What did I do? What were the outcomes, for me, the team I was working with, and others? (CAS Guide, 2008, 2015). Reflection can take many forms: public or private, individual or shared, objective or subjective. Furthermore, the IB encourages students to use a variety of reflection methods—writing or journaling is by no means the only method. Simply having a group discussion (with an educator-moderator ideally) after an activity is often an effective method of reflection. Other methods include oral presentations, as well as "scrapbooks, photo essays, videos/DVDs or weblogs." (CAS Guide, 2008). The revised CAS Guide (2015, p. 30) has added that all DP students "are expected to maintain and complete a CAS portfolio as evidence of their engagement with CAS and achievement of the seven CAS learning outcomes. The CAS portfolio can also reveal how students have developed the attributes of the IB learner profile."

Problem

In my own experience as an IBDP educator, I have heard many students complain about "being forced" to do "useless" reflections for CAS. "Why do we have to do this?" is a common refrain from DP students. What's more, teachers and CAS advisors are continually employed in cajoling, pestering, and otherwise demanding students to complete their reflections such that they do not fail CAS and, consequently, fail the DP. Teachers

furthermore have often reported that the quality of CAS reflections leave something to be desired: it often appears that students are doing reflections perfunctorily and without actively engaging in the kind of reflection that leads to personal insight and growth—the very *raison d'etre* of CAS.

Preliminary analysis of this multi-case study also revealed many IB students expounding upon their strong dislike of "doing" reflection for CAS activities or projects. Students elaborated on a common refrain that the reflection process within CAS is a burden; that they do not perceive any value in reflection other than as a requirement for an IB diploma; and that they wished the reflection process was different.

In short, CAS reflection, as typically implemented at IB schools in Turkey, is not functioning as intended by the DP curriculum: students dislike doing it, and teachers are disappointed with the student products. From an educational standpoint, this is a serious issue. Reflection is a core curricular component in the CAS program—the means by which students connect experiential learning to both academic learning and self-knowledge. If it is the means by which a person turns service into learning (Wilczenski & Cook 2009), then there is a real possibility that students are not accessing the full benefits of the CAS program.

Purpose

With multi-case study design and selectively inviting six IB schools to participate in the study, this research was engaged for three primary purposes. First: to understand and explicate how the CAS program—with a focus on the reflection process—is implemented at six IB schools in Turkey. Second: to identify and understand attitudes, opinions, and perceptions about the process of CAS implementation from various stakeholders—student, teachers, and administrators. The first two purposes include the identification of strengths and weaknesses of the CAS programs—some schools as will be shown, were more successful than others in supporting students' approaches to reflection. The third purpose of this research: to discover more effective practices of reflection within CAS programs, and within similar service-oriented or experiential learning curricula around the world.

Research Questions

This study was guided by four questions:

1. How is reflection implemented at six IB schools in Turkey?
2. What are strengths and weaknesses of the CAS reflection process?
3. To what extent did the means used for CAS reflection support the learning process?
4. To what extent does ManageBac support reflection?

As it stands, there is a considerable dearth of research about CAS not only in Turkey, but around the world, though some studies have been summarized elsewhere (Brodie, 2014). Nor is there much research about service learning in general in Turkey. The secondary educational system is focused on a narrow set of subjects which are tested on the national entrance exams for university. There is such an emphasis on this exam, in fact, that most Turkish national students during their senior year of high school stop participating in extracurricular activities altogether to focus on preparing for the exam. Extracurricular activities have little or no bearing on university entrance, nor do students see much efficacy in those activities beyond enjoyment. As a consequence, educational researchers in Turkey have conducted little research on service learning or even other extracurricular activities. Consequently there is an information gap in terms of how CAS—and specifically the reflection process—is being implemented at the various DP schools.

Method

This research is part of a larger research project with Drs. Robin Ann Martin and Manolya Tanyu. As a more-focused study, it focused on approaches to, and outcomes of, the reflection process within CAS.

The research used non-participatory multi-case study, employing descriptive content analysis, would be the most appropriate research method (Cohen, Manion, & Morrison, 2007). The "bounded system" in question is reflection implementation within CAS programs at six IB schools in Turkey. More narrowly, the boundaries include the participants—grade 11 and 12 students, and the teachers, supervisors, and administrators of those students—during a particular time period—November 2013 to March 2014.

In terms of the transferability of the data, there are many IBDP schools—more than 1000—around the world. Even though individual school cultures may be different, one would expect some similar challenges are faced in implementing the reflection process, particularly in countries whose broader educational systems tend toward more traditional approaches of teaching and learning.

Concerning the trustworthiness of the data collected, it was noted that CAS coordinators naturally wanted to portray their CAS program positively—inasmuch as their job security as a CAS coordinator is directly related to the perceived success of their program. Having known that my data would be published (albeit maintaining the anonymity of schools and individuals), there is a possibility that CAS coordinators—and perhaps administrators as well—gave slightly biased answers to interview questions. As such, the analysis was adjusted to account for

potential biases. Teachers and students, on the other hand, were surprisingly frank in their discussions (I made it clear that I would not discuss the responses of any one participant with other participants).

Context of IBDP in the Turkish national system

Onur (2011) published a case study of the integration of the IBDP and the Turkish national high school curriculum at her institution, Koç School, in Istanbul, Turkey. She purports that at Koç there had been a "convergence" between the national curriculum and the DP (approximately 30% of Koç students pursue the DP in addition to the national curriculum). "Convergence" implies two entities incorporating characteristics of each other as they become more similar. However, a closer reading of the chapter suggests that in fact it was the national curriculum courses that adapted some methods and philosophy of the DP—rather than the converse. This gradual process started with non-IB students participating in CAS activities, then taking IB courses, followed by teachers who adapted their methods to more closely approximate those of the DP. This can be seen as a testament to the value of the DP: according to the author, this convergence was initiated first through the efforts and desires of students, rather than the administrators or teachers.

Both the DP and the Turkish national curriculum teach essentially the same subjects (experimental and human sciences, languages, math, arts, and electives), though typically using different methods. The unique strength of the DP thus lies in the way in which these subjects are woven together with the IB philosophy (primarily the "Learner Profile") and—more concretely—the three entities at the core of the DP: CAS, the Extended Essay (EE), and Theory of Knowledge (TOK), of which CAS is the most prominent in terms of the time commitment required of students. According to the official IB "Diploma Programme: General Regulations" (2014), a student should devote approximately 40 hours to the EE, and 100 hours to TOK (not including assessment preparation). CAS requires, however, considerably more commitment: students are expected to participate in CAS activities on a *daily basis* throughout the DP. Prior to 2010, the official requirement was 150 hours of CAS participation, though that number has been replaced by a set of expectations for participation that has—in reality—often led to students completing far more than 150 hours.

Furthermore, while the EE and TOK both focus on academic skills and concepts, CAS focuses on experiential learning, which is rarely a part of the school curricula in Turkey. All this suggests that the "convergence" achieved at Koç, or other schools like it, may not be not predicated so much on the Turkish national curriculum, but on the unique programs within the DP: the EE, TOK, and to a greater extent, CAS.

Participants/Sampling

Six schools were chosen for this study through purposeful sampling. Two schools were initially known to have strong CAS programs, and recommendations were sought of other well-established IBDP schools with strong CAS programs in Turkey. The schools chosen had had the DP (and other IB curricula) longer than most other IBDP schools in Turkey. All schools were also located in urban areas in Ankara and cities west of Ankara, which is representative of where most IB schools in Turkey are located.

Table 1 provides basic characteristics of the participating schools. Four of the schools were originally established with only the Turkish national curriculum, having adopted the DP as a secondary curriculum. A fifth school was inclusive of both curricula from its inception, and a sixth school was composed of international students as a counterpoint to the national schools. Students at the national schools delivering IB curricula are almost exclusively Turkish, thus they are mandated by law to fulfill the MEB requirements for a Turkish high school diploma. Those students who are in the DP—though they are pursuing an International Baccalaureate Diploma—nevertheless must complete the MEB requirements concomitantly with their DP studies (no small feat considering the rigor of both programs).

Table 1: Summary of participating schools

School	Year DP started	# of DP students	Total # of students (grades 11 and 12)	% of DP students to total students
School 1	1994	220	489	45%
School 2	1996	90	90	100%
School 3	1997	80	80	100%
School 4	1999	263	1044	25%
School 5	2005	72	291	25%
School 6	2006	64	130	49%

The variance of school sizes should also be noted. In a large institution like Schools 1 or 4, the CAS coordinators are under considerable pressure due to the sheer number students under their aegis.

Our student focus groups were composed mostly of Turkish nationals (except for in School 3), with varying degrees of English fluency—though all were fully capable of expressing their thoughts competently in English. The students are generally from middle- and upper-income families. The majority of teachers in our focus groups were also Turkish nationals, though there were a few international teachers as well. The DP curriculum

is taught in English—as per requirements—so most teachers also were able to communicate effectively in English; however at five of the six schools, translators were used in the teacher focus groups to help those more fluent in Turkish to feel more comfortable with questions as well as responses.

In terms of technology, Schools 1 and 3 used a web-based system called ManageBac—this program helps students, teachers, and supervisors to organize and manage various facets of the DP, including CAS. There is a specific function in ManageBac for submitting CAS reflections, to be discussed in more detail later. Schools 2, 4, 5, and 6 used other means—primarily on paper—to manage CAS activities, including reflection; though at least two of the schools also integrated Moodle systems.

Data collection

This study used two primary research methods, focus groups and individual interviews, along with a third method of document analysis. Creswell (2007) provided guidance for developing the interview protocols and techniques.

At each school there were four sessions: an individual interview with an administrator overseeing the CAS program (usually a school director or IBDP Coordinator), an individual interview with the CAS coordinator (sometimes there were multiple coordinators), a focus group interview with four to six IBDP teachers, and a focus group interview with five to eight IBDP students. The CAS coordinator was asked to choose students of varying degrees of motivation in regard to CAS: two of low motivation, two of moderate motivation, and two of high motivation. In this manner, ideally, a range of comments were collected.

The interviews were recorded and then transcribed in preparation for content analysis. Additionally, a variety of documents related to the CAS programs were gathered from each school. Triangulation was done across stakeholders and documentation. The documents included examples of written reflections and various curricular documents, and other forms related to the administration of CAS and CAS reflection.

Data analysis

Guidelines were followed for content analysis and case study as established by Neuendorf (2002) and Creswell (2007). Based on steps of Neuendorf's flow chart model (2002, p. 50-51), the content analysis was as follows:

1. *Rationale*: Reflection was the focus for this study because in other schools where I had worked, I saw the poor state of student reflection and wanted to understand the factors that may have contributed to that outcome.

2. *Conceptualizations*: Concepts of reflection such as pacing, timing, and authenticity, were determined based on implementation literature and also a thorough review of the theory and literature on reflections (see Perry, 2015, Chapter 2).

3. *Determining measures*: Protocols were developed appropriate to each stakeholder group (see Appendix A). For face validity, the protocol questions were developed using guidelines from prior research and the CAS Guide. The guide elaborates certain methods and structures to be followed for programs to align with the aims of CAS.

4. *Coding schemes*: Nvivo 8, a program designed for qualitative research analysis, was used to code the data. Sixteen primary codes were decided upon. Within each primary code, there were secondary sub-codes. For example, primary code number 6, "Student motivation for CAS," contained secondary sub-codes such as "6.3 - Work on established interests" and "6.7 - Fun, enjoyment." Within each transcript, blocks of text were assigned one or more codes. For this study, I looked specifically at the following codes: 3.4, "Monitoring Students;" 3.4.1, "ManageBac"; 3.5, "Student reflection process;" and 8.2.2, "Writing reflections, journals, forms – Challenges for students."

5. *Training and pilot reliability*: There were three coders working with the same codes and raw data. To ensure similar interpretations across coders, several transcripts were coded together, and we discussed discrepancies to come to a mutual understanding.

6. *Tabulation and reporting*: After all transcripts were coded, we collated the data for each code horizontally. For example, selecting code 6.3, one can see the responses from all the schools related to "Fun, enjoyment" as a "Student motivation for CAS." Additionally, the data were organized vertically by school, showing the prevalence of each code within each school studied.

Thus, larger themes and patterns across schools and across stake-holding groups were revealed. The next step was to develop a narrative for each school. A profile report was written for each CAS coordinator that summarized our interpretation of CAS in their school. These reports were sent to the respective CAS coordinators for the purposes of participant checks, with clarification questions specific to each school; after receiving their comments, the reports were appropriately corrected. Then, I analyzed reflection more specifically (as summarized in Perry, 2015, Chapter 4).

Findings

Research question 1: How is reflection implemented at six DP schools in Turkey? The schools were grouped into several categories, according to the distinguishing features of their CAS reflection implementation.

Schools with strong support for authentic reflection processes

Unlike the other schools in our study, Schools 1 and 3 encouraged students to use a variety of methods for reflection (provided those methods could be uploaded, in some fashion, to ManageBac). School 3 was the most innovative in using the "CAS Panel" as a motivating element, assessment tool, and reflection exercise in itself.

Overall, it could be said that much of the success of reflection implementation specifically—and the CAS program in general—at these schools is attributable to the flexibility that is given to students, the greater involvement of other teachers and staff, and the understanding that reflection is a tool, and not an end in itself.

Schools 1 and 3 both used ManageBac as the primary means of facilitating CAS, and reflection in particular. Though, a correlation ought not be made between using ManageBac and CAS program success (see summary of Research question 4). These schools were also unique according to the open-endedness of their guidelines for doing reflection: There was no required minimum, nor schedule according to which the students were meant to complete reflections. Rather, they were encouraged to do reflections when they felt personally compelled. Nevertheless, expectations were communicated by coordinators that reflections should be done regularly. For both coordinators, reflection was not viewed as an end in itself but rather as a means to achieving CAS learning outcomes.

Schools with strong cultures for supporting CAS

Schools 2, 5, and 6 demonstrated strong CAS "cultures" in the sense that, according to students and teachers, there was an appreciation and commitment to the ideas and goals of CAS. Each culture, though, did not always translate into positive outcomes with every student, particularly with the reflection process—"the most hated thing of CAS." This came from a student at School 6, and she was referring specifically to the program's "CAS folders" which, in fact, constituted only a part of the reflections happening at the school. The folder contained mostly evidence from activities, and the plethora of Before and After activity forms completed for every activity in which a student participated (at both Schools 5 and 6). These activity forms contained a variety of questions intended to stimulate reflective thinking, but were seen by students to have limited value toward that end.

Still, there was much meaningful reflection happening at these schools through other means—primarily essays and verbal interactions with advisers/teachers. School 5, in particular, really encouraged students and advisors/teachers to interact on a regular basis as they were developing activities or projects. Teachers reported that these interactions were fruitful for enabling reflection—advisors discussing experiences with students, asking questions, eliciting meta-cognition. School 2 also showed evidence of frequent scheduled and unscheduled interactions between students and the CAS coordinator.

Additionally, reflection essays from Schools 2, 5, and 6 generally showed authentic and meaningful reflection. Interestingly, these essays also gave the impression that many students did not understand that discussion and essay-writing are forms of reflection. Interviews indicated that this may have been partially a result of the

diction employed by advisors and coordinators: the term "reflection" was often employed to connote a record of activities rather than as a learning process, so students likely understood it as evidence rather than in terms of its value for their learning. Consequently, many students failed to realize that they were actually reflecting effectively using different methods, not only written reflections.

School with a unique collaborative process for reflection and monitoring

In School 3, at the conclusion of the CAS program, students are required to sit for a formal interview with a panel of four staff members. Sometimes non-teaching staff are also included, according to the CAS coordinator, to get the whole school knowledgeable about, and invested in, CAS. Prior to the interview, the four panel members review the individual student's CAS activities, as logged in an electronic program. The panel members look for balance and variety among the student's activities, evidence of the CAS learning outcomes, and sufficient reflections across activities. During the interview itself—running about thirty minutes—the candidate first gives a prepared statement, then the panel asks a series of questions prompted by their investigation of the student's documents. The panel is also provided with a list of standard questions related to the CAS learning outcomes; for example: "*Which of the CAS objectives did you find most difficult to achieve?*" "*Explain the global significance of one of your activities.*" "*Discuss one new skill you developed as part of your CAS experience and how it may help you in the future*."

Based on the student's responses/dialogue during the interview, especially with respect to the verbal reflection process on the learning outcomes, the panel makes a determination of one of three options: *Pass*, *Provisional Pass*, or *Not Pass*—in the case of Provisional Pass, the DP and CAS coordinators making final decisions on the provisional passes.

Our qualitative data showed extensive support for the CAS Panels from students, teachers, and administrators. One teacher remarked,

> I think it makes it a bit more real for them, that they're going to be held accountable, not by some invisible organization, but they're going to have sit across the table from four teachers that they know, and they're going to have to talk about what they've done. Some of the students were really nervous in it. (focus group, March 2014)

The CAS coordinator observed: "...I just saw this almost immediate turn-over in how students were approaching [CAS]… it's much harder to be disingenuous face-to-face." Students also gave positive comments. For example, one student explained how the CAS Panel helped her to realize that the CAS panel was not just for meeting the requirements of the IBDP; rather, she suddenly saw from the dialogue that unfolded during the

panel that, “It improves yourself, basically. It helps you realize that you’re doing something that’s beneficial to your self-improvement” (focus group, March 2014).

These comments represent the attitudes of many stakeholders at School 3. During the time of our visit, the CAS Panel regime had been in place for only one year, so perhaps the novelty of the program affected perceptions. Also, two students complained on behalf of peers who felt they should have been given more warning about the importance of the panels; however, the CAS coordinator showed us how she had notified all students several times in advance of the panels. Nevertheless, the CAS Panel seems an effective method of reflection because it requires a student to prepare mentally for the interview by reconsidering—reflecting—on her overall experiences and activities in CAS.

School facing more challenges

School 4 had the weakest CAS program in our sample. It also had the largest student CAS population—263 at the time of our visit—and thus required *three* CAS supervisors (as opposed to the one coordinator at every other school) to administer the program. In their implementation of reflection, they relied primarily on Before/After activity forms and regularly written, along with brief journal entries and communications by Moodle. CAS supervisors had little time in the hectic academic schedule for giving feedback on student reflections. Consequently, students neither appreciated the significance or meaning of reflection, nor did they produce generally authentic reflections.

Research question 2: What are strengths and weaknesses in the CAS reflection process?

These trends will be reviewed in terms of recommendations for reflection as suggested by the CAS Guide (2015), and also align well with literature that was reviewed about the reflection process. In particular, a careful review of literature on reflection (especially for service learning) revealed the importance of certain features that help to make reflection more effective:

1. Reflection should happen repeatedly, and at different times during a service learning experience—before, during, and after (Eyler, 2002; Knight-McKenna, et al., 2011).
2. Students should have the opportunity to reflect using a variety of means (writing, speaking, drawing, etc.) and under a variety of different conditions (e.g., individually, in group settings, one-on-one conversations) (Eyler, et al., 1996; Kessler & Burns-Whitmore, 2011; Reed & Koliba, 1995).

3. Teachers or advisors need to be actively involved in the reflection process through feedback, questioning, prompting inquiry, and guiding students toward effective reflection (Dekker et al., 2013; McEachern, 2006).
4. Reflection should be "authentic" in the sense that it is not necessarily "forced," that topics of reflection come naturally from their learning experience, and that it doesn't have to occur on a regular basis—writing a reflection every Friday, for example (De Bruin et al., 2012; Dekker et al., 2013; Harland & Wondra, 2011).

Timing of reflection. Firstly, the CAS Guide recommends that students "reflect at the beginning, during, and at the end of a series of CAS experiences. This enables students to deliberate on such elements as planning, opportunities, expectations, challenges, progress, and personal growth" (2008, p.28). The key element here is to embed reflection *into* CAS activities such that it is used to both understand and inform the activities of participants. Reflecting only at the conclusion of an activity is useful, but only to a limited degree.

All the schools in our study had some form of reflection before, during, and after CAS activities. Though the type and quality of those reflections varied, all the schools can be considered to have successfully aligned with the CAS Guide on this particular point about the timing of reflection.

Varied forms of reflection. In line with prior research, the CAS Guide (2015, p. 28) further recommends that "Reflection can appear in countless forms. CAS students should be able to identify forms of expression that have personal meaning and best enable them to explore their experiences." Students should neither be required nor encouraged to reflect only through one medium.

Among the six schools in our study, the most common means of reflection was writing, followed more infrequently by verbal and/or group discussions involving students and CAS advisors. Written reflection is, of course, an effective and logistically convenient method, but student perceptions at all the schools in our study showed that they felt almost overwhelmed by the burden of written reflections. Schools 1 and 6 were unique in that their respective CAS coordinators encouraged students to reflect in different ways, yet most reflection was still happening through writing. The CAS Guide suggests that, "When overly prescribed, students may perceive the act of reflection as a requirement to fulfill another's expectations." However, "By encouraging students to choose forms of reflection that are personal and enjoyable, reflection becomes a means for self-discovery."

The six schools in our study were not successful at encouraging students to reflect in diverse ways. Nor were there any instances in which students referred to the reflection process as "enjoyable" Nor did hardly any students see its value in terms of their learning process either. Much to the contrary, the burden of reflecting

almost exclusively—and continually—through writing was perceived as being almost "against the spirit of CAS," as one student remarked.

Feedback about reflection. In terms of the responsibility of the CAS coordinator and advisors, the Guide (2015) submits that feedback "is beneficial and necessary… [It] provides acknowledgment, confirmation or clarification of students' understanding and insight, and opportunities for further development." Because feedback is often given verbally, it was hard to quantify the extent to which it was occurring. However, according to the sample written reflections provided by the schools, as well as comments from teachers and students, as a general trend the six schools were moderately successful in providing substantial and regular feedback to students about their reflections. At School 4, for example, the data showed that feedback was almost nonexistent; while at other schools feedback—both written and oral—was more common, though still not to the degree recommended by research and the CAS Guide. However, the more valued CAS programs encouraged much verbal interaction between students and CAS Advisors, and these kinds of interactions were noted as fruitful arenas for constructive feedback from the student perspectives.

Misunderstanding the purpose of reflection. A final trend observed across all six schools was the extent to which many students simply did not understand the nature and purpose of reflection. For some students, "reflection" was understood as merely providing evidence that they participated—photos, signatures, and written descriptions of their activities. Whilst other students understood reflection to be just another necessary box to be ticked as a requirement for passing the CAS program, and thus graduating from the Diploma Programme. These latter students enjoyed their CAS activities, but, by and large, they did not perceive any utility whatsoever in reflecting.

Research question 3: To what extent did media and methods used for CAS reflection support the learning process?

Two overall trends were revealed by this document analysis. First, based on comments from students as well as evidence from the documents, the reflection "before/after forms" being used by most schools were perceived to have little value or effectiveness in terms of promoting authentic reflection. Multiple students remarked that they often gave the answer that they assumed was expected, rather than an authentic response. Also, while some written questions do promote authentic reflection, the forms provided too little space—usually only two or three lines—for responding with authentic reflection.

Second, several schools utilized essays, to varying degrees, as summative reflections covering longer periods of time and multiple activities. According to student comments and evidence from the reflection samples, these essays were a much more effective method of reflection. Many samples showed extensive, authentic reflective thinking, such as considering actions, thinking about choices, and questioning assumptions. Students reported, as well, that they were more amendable to writing the essays, as opposed to the vitriol routinely heaped upon the forms.

Research question 4: To what extent does ManageBac support reflection?

The two schools in our study that utilized ManageBac had rather robust, well-developed programs that encouraged participation of more teachers as CAS advisors. However, this seemed more a relationship of correlation, as one of the decision points for opting to try ManageBac was because they wanted to encourage more collaborative relationship for supporting CAS. Other schools had aspects of reflection implementation that were very strong—in the way, for example, that students and advisors interacted verbally, or reflection essays.

The analysis of feedback from this study, however, showed that ManageBac does provide two distinct advantages. First, it is a platform that encourages the use of different reflection methods. At the two schools using ManageBac, students were submitting reflections in writing, as well as by YouTube clips and other media. This is important inasmuch as prior research recommends that reflection should occur through different methods. Second, ManageBac streamlines the feedback process between students and advisors/teachers, and between teachers and coordinators. Because of the limits of time and physical space, paper-based reflections necessarily require considerably more effort. With ManageBac, that process was made easier for advisors to give feedback as well as to communicate more quickly with students.

Based on my analysis, however, ManageBac only works well if it is implemented adroitly by advisors and coordinators. It is only a tool, and as such can be used effectively or ineffectively. The wide range of quality of student reflections on ManageBac—paralleling the range of quality of student reflections found at schools that did not use ManageBac—showed that if students are not given the proper guidance, support, and feedback throughout their time in the CAS program, then no amount of technology will encourage or sustain authentic reflection.

Recommendations for practice

Based on this research, along with prior research, recommendations can be made to improve the implementation of CAS reflections.

Recommendation 1: Use pre-reflection as a roadmap and measurement tool.

Firstly, at the beginning of the two years of the CAS program, students should write a pre-reflection. It is important that it be written, because it must be easily referred to, and addressed, at later dates. This pre-reflection should contain two primary components:

1. An assessment of one's strengths and weaknesses vis-à-vis the learning outcomes and the three elements (Creativity, Action, and Service) of CAS. Some students may recognize that they are stronger, for example, in teamwork and social skills in the context of sports, while being weaker in the awareness of "issues of global significance" in the context of volunteering (Service). This leads into the next component:
2. Based on the student's self-assessment of strengths and weaknesses, she will establish goals which she intends to achieve through her activities in the CAS program. Using the aforementioned fictional student, she is already strong in sports and collaboration, so should design goals to help her improve in the areas of, for example, Service and global awareness. This is important because CAS places emphasis on the fact that students should be taking risks, expanding their boundaries, and growing holistically. It is important that these goals be designed using a framework similar to the infamous SMART goals—namely, that the goals be Specific, Measurable, Attainable, Relevant, and Time-bound (Haughey, 2014). SMART goals are important in the context of CAS because it is very easy to say, "I will become a better volunteer," or "I will be more aware of global issues." While noble in intention, such goals are almost impossible to measure, and thus have little utility for self-assessing.

The purpose of this initial pre-reflection is two-fold. First, to serve as kind of a road-map for a student's CAS experience. Based on goals established for herself, a student can plan and develop activities toward those goals. Second, the pre-reflection is useful as a means of assessing a student's success at the end of CAS. The student can look back on her SMART goals and determine whether or not she was successful. In the nebulous realm of social-emotional learning, it is often hard to recognize personal growth. This kind of pre-reflective activity, thus, would help students to see how they have grown and developed over the course of two very important years of their lives. It is also useful for CAS coordinators in their assessment of a student's success—or lack thereof—in achieving the learning outcomes. It bears repeating that a student must pass CAS (by achieving the learning outcomes) in order to receive an IB Diploma; thus this pre-reflection essay can be useful to Coordinators, or CAS panel members, in making that important judgment.

Recommendation 2: Exercise flexibility in the timing of reflections.

The schools in our study were mostly successful at utilizing reflection before, during, and after CAS activities, and this should be continued: it is important for reflection to be embedded within CAS activities. Most schools had expectations in terms of how many reflections a student should be completing during a particular semester. The CAS Guide (2015) and prior research both have suggested that forcing students to do reflection detracts from the efficacy and authenticity of reflection. To wit:

> Students are not expected to reflect on every CAS experience; they should identify moments worthy of reflection. Reflection is most meaningful when recognized as a personal choice. If the emphasis is on quantity with a required number of reflections or with a requirement such as 'students must complete a reflection for every CAS experience', reflection becomes an obligation, which is contrary to the purpose of reflection in CAS. (p. 27)

This was borne out in student comments: they often felt that reflection was primarily an obligation, and not a meaningful exercise related to their activities. The CAS coordinator at School 6—a successful CAS program in terms of its reflection process—noted that she neither required nor expected students to reflect daily or even weekly. Some kind of strictures need to be in place for ensuring that students engage in reflection on a somewhat regular basis. However, reflections would be more authentic if Coordinators and advisors developed an environment or culture of reflection within which reflection is encouraged, but not demanded, so that students may come to see the utility of reflection and engage in it of their own volition.

Furthermore, as reflections should be fewer in number, they should concomitantly be deeper and more thoughtful—that is, more authentic. One or two truly authentic (and long) reflective works are significantly more useful than twenty rudimentary reflections. Depth and authenticity should be the rule, rather than frequency and regularity. This is particularly true for ManageBac which, through its format, tends to encourage many brief and shallow reflections. CAS coordinators would do well to modify how ManageBac is used to facilitate reflection.

Recommendation 3: Use a wide variety of means for reflection.

It is very important that students be encouraged, and given opportunities to do reflection using a variety of means or methods. Two of the CAS programs in our study did just this, and they were among the most successful programs in terms of the many positive comments that both students and teachers gave about value of CAS. Some students are simply able to better express and understand themselves through different means—writing, or speaking, or interaction, or making and discuss videos as just a few examples. Forcing students to

reflect using only writing—which is, by far, the most common method among the six schools studied—naturally inhibits many students in their possibilities of internalizing the social-emotional lessons of experiential learning. According to the CAS Guide (2015, p. 28),

> Student reflection may be expressed through a paragraph, a dialogue, a poem, a comic strip, a dramatic performance, a letter, a photograph, a dance, a blog, or other forms of expression. Students find greater value and purpose when they apply their own interests, skills and talents when reflecting. They discover that reflection can be internal and private or external and shared.

It may seem as though I am simply repeating, with my recommendations, the guidelines found in the CAS Guide. However, our research has shown that some schools simply are not yet heading these guidelines. To an overwhelming degree, most reflection happens via written journals or reflection forms. This is not to say that written/journal reflections are not authentic or effective—much to the contrary. Rather, they should be used as one means among many, dependent on the personality of a student and the context of the activity.

Recommendation 4: Establish the meaning and importance of reflection.

Our research showed that many students were confused about the very meaning and purpose of reflection—they thought of it as a sort of mix of evidence (of participation), a record of what happened, and also reflection.

As such, CAS coordinators should clearly delineate reflection from other types of documentation. It is perfectly acceptable to require evidence of participation (a few students indicated that occasionally students cheat by "making up" phony CAS experiences). However, it should be clear to students that reflecting on an experience is separate from documenting verifying the experience. This is a particular issue for ManageBac—its platform blurs the meaning of evidence and reflection.

Recommendation 5: Integrate regular feedback from advisors.

Students submit many reflections over the course of two years, and at all of the six schools, the responsibility of providing feedback on these reflections belonged primarily to CAS coordinators. Feedback is necessary for helping students to improve their reflective skills as well as achieve insights. However, with the many responsibilities weighing upon CAS coordinators, it becomes difficult to provide meaningful feedback to students. Therefore, I recommend that CAS advisors (as distinct from coordinators) bear more responsibility in giving feedback to students. This is for three reasons. First, the CAS coordinator is just one person, and the advisors are many—and many hands make light work, freeing the CAS coordinator to focus on other logistics of the program as a whole. Second, an advisor has a much better understanding of the specific activity that her students are engaged in as she is the one tasked with overseeing and helping to manage the given activity. As

such, the advisor is in a much better place to give feedback about that activity. Third, an advisor has more contact time with students, thus she is more available to give feedback. At School 5, for example, students have weekly club hours at which they can discuss their activities with their advisors.

In some schools, to implement this recommendation, CAS coordinators would need to meet early each year with the teachers who are likely to be CAS advisors to discuss and encourage the feedback process. CAS coordinators could perhaps share with advisors a copy of students' pre-reflections, so that the advisors could help with monitoring goals by knowing their advisees better.

Recommendation 6: Conclude the CAS program with greater emphasis.

The CAS programs I observed tended to end (at the end of grade 12) with a whimper, instead of a bang: students confirmed that they had achieved the outcomes, completed the requisite documentation, and thus passed CAS. However, School 3 went one step further with the CAS Panel. It was a sort of capstone to the whole program; a way of encouraging students to look back and consider everything they had done over the course of two years. By giving students a forum to summarize and voice their thoughts about CAS, it gave the students a sense of closure to their whole CAS experience. When I visited School 3, the CAS Panel had only been in place for a year, but students, teachers, and the CAS coordinator all talked about it in glowing terms. The CAS coordinator saw a sort of sea-change in the attitudes of students: suddenly, she said, they realized that they had to give an accounting of themselves to a panel of respected adults. This had the effect of motivating students to make CAS a more meaningful and fruitful experience. In terms of reflection specifically, the Panel encouraged students to think deeply and authentically about the overall value of their two years of CAS.

Implications for further research

There are a number of directions in which this current research leads. As an implementation study, it is a good first step—having established how schools are implementing reflection in CAS. The next steps should attempt to address more specific questions about the effectiveness of the various methods of implementation. Building on the ideas of Harland and Wondra (2011), a study could be conducted that objectively analyzes the quality and depth of reflection samples. In the context of CAS, this would require that, first, a relatively large sample of reflections be gathered, representative of the DP student population of a particular school, or for a given region of the IB. Those reflections would then be coded according to depth and authenticity: for example, description coded as "not reflective", and questioning one's choices coded as "deeply reflective." After gathering and

collating the codes, a relatively objective quantitative analysis could be made about the authenticity of student reflections, in accordance with varied contexts and evidence of outcomes.

More ambitiously, a pre- and post-test causal-comparative study could be conducted that measures the effectiveness of a professional development course designed for helping CAS coordinators and advisors to improve the CAS program school-wide.

Limitations of the study

The primary limitation of this study is the number of schools where stakeholders were interviewed, and that they represent only IBDP schools in Turkey. However, these schools are nonetheless representative of IB schools that are leading the way for the IB in Turkey. Furthermore, these six schools are located in the larger cities of Turkey; there are a few IB schools in smaller communities, or in eastern Turkey, that would perhaps contribute unique voices to future research. On a personal level, I teach in the Diploma at an IB school in Turkey, so my perspective was partially informed by my experience with the students, and other stakeholders, at my school.

A further limitation of this study is temporal: Our research team was only able to visit each school for one day. Although I gathered many interviews from different stakeholders, the data would be more robust and comprehensive if collected at several times during the school year.

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APPENDIX A: Focus Group and Interview Questions

The following questions were part of the interview and focus group protocols that were used for this study, along with spontaneous question that arose in the context of interacting. Some of the questions have been paraphrased.

- **Student focus group**
  - Protocol Questions
    - Tell us about the CAS program in this school.
    - How do you share what you learn from CAS? (in presentations, in reports, in logs or journals that you share with the CAS coordinator, etc.)
    - What is the purpose for you of the reflections? Do the reflections affect your experience of CAS? Have you received any feedback about your reflections? Overall, are your reflections useful for you?
    - If you were to change one thing about the CAS program, what would that be?
    - What have been some difficulties of your current CAS project?
  - Spontaneous questions that emerged during focus group:
    - Do you guys ever… stop, afterwards with your teachers, and talk about it at all?
    - Tell me about these "forms."
    - What kind of questions did they ask you?
    - If they changed the questions or the format of the reflections, would it be more useful for you?
- **Teacher focus group**
  - Protocol questions:
    - How do advisors/teachers support students in their plan/act/observe/reflect process?
  - Spontaneous questions that emerged during the focus group:
    - Have others had trouble with reflections with students?
    - What are they realizing during this [panel interview] that they didn't really see before?
    - How do you help them be reflective learners about the process of planning and then doing something and then observing themselves and then reflecting on the learning process?
    - Then how do you guide them through, what did they learn, what did they get out of it for personal development?.
- **CAS coordinator interview**
  - Protocol questions
    - Describe the CAS program in your school.
      - How do students reflect on their experiences?
    - What are some of the challenges of the CAS program at your school?
      - How did you address them so far?
    - What kind of resources are available to faculty and staff to implement CAS? Consider the time, materials, and guidelines that are available.
  - Spontaneous questions
    - Besides written reflections, how else do students reflect?