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Working Paper

Impact evaluation design for the CHED K-to-12 transition program

PIDS Discussion Paper Series, No. 2018-44

Provided in Cooperation with:
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Suggested Citation: Cabalfin, Michael R.; Mallari, Ruzzel Brian C.; Orbeta, Aniceto C. (2019) : Impact evaluation design for the CHED K-to-12 transition program, PIDS Discussion Paper Series, No. 2018-44, Philippine Institute for Development Studies (PIDS), Quezon City

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DECEMBER 2018

DISCUSSION PAPER SERIES NO. 2018-44

Impact Evaluation Design for the CHED K-to-12 Transition Program

Michael R. Cabalfin, Ruzzel Brian C. Mallari, and Aniceto C. Orbeta Jr.

Philippine Institute for Development Studies

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Impact Evaluation Design for the CHED K-to-12 Transition Program

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PHILIPPINE INSTITUTE FOR DEVELOPMENT STUDIES

December 2018

(Revised April 1, 2019)

Abstract

The Enhanced Basic Education Act of 2013, among others, added two years in secondary education thereby delaying entry into higher education by two years. This was expected to displace teaching and non-teaching personnel in higher education. To mitigate the impact, the law mandated the Commission on Higher Education (CHED), the Department of Education (DepEd) and the Technical Education and Skills Development Authority (TESDA) to develop and implement adjustment programs. The CHED K to 12 Transition program is one of those programs. This paper describes an impact evaluation design for the CHED K to 12 Transition Program. It focuses on two of the biggest components of the program, namely, (a) the scholarships for graduate studies, and (b) the institutional development and innovation grants. The scholarships for graduate studies aim to enhance the knowledge and skills of higher education institution personnel and improve the quality of teaching in higher education. Given the limited coverage of the program, the selection of participants based on certain criteria summarized into a score that can be ranked and the supposed cut-off score, and the phasing of program implementation, the most appropriate evaluation strategy is regression discontinuity design. The Institutional Development and Innovation Grant, on the other hand, aims to enhance the quality of higher education institutions, among other things, by helping them improve their accreditation level, acquire centers of development and excellence status, autonomous and deregulated status, and in their quest for global competitiveness. Given similar considerations, the proposed evaluation method is also the regression discontinuity design. The paper also describes the next steps in implementing the impact evaluation.

Keywords: Higher Education, K to 12, Scholarships, Institutional Development, Innovation

Table of Contents

1. Introduction 1
1.1. Study background 1
1.2. Rationale 3

2. Scholarships for Graduate Studies 5
2.1. Sub-project background (including review of design and implementation) 5
2.2. Review of literature 10
2.3. Proposed evaluation design 13

3. Institutional Development and Innovation Grants 20
3.1. Sub-project background 20
3.2. IDIG Overview 20
3.3. Theory of Change 21
3.4. Sub-project background (including review of design and implementation) 23
3.5. Review of literature 28
3.6. Proposed evaluation design 32

4. Summary and Next Steps 35
5. Bibliography 37
6. Appendices 41

List of Tables

Table 1. Financial targets and accomplishments, 2016 10
Table 2. Sample size: Master's degree nominees, power=0.8, alpha=.05 19
Table 3. Sample size: Doctorate degree nominees, power=0.8 19
Table 4. Sample distribution by strata 20
Table 5. IDIG applications and approval rates by category and type of HEI, 2016 26
Table 6. IDIG recipients with/without COE/COD 26
Table 7. IDIG grantees by HEI size, 2016 27
Table 8. Approved grant amounts by category, 2016 27
Table 9. Regional distribution of IDIG grants by region, 2016 27
Table 10. Accrediting agencies in the Philippines 30
Table 11. Levels of accreditation: Processes and validity 30
Table 12. HEI vertical typology level 31

List of Figures

Figure 1. Budget allocation (in thousand pesos) (2016-2018) 4
Figure 2. Target individual beneficiaries by package (2016-2020) 4
Figure 3. Proportion of HEI faculty with Master's degree 6
Figure 4. Proportion of HEI faculty with PhD 6
Figure 5. Number of HEI faculty with Master's degree (baseline and target) 7
Figure 6. Cumulative number of HEI faculty with PhD (baseline and target) 7
Figure 7. Number of grantees (Active) for MA/MS scholarships versus target 8
Figure 8. Cumulative number of grantees (Active) for PhD scholarships versus target 9
Figure 9. Probability of completing a graduate degree by scholarship evaluation score/rating (before intervention) 14
Figure 10. Probability of completing a graduate degree by scholarship evaluation score/rating (hypothetical after intervention) 15
Figure 11. Key features of the IDIG 21
Figure 12. IDIG Theory of Change 22
Figure 13. Number of accredited programs by level 23
Figure 14. IDIG selection process 25
Figure 15. Quality Assurance Framework for HEIs 29

Impact Evaluation Design for the CHED K-to-12 Transition Program

Michael R. Cabalfin, Ruzzel Brian C. Mallari, and Aniceto C. Orbeta, Jr.*

1. Introduction

1.1. Study background

Republic Act 10533 or the "Enhanced Basic Education Act of 2013" re-defines basic education as encompassing kindergarten, six years of elementary, and six years of secondary education, more popularly known as K-to-12. It added two years in secondary education comprising senior high school delaying the entry into college by two years. This is expected to decrease enrollment in higher education institutions (HEIs) and technical vocational institutions (TVIs) during the initial stages of the introduction of K-to-12 system. This is estimated to lead to the displacement of over 25 thousand teaching and non-teaching personnel (Orbeta, et al. n.d.). Apart from this, retained personnel are expected to suffer a decrease in income as a result of reduced teaching load.

Given the expected displacement, the law mandates the DepEd, CHED and TESDA to formulate appropriate strategies and mechanisms for the smooth transition to K-to-12. The Implementing Rules and Regulations (IRR) of Republic Act 10533 includes among these strategies infrastructural, human resource and organization development and bridging secondary education competencies and admission into tertiary education, as well as government partnerships with stakeholders. The IRRs mandate DOLE, CHED, DepEd and TESDA to promote the welfare of education workers as well as ensure the sustainability of educational institutions.

In joint guidelines[1], the foregoing agencies aim to promote the welfare of HEI personnel through security of tenure and provision of separation benefits while recognizing HEIs' right to returns on their investment and over the employment and termination of personnel. Based on regional level profiling, DOLE, CHED, DepEd and TESDA shall provide assistance to higher education institutions and personnel affected by the K-to-12 program. Assistance to higher education institutions include the Expanded Government Assistance to Students and Teachers in Private Education (E-GASTPE), loan assistance primarily from public financial institutions, and loan amortization. Assistance to personnel includes wage employment, training, livelihood or entrepreneurial assistance such as through the DOLE Adjustment Measure Program. The guidelines also provide for welfare assistance in terms of emergency loan, suspension of loan payments and condonation of interest with SSS and HMDF and sponsorship to the national health insurance program. The specific programs of each department are as follows.

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[1] (DOLE-DEPED-TESDA-CHED 2014)

To meet the demand for teachers in senior high school and to mitigate the reduction in enrollment in HEIs and TVIs, DepEd will utilize the manpower of HEIs and TVIs allowing their faculty to teach secondary education and prioritizing them in the recruitment during the transition period. The Department of Education established a "Green Lane" to facilitate the hiring of displaced HEI personnel in the same locality and at similar salaries. In the hiring of Senior High School, applicants with teaching experience in HEIs are given a premium in their evaluation (DepEd Order 3, s. 2016). Displaced HEI personnel are also given priority in the hiring among qualified applicants. A focal person for the interagency committee in DepEd regional offices consolidates data on displaced HEI personnel hired by DepEd.

The DOLE Adjustment Measure Program aims to support displaced HEI personnel as they move to self- or full time- employment through financial support, employment facilitation, and training and livelihood. The financial support involves 3 to 6 months' worth of salary support depending on tenure and the average salary in the region for the kind of appointment. Employment facilitation provides opportunities for re-employment through job matching and placements. Training is provided through TESDA's TVET programs while livelihood assistance is provided under DOLE's Kabuhayan Program.

To address income reduction among retained personnel, the Commission on Higher Education (CHED) established the K-to-12 Transition Program. The transition program has two objectives: to mitigate the impact of the transition on labor, and to upgrade the qualifications of faculty (CHED 2016). The program includes scholarships for full-time graduate studies in the country and abroad, grants for part-time professional improvement activities, and institutional grants for program innovation.

The Guidelines on Graduate Education Scholarships for Faculty and Staff Development in the K to 12 Transition Period provide for the following support for personnel development: full scholarship for doctoral degree, full scholarship for master's degree, thesis or dissertation grant, scholarship for foreign master's or doctoral degree and other grants (professional advancement and post-doctoral fellowships). The Guidelines for Foreign Scholarships for Graduate Studies for Faculty and Staff during the K to 12 Transition Period further specifies the components of scholarships for foreign studies as follows: start-up grant for applications, Ph.D. sandwich program, full scholarship and partial support for foreign master's and doctoral studies. The Guidelines for Professional Advancement and Post-Doctoral Study Grants for Faculty and Staff during the K to 12 Transition Period specify the components of other grants as follows: professional advancement (graduate certificate/diploma programs, leadership development programs, accreditation of learning earned through massive open online courses), post-doctoral studies, and continuing professional education programs. CHED also provides senior high schools support grants (content knowledge development grants for HEI units and action research grants for individual faculty) and instruction, research, and sectoral engagement grants. Apart from the foregoing grants for individuals, CHED also provides institutional development and innovation grants. These grants support institutional development projects (institutional quality assurance and organizational strengthening of HEIs), innovation projects (research, development and extension; development of academic programs; academe-industry linkages; internationalization), and CHED-initiated partnerships for innovation.

1.2. Rationale

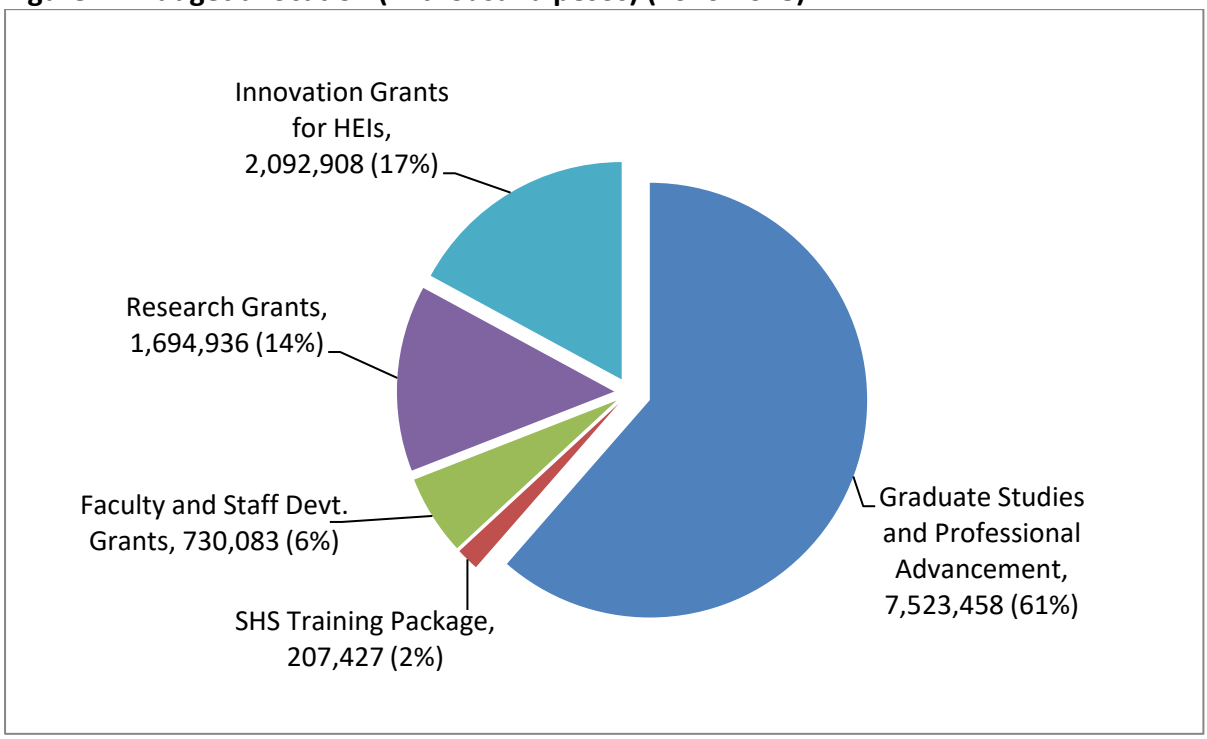
What is the rationale for evaluating the CHED K-to-12 Transition Program? The program is consistent with global and national goals as articulated in the Sustainable Development Goals, the Philippine Development Plan and Budget Priorities Framework, and CHED's Higher Education Reform Agenda (K-to-12 PMU 2017). At the global level, the program is aligned with the Sustainable Development Goals 2030, particularly the goal of "ensur(ing) inclusive and equitable quality education and promote lifelong learning opportunities for all." Relevant specific objectives under this goal include increasing the number of adults with relevant skills, increasing the number of scholarships in higher education, and increasing the number of qualified teachers in higher education.

The transition program is also consistent with the Philippine Development Plan 2017-2022 goal of accelerating human capital development. Specifically, the plan aims to "increase (the) number of HEIs engaged in local and global partnerships and collaborations" and "increase (the) number of graduate education graduates (MA/PhD) engaged in original research of creative work." Further, the transition program is consistent with the Budget Priorities Framework, particularly in improving higher education outcomes, by improving research and innovation; and in advancing Science, Technology, and Innovation through scholarships and local and international collaboration. The program entails substantial resource allocation. In 2017, the K-to-12 Transition Program budget stood at PHP 3.6 billion comprising 19 percent of the new appropriations for CHED (Republic Act 10924). Moreover, the program's budget rose to PHP 3.9 billion in 2018, making up 31 percent of CHED's new appropriations. Given the huge program cost, it is worth knowing whether the government's investment is achieving its purpose.

Moreover, the transition program is critical to CHED's mandate of "promot(ing) relevant and quality higher education" (at par with international standards). It is also consistent with the higher education sector outcome of developing "high-level manpower and globally competitive professionals" and supportive of the Higher Education Reform Agenda and the administration's 10-point Socioeconomic Agenda.

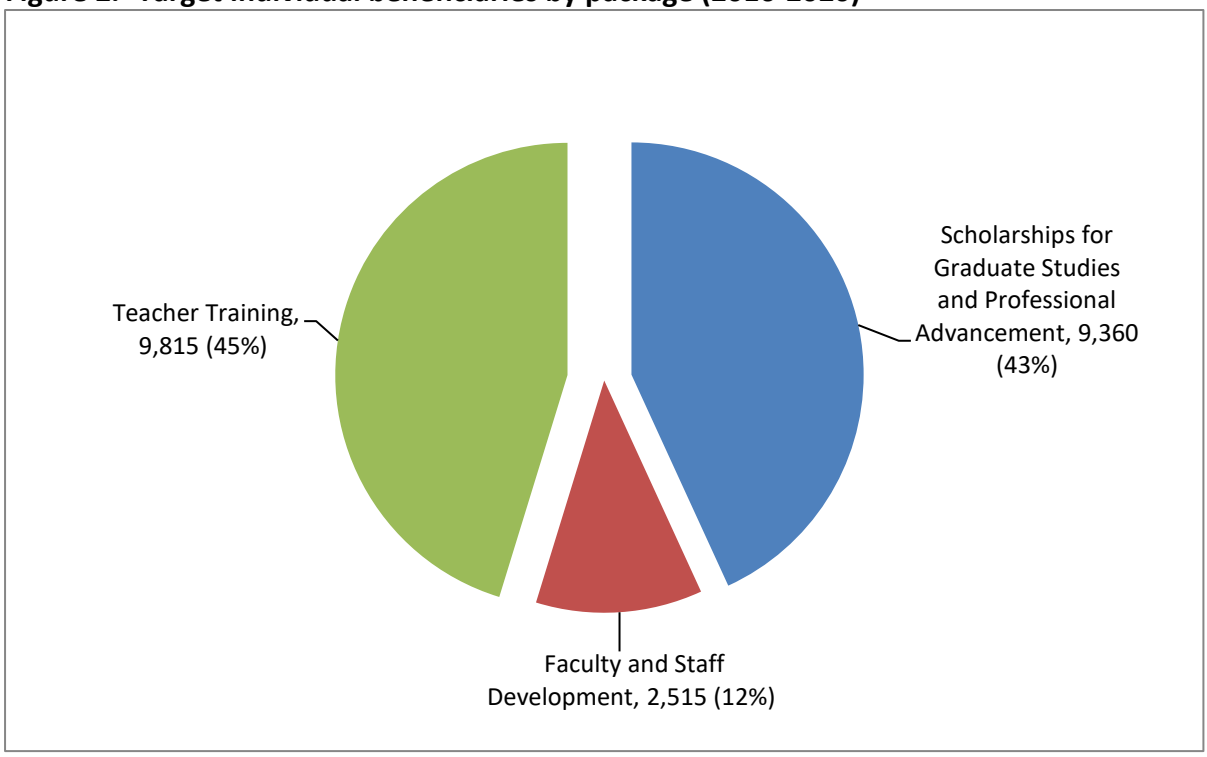
Budget allocation for the program is given in Figure 1. In terms of approved/projected budget, the scholarship for graduate studies & professional advancement has the biggest allocation (61%) followed by Innovation Grants for HEI (17%) and Research Grants (14%). Faculty and Staff Development Grants only account for six percent while Senior High School Training has the smallest allocation at two percent. The total number of projected individual beneficiaries is 21,811, the distribution of which is shown in Figure 2. The largest group of beneficiaries is those receiving research grants (45%) followed by recipients of scholarships for graduate studies and professional development (43%) and recipients of faculty and staff development grants (12%). Considering the foregoing allocation of funds and distribution of beneficiaries, and given the need to focus the evaluation, the evaluation will focus on scholarships for graduate studies (particularly local studies), and institutional development and innovation grants.

Figure 1. Budget allocation (in thousand pesos) (2016-2018)



Source: K-to-12 PMU.

Figure 2. Target individual beneficiaries by package (2016-2020)



Source: K-to-12 PMU.

The paper is organized as follows: Section 2 describes the impact evaluation design for the scholarships of graduate studies while Section 3 describes the impact evaluation design for the institutional development and innovation grants. Section 4 provides a summary and describes the next steps in implementing the impact evaluation.

2. Scholarships for Graduate Studies

Pursuant to the State's responsibility of promoting citizens' right to affordable quality education at all levels and ensure accessibility of education to all, and CHED's mandate of developing higher education and research programs, CHED has developed the Graduate Education Scholarships for Faculty and Staff Development (CHED 2016).

2.1. Sub-project background (including review of design and implementation)

The logical framework of the Scholarship for Graduate Studies describes the objectives, components, target beneficiaries and deliverables of the package (K-to-12 PMU n.d.). The objective of the program is to increase the number of faculty and non-teaching staff with relevant graduate degrees. As of SY 2014-15, 41 percent of the HEI's faculty have master's degrees while 13 percent have doctoral degrees (CHED 2016). The program has two components: full scholarships for masteral or doctoral studies, and thesis or dissertation grant. Target beneficiaries are "Faculty from HEIs who will be de-loaded and displaced from their normal number of teaching load" and "Faculty and staff (of) HEIs who need to enhance knowledge and skills in order to be able to keep up with the relevance of the new curriculum and/or that will help improve the SHEI's quality in delivering higher education." Among the key deliverables are a list of delivering HEIs and their approved programs and the provision of 15,000 scholarships/grants to teaching and non-teaching staff over the transition period.

2.1.1. Impact

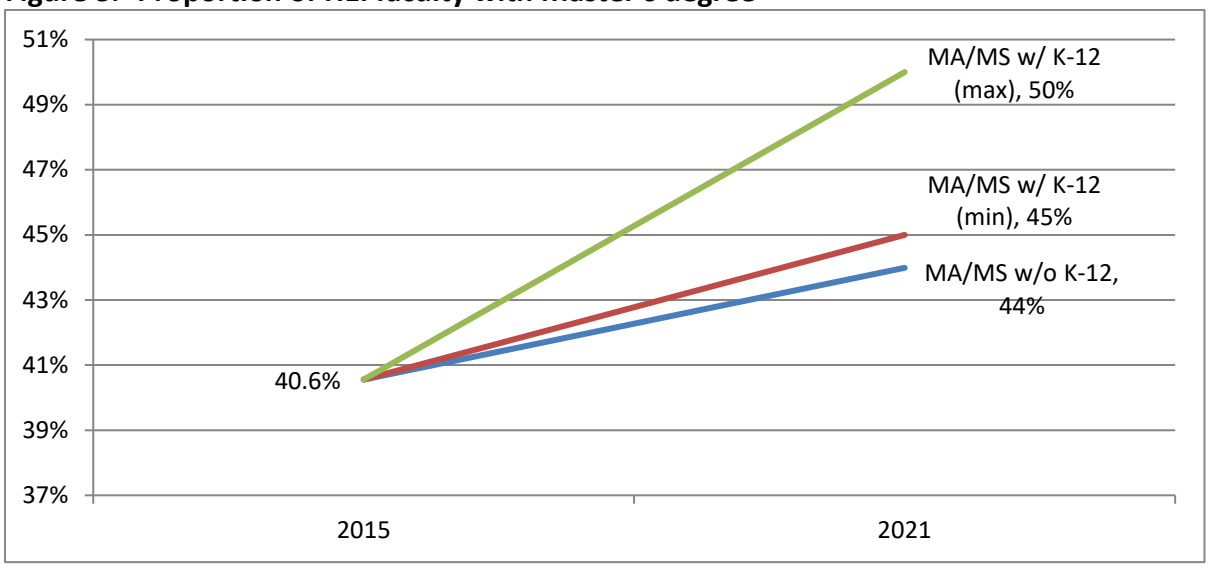
The project logical framework defines impact as the "contribution of the program to the country's overall development agenda". This is consistent with evaluation standards which define impact as "the benefits to a society" (DAC 2002) and "(t)he broad development (objective) to which the project contributes – at a national or sectoral level" (EC 2004). However, the impacts identified for the project are "Increased number of teaching and non-teaching staff with relevant graduate degree" and "Enhanced knowledge and skills relevant to the new curriculum", objectives more aptly defined as project purpose. A more appropriate impact would be the improvement in the quality of tertiary education as mandated in the Higher Education Act of 1994. Moreover, objectively verifiable indicators of this impact and their means of verification should also be identified.

2.1.2. Purpose or outcomes

A project's purpose is "(t)he development outcome at the end of the project – more specifically the expected benefits to the target group(s)" (EC 2004). Also called outcome, it pertains to the "short-term and medium-term effects of an intervention's outputs" (DAC 2002). The project logframe defines outcomes as "(t)he situation which the program aims to bring about. They are measured using demand-side data: access, usage, and satisfaction of beneficiaries." The project's stated outcomes are "number of scholars who completed graduate degrees" and "100% funds are utilized for the grant." As mentioned earlier, "enhanced knowledge and skills" of HEI faculty and staff would be a more appropriate project purpose, the indicators for which would be the "number of scholars who completed graduate degrees" and "number of teaching and non-teaching staff with relevant graduate degree." The purpose of the project is to enhance the capacity of HEI personnel, the impact of which is the improvement in teaching and learning at the tertiary education level.

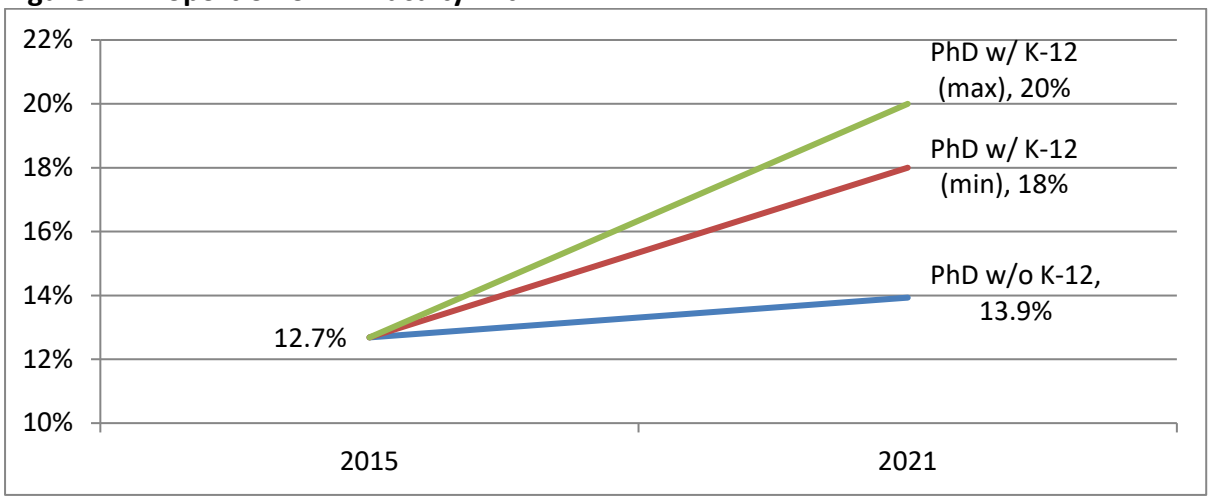
The project's logical framework has no specific target as to the number of scholars who are expected to complete their graduate studies. However, data from the K-to-12 PMU reveals targets ranging from 63-70 percent. Figure 3 and Figure 4 show the baseline and target proportions of faculty with relevant graduate degrees. In AY 2015-2016, there were 152,688 faculty in HEIs, of which 61,925 (40.6%) had Master's degrees while 19,368 (12.7%) had doctoral degrees (CHED 2016). Assuming historical trend for 2004-2015 (CHED n.d., CHED 2016), the number of HEI faculty is expected to grow to 175,304 by 2021. The number of faculty with Master's degrees is expected to increase to 77,114 (46.2%) in 2021, while those with doctoral degrees is expected to increase to 24,421 (14.7%), even without the transition program. With the transition program, the target proportion of faculty with Master's degrees by 2021 is 45-50 percent while the target for doctoral degrees is 18-20 percent. Given the expected number of faculty by 2021, the 50 percent target for faculty with Master's degrees amounts to 88,170 while the 20 percent target for faculty with PhD amounts to 35,268. These are 11,056 and 10,848 more than the expected numbers of faculty with Master's and doctoral degrees without the transition program, respectively; or a total addition of 21,903 faculty with relevant graduate degrees under the transition program.

Figure 3. Proportion of HEI faculty with Master's degree



Source: CHED Higher Education Indicators 2016, K-to-12 PMU.

Figure 4. Proportion of HEI faculty with PhD

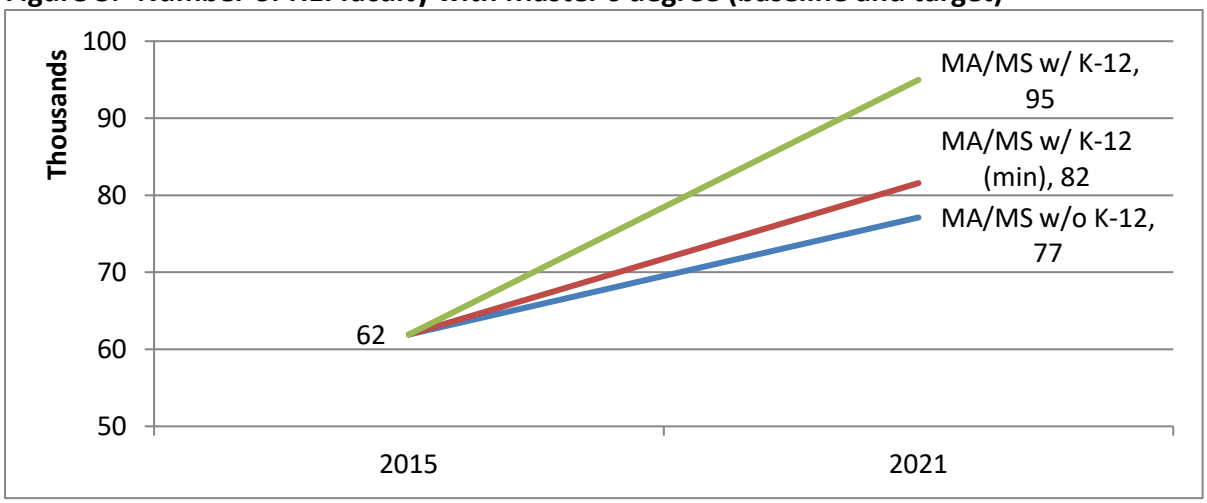


Source: CHED Higher Education Indicators 2016, K-to-12 PMU.

Figure 5 shows the baseline and target numbers of HEI faculty with Master's degrees. In 2015, 61,925 HEI faculty members had Master's degrees. Assuming historical growth rate, we would expect this number to increase to 77,114 by 2021 even without the transition program. The transition program has several target scenarios, the most conservative having a minimum 4,467 new Master's degree scholars. This would increase the number of HEI faculty with Master's degrees to 81,581 or 46.5 percent, a little over the minimum target of 45 percent. A more liberal target has 17,867 new Master's degree scholars increasing the number of HEI faculty with Master's degrees to 94,981 or 54.2 percent, well above the maximum target of 50 percent.

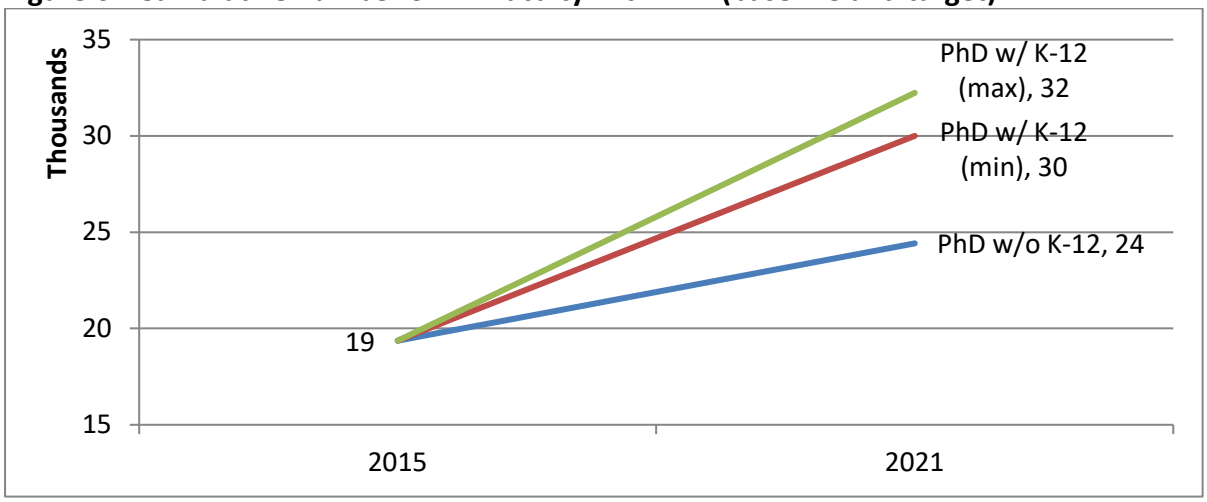
Figure 6 shows the baseline and target numbers of HEI faculty with PhD. In 2015, 19,368 HEI faculty had PhD. This is expected to increase to 24,421 by 2021 even without the transition program, assuming historical growth rate. The transition program aims to provide a minimum of 5,584 PhD scholarships, increasing the expected HEI faculty with PhD to 30,004 or 17.1 percent of total, less than the minimum target of 18 percent. The maximum target number of PhD scholars is 7,817, raising the expected HEI faculty with PhD to 32,237 or 18.4 percent of total, above minimum target but below the 20 percent maximum target.

Figure 5. Number of HEI faculty with Master's degree (baseline and target)



Source of basic data: Higher Education Faculty by Highest Degree Attained and Institution Type, AY 2015-2016, CHED 2016; K-to-12 PMU.

Figure 6. Cumulative number of HEI faculty with PhD (baseline and target)

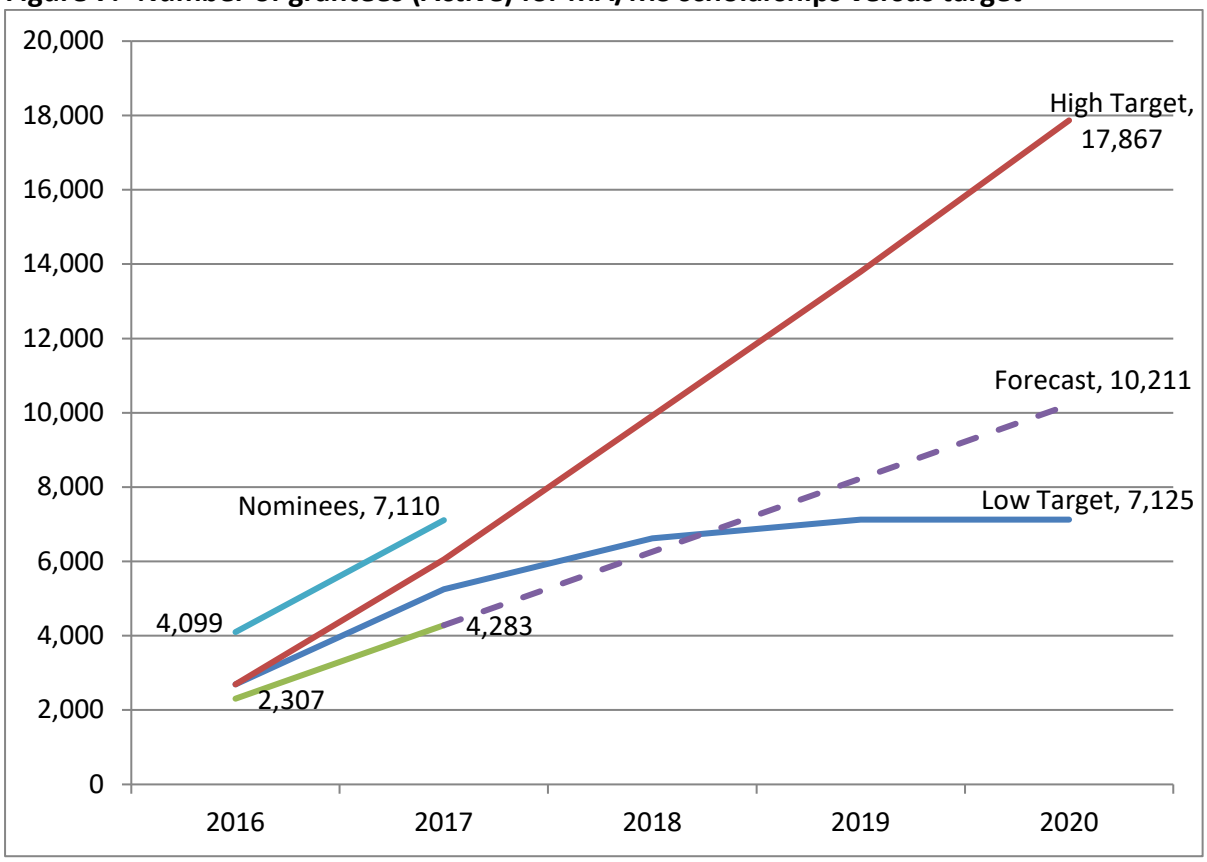


Source of basic data: Higher Education Faculty by Highest Degree Attained and Institution Type, AY 2015-2016, CHED 2016; K-to-12 PMU.

2.1.3. Results or outputs

Results are "(t)he direct/tangible results (good and services) that the project delivers, and which are largely under project management's control" (EC 2004). Also known as outputs, these are "(t)he products, capital goods and services which result from a development intervention" (DAC 2002). Similarly, the project defines outputs as "goods and services generated from the activities, and they usually take the form of tangible matter that the people/beneficiaries can make use. These are within control of CHED." The main output of the project is "15,000 eligible scholars granted either for the full scholarship for master's and doctoral program or for the thesis or dissertation grant for the whole transition period." Apart from this overall target, there are minimum and maximum targets for grantees of both Master's and PhD degrees.

Figure 7. Number of grantees (Active) for MA/MS scholarships versus target



Source of basic data: K-to-12 PMU.

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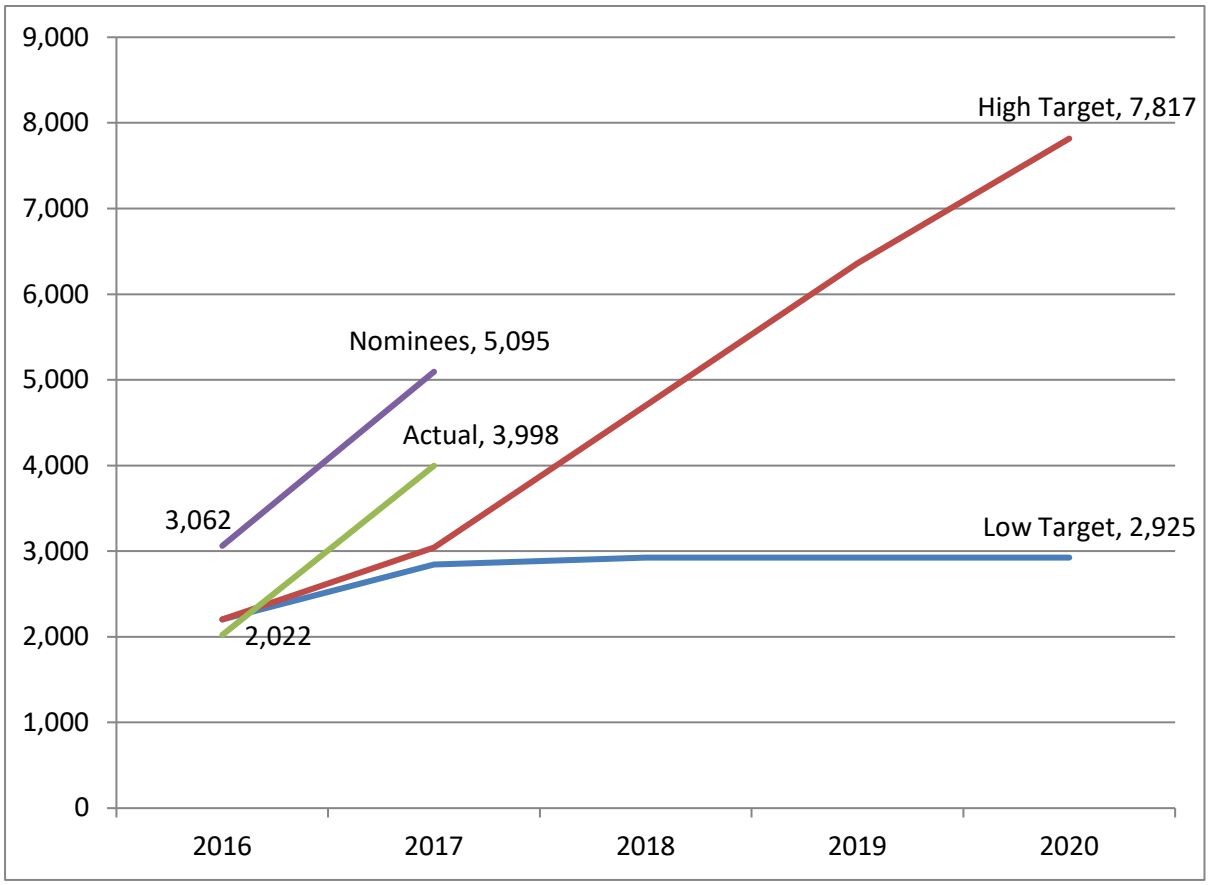
Figure 7 shows the cumulative number of active grantees of scholarships for local and foreign Master's degrees against cumulative minimum and maximum targets during the transition period. In 2016, there were 4,099 nominees for scholarships for Master's degrees. Fifty six percent of the nominees were actual grantees. The number of actual grantees is 86 percent of the target. By 2017, there were a total 7,110 nominees, 60 percent of whom were granted scholarships. However, the accomplishment was lower than in 2016, with the cumulative number of grantees being only 82 percent of the minimum target and only 71 percent of the maximum target. At current take-up rates, the minimum targets may be achieved by the end of the project. However, only 57 percent of the maximum target might be achieved by the project's end.

Figure 8. Cumulative number of grantees (Active) for PhD scholarships versus target



Source of basic data: K-to-12 PMU.

Figure 8 shows the actual number of PhD scholar against the targets. While the number of grantees was eight percent below target in 2016, the uptake has dramatically increased in 2017 surpassing the minimum and maximum targets by 41 percent and 31 percent, respectively. This indicates the high likelihood of achieving the end of project targets.

The project logical framework also includes among its outputs the "list of approved programs and DHEIs". However, there are no targets so it is difficult to assess accomplishment. Nevertheless, there were 59 DHEIs and 450 programs approved in 2015, apparently adopted from Faculty Development Program (K-to-12 PMU n.d.). The number of approved DHEIs increased to 148 in 2016 while the number of programs rose to 2,182.

2.1.5. Inputs

The logframe defines inputs as "the resources (financial, physical, etc.) that will be utilized for the production or operation of the program such as budget, equipment, or buildings." The project targets "100% funds are utilized for the grant", although this was incorrectly identified as a project outcome. Table 1 shows the financial targets and accomplishments for 2016. The financial target for the local scholarships was almost PHP 1.95 billion while that for foreign scholarship was over PHP 151 million. Financial accomplishment for local scholarships was only 71 percent while that for foreign scholarships was even lower at only 37 percent.

Table 1. Financial targets and accomplishments, 2016

	Targets		Accomplishment		
	Physical	Amount (PHP '000)	Physical*	Amount**	% of Target
Local Scholarships	5,514	1,948,361	5,493	1,375,669	71%
Foreign Scholarships	170	151,305	53	55,400	37%

Note: *Actual Accomplishments (number of grantees/scholars; **Amount Obligated (PHP '000)
Source: 2016 Accomplishment Report for HEDF for Congress, K-to-12 PMU.

The PMU attributes the low financial accomplishment in the first year to several factors (K-to-12 PMU n.d.). One is the misalignment between the fiscal and academic calendars, with the former starting in January while the latter starts in June and even shifting to August. Second is the low rate of nominations from sending HEIs. Third is the lack of understanding on the requirements for the release of allowances for scholars.

A related study conducted process evaluation of the program (Brillantes, Brillantes and Jovellanos 2018). The authors found slow processes of nomination and disbursement of the scholarship benefits. Nominations took longer than the expected three months while disbursement took up to five and a half months compared to the ideal two months. The slow nomination process is attributed to late information dissemination, unprepared / lack of support from the sending HEIs, slow / unreliable online application system and the imposition of additional requirements.

The main reasons for the slow disbursement are incomplete and incorrect submission of requirements and the unavailability of signatories. Another reason is the inadequate number of project staff processing many scholarships applications. The unautomated system during the first year also led to inefficiencies. Finally, the centralized disbursement in the first year also contributed to the slow disbursement.

2.2. Review of literature

Standard growth theory attributes the level of national income to the stocks of capital and labor (Solow, 1956; Swan, 1956) and technological improvement (Solow, 1957). Per capita income depends on capital per worker, the growth of which in turn depends on savings as a proportion of income, capital consumption, and population growth. Mankiw et.al. (1992) expands the Solow model by including human capital. While national income exhibits constant returns to scale with respect to all factors, it exhibits diminishing returns to human capital, holding other

factors constant. In contrast, Lucas (1988) assumes constant returns to human capital and sustained economic growth due to human capital.

Education is primarily a private good (Rosen, 2005). However, it has certain public good characteristics such as socialization and political enlightenment. Government intervention in education is also justified on the basis of equity as education leads to social mobility which should be available to all. Government subsidy and provision of education is also justified with the theory that it creates human capital and instills trust in the political system.

Supporting graduate programs for higher education instructors is justified with the view that research in universities creates positive externalities to the country and that research is usually undertaken at the graduate level (UNESCO Institute for Statistics, 2014). Therefore, promoting graduate education enhances a country's economic competitiveness.

Dynarski (2003) analyzed the impact of eliminating student aid on college attendance and completion in the US. Using a difference-in-difference approach, she found that eliminating student aid decreased the probability of attending college by over a third. While eligibility to aid increases the probability of completing a year of college / years completed, the effects are not significant.

In Denmark, Nielsen, Sorensen, & Taber (2010) found that as annual stipend increases by $1000, college enrollment increases by 1.35 percentage points. This is lower than the effect found in the US due to the higher subsidies in Denmark.

Higher education enrollment in Asia has grown tremendously in the last 25 years. As a result, higher education systems have "expanded out" as well as "expanded up" (UNESCO Institute for Statistics 2014). Expanding out entails the establishment of new universities, recruitment of teachers, widening delivery options, and promoting private sector provision. Expanding up refers to the broadening the provision of graduate education in order to address the rising demand for higher education faculty. Moreover, the growth of graduate education promotes academic research that foster economic growth, thereby improving the economic standing of a country.

Worldwide enrollment in higher education has risen from 33 million in 1970 to 182 million in 2011 (UNESCO Institute for Statistics 2014). Almost half (46%) of the enrollment in 2011 was in East and South Asia. This remarkable growth is mainly due to increased enrollment and promotion rates in primary and secondary education. In the past few decades, higher education systems in East and Southeast Asia have gone through "massification phase" (Trow 2006 as cited in UNESCO Institute for Statistics 2014), with gross enrollment ratios ranging from 15 to 50 percent.

As higher education systems evolve, they are confronted with different challenges (UNESCO Institute for Statistics 2014). A larger and more diverse enrollment creates new challenges for instruction on top of the pressure of doing research. Higher education systems are also facing financial pressure as university budgets are unable to cope with rising enrollment. This results in decreasing teacher salaries, recruitment of lower-skilled faculty, and deterioration of employment conditions (ADB 2011 as cited in UNESCO Institute for Statistics 2014). In more than half of the countries in East and Southeast Asia, student-instructor ratios have increased. In six out of seven countries, public spending per student in higher education decreased. In 9

out of 14 countries, while the proportion of public spending in higher education increased, spending per student decreased.

To address the financial constraints, governments have adopted several strategies such as shifting costs to students, collecting course fees, promoting resource mobilization among public universities, promoting online courses, and promoting private sector provision (UNESCO Institute for Statistics 2014). The private higher education sector has experienced the faster growth over the past two decades. Enrollment in private higher education institutions averaged close to 40 percent in Asia. Some countries traditionally have a strong private sector in higher education, including Indonesia, Japan, South Korea and the Philippines (UNESCO Institute for Statistics 2014). In the Philippines, over three-fifths of higher education students were enrolled in private institutions in 2009.

Gender equity in access to higher education has improved over the past decade, with gender parity index in higher education gross enrollment ratio moving to parity or in favor of women (Jacobs, 1996; Buchmann et al., 2008 as cited in UNESCO Institute for Statistics 2014). However, while the enrollment shares of males and females in bachelor's and master's programs are close to parity, enrollment in doctoral programs is still dominated by males. Moreover, wealth equity in access has not improved much. The proportions of the population aged 20-24 with higher education are much higher for richer families compared to poorer families. Inequity is particularly stark for the Philippines, with less than 10 percent of the poorest quintile having higher education while the almost 70 percent of the richest quintile have higher education.

Expanding out necessitates expanding up (UNESCO Institute for Statistics 2014). Increasing undergraduate enrollment raises demand for higher education faculty sometimes faster than qualified faculty can be hired or equipped, thus creating a higher demand for graduate education. Moreover, governments expect universities to undertake research that would promote economic growth. Graduate enrollment as a ratio of undergraduate enrollment (for 2011 or most recent year available) widely varies across countries, ranging from 1:2 in Hong Kong and 1:4 in Singapore to 0 in Timor-Leste and Bhutan. The Philippines is at the lower end with a ratio of 1:27. Gross enrollment rate in graduate education for the Philippines increased in 1990-2000 but declined in 2000-2011.

Public institutions account for the bulk of graduate education enrollment in Asia even where higher education enrollment is mostly in private institutions including the Philippines. Low- to middle- income countries annually produce less doctorates than do developed countries. Apart from local graduates, some doctorates were trained abroad and their share is quite significant in some countries. Some countries also focus on graduate programs in the fields of science, technology, engineering and mathematics (STEM). International student enrollment in Asia has also increased, accounting for between one fourth and one third of graduate enrollment. The growth of graduate education has likely improved the quality of higher education by producing faculty with master's and doctorate degrees. In the Philippines, the proportion of higher education faculty with master's degrees increased from 26 to 41 percent, while that with doctorate degrees rose from 8 to 13 percent, between 2002 and 2012.

2.3. *Proposed evaluation design*

2.3.1. Impact evaluation design

There are several considerations in choosing an evaluation method: the available resources, the eligibility criteria, and the timing of implementation (Gertler, Martinez and Premand 2016). Available resources may allow either full or limited coverage. Eligibility may be universal / apply to all or may be based on a "continuous ranking with a cut-off point". The timing of implementation may be all at once or phased over time.

Over the transition period, the total budget for scholarships for graduate studies amounts to almost PHP 13.8 billion. With average unit costs of PHP 406,000 for local scholarships and over PHP 3.3 million for foreign scholarships, a total of 16,432 local scholars and 1,550 foreign scholars will be supported. The combined total is 12 percent of the total HEI faculty in 2015. Given the limited coverage of the scholarships, eligibility is based on certain criteria. These include an age limit of no more than 52 years old for master's degree scholarship applicants, no more than 50 years old for PhD scholarship applicants, and no more than 60 years old for the thesis / dissertation grant; holds a degree related to his proposed study; proposed study in CHED-recognized HEI in teaching-related discipline; good health and moral character; no criminal record; commitment to the scholarship's terms and conditions including the preparation of a reentry plan and fulfillment of return service obligation; and fully or partially deloaded during the scholarship period. Moreover, the nomination is subject to justification by the sending HEI as to the importance and value of the nominee to the HEI, to regional and national development, and to the discipline and profession.

The selection process starts with the Sending HEI submitting nominations. The nominations are then evaluated by the National Screening Committee against nominations from other SHEIs using the following criteria: relevance and appropriateness of nominations, consistency and clarity of strategic directions, and quality of nominees. The evaluation criteria are operationalized and weighted as follows: scholastic record (20%), professional experience (40%), potential outcomes (35%) and strategic direction of the SHEI (5%). There is supposed to be a cut-off score for the approval of nominations but there is no explicit policy on this. Scholarships are distributed proportionately between public and private HEIs and considering regional representation and the number of affected personnel. The Commission en Banc approves SHEI nominations following the recommendations of the National Steering Committee.

Given the budgetary limitations, the timing of program implementation is phased over the transition period. The target number of local scholars is 5,493 for 2016, 4,200 for 2017, 5,507 for 2018 and 1,232 for 2019. For scholarships abroad, the targets are 92 for 2016, 160 for 2017, 228 for 2018, 195 for 2019 and 200 for 2020.

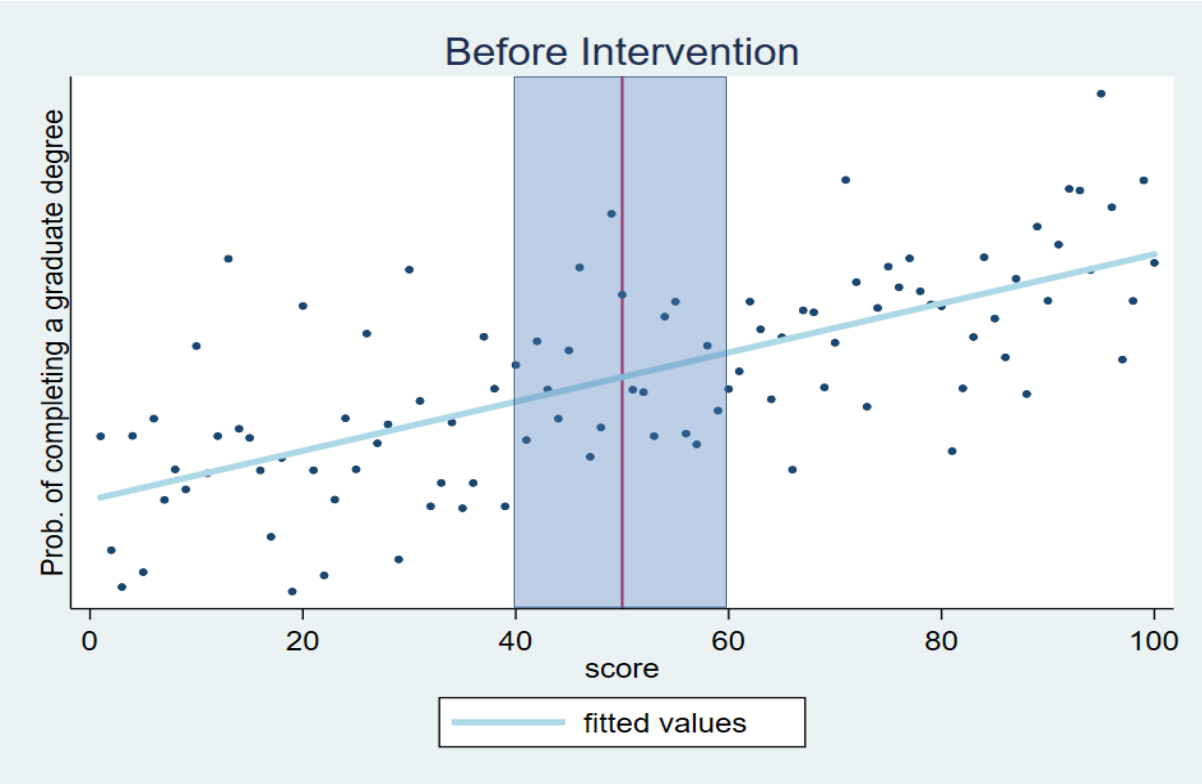
Given the limited coverage of the program, the selection of participants based on certain criteria summarized into a score that can be ranked and the supposed cut-off score, and the phasing of program implementation, the most appropriate evaluation strategy is regression discontinuity.

Regression discontinuity requires satisfaction of certain conditions. First, a continuous eligibility index that allows ranking. Nominations are evaluated by the national steering committee based on scholastic record, professional experience, potential outcomes and the

strategic direction of HEI. Second, there must be a clearly defined cut-off score above which the nominees are classified as eligible for the program. The cut-off score is set at 50 percent. Nominees with a score of 50 or higher pass the evaluation; otherwise, they fail. Third, the scoring system including its cut-off must be used exclusively for selection into the program and not for other programs. To our knowledge, the evaluation scores are used only for the scholarship program. Finally, the scoring system must not be subject to manipulation. Impact is measured as the difference in the averages outcomes for scholarship recipients just above the cut-off and non-recipients just below the cut-off.

Figure 9 plots the outcome of interest (in this case probability of completing a graduate degree) against the eligibility score (scholarship evaluation score/rating), distinguishing between those with evaluation scores of 50 and above and those below 50. The graph shows a positive correlation between completing the degree and evaluation score. If we compare the nominees with the very low scores and those with the very high scores, their probability of completing a graduate degree would be very different and not comparable. This also means that these two groups are very dissimilar in relevant characteristics. However, if we compare the nominees with scores just above the cut-off (say, plus 10 percentage points) to those just below the cut-off (say, minus 10 percentage points), their probability of completing a degree would be much more similar. The actual bandwidth that will be used in the estimation will be optimally determined based on the characteristics of the outcome variable (see Cataneo, Idrobo, and Titiunik, 2018a, 2018b, for a review). Thus, the evaluation score that will be used to identify the similar two groups; and these two groups are good candidates for comparison, the former being the treatment group, the latter being the comparison group.

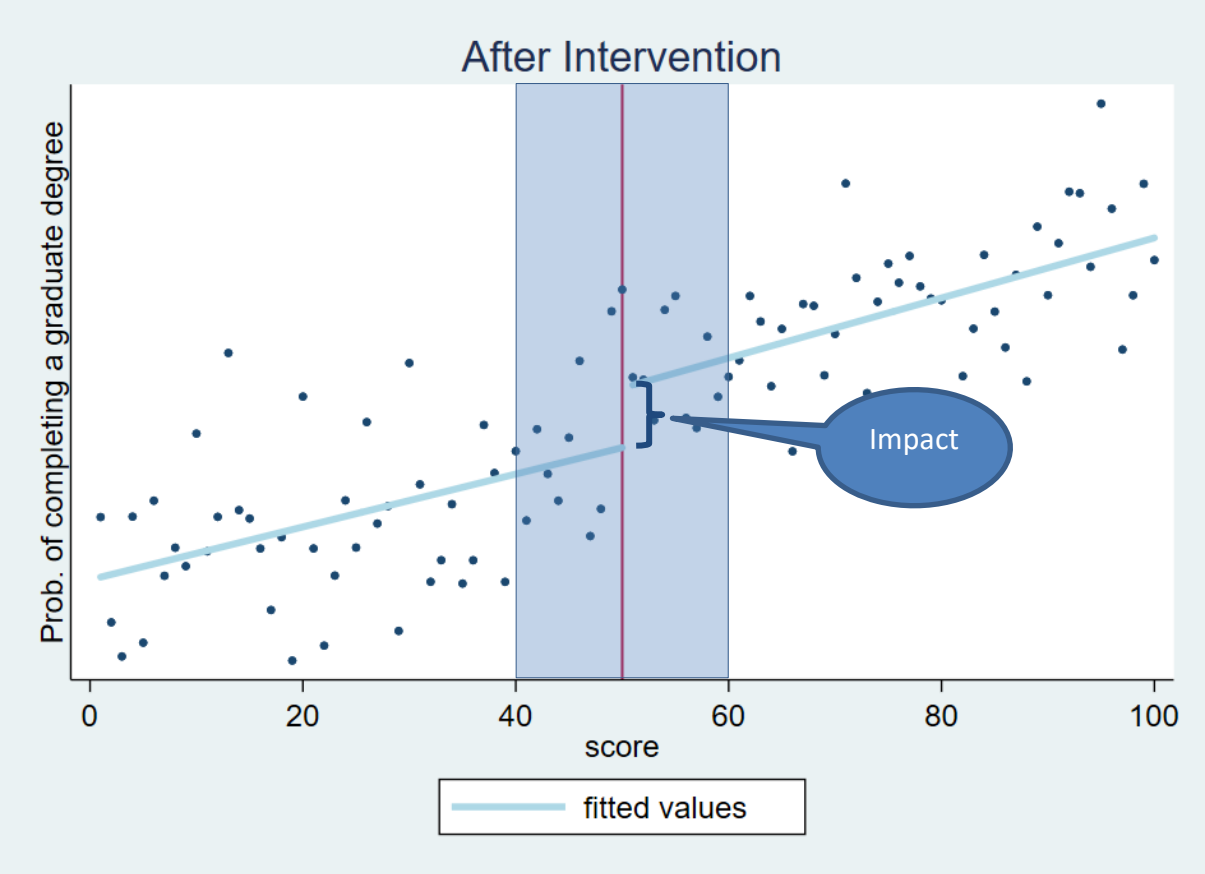
Figure 9. Probability of completing a graduate degree by scholarship evaluation score/rating (before intervention)



Source: Authors' estimates.

By the end of the program, we might see a plot like Figure 10. The impact of the program would be the difference in the probability of completing a graduate degree at the cut-off. Given that these two groups are very similar at the beginning of the program, the difference in educational attainment can be attributed to the scholarship program.

Figure 10. Probability of completing a graduate degree by scholarship evaluation score/rating (hypothetical after intervention)



Source: Authors' estimates.

The objective of the impact evaluation is to determine the effect of receiving a scholarship X_i on probability of degree completion Y_i. The model for probability of degree completion can be written as:

$$y_i = \alpha + x_i\beta + (z_i - c)\rho + x_i(z_i - c)\gamma + \varepsilon_i$$

where y_i is probability of degree completion, x_i is scholarship status (1 received and 0 otherwise), z_i is the scholarship evaluation score/rating, c is the eligibility threshold (assumed here to be 50), and β is the impact estimate. With full compliance, this is known as the average treatment effect (ATE).

When individuals comply with their corresponding assignments (i.e., scholar or non-scholar) based on their evaluation score, the regression discontinuity design is said to be sharp. In this case, receipt of scholarship x_i deterministically depends on the eligibility score z_i:

$$x_i = \begin{cases} 1\ if\ z_i \geq 50 \\ 0\ if z_i < 50 \end{cases}.$$

Given the cut-off score, $z^* = 50\%$, nominees with a score equal to or above the cut-off, $z_i \geq z^*$ receive the scholarship, $x_i = 1$, while nominees with a score below the cut-off, $z_i < z^*$, don't receive the scholarship, $x_i = 0$.

However, if individuals on either side of the cut-off do not comply with their assignment, the regression discontinuity design is said to be fuzzy. This is the case if some nominees who passed the evaluation did not receive the scholarship or if some nominees who failed the evaluation somehow received the scholarship.

In 2016, only 3,000 out of 6,000 nominees passed the evaluation. With 5,909 scholarships available, some of those who failed the evaluation but scored 40-44 were considered for scholarship conditional on their eligibility and the alignment of their proposed program with their discipline. The consideration was justified based on limitations external to the nominees, such as too broad justifications from the HEI representative and absence of specific targets in the HEI's strategic direction. PhD nominees who satisfied the conditions were asked to submit an appeal to CHED to bolster their approval. Similarly, some nominees who failed the evaluation in 2017 were approved based on the foregoing considerations but only for those with scores of 45-49.

Conversely, some of those who passed the evaluation were not approved, mainly because their proposed programs have been disapproved under the Delivering HEI applications. These programs include Business Administration, Public Administration, Education Management which are said to have been oversubscribed. The program on Filipino was also disapproved as it was under Senior High School. Some nominees were also disapproved for failing to accomplish the application online.

In this case of imperfect compliance, receipt of scholarship x_i is a probabilistic function of the eligibility score z_i:

$$x_i = f(z) \equiv E[x_i | z_i = c] = \Pr[x_i = 1 | z_i = c].$$

To correct for non-compliance, the model becomes an instrumental variable model with the evaluation score (z_i) as the instrument for receipt of scholarship (x_i). Other possible instruments are the evaluation result (pass/fail) and the Commission En Banc decision (approved/disapproved). A valid instrument must be exogenous and relevant. The evaluation score is exogenous to the scholars as it determined by the program. It is also relevant; it is highly correlated with the treatment (receipt of scholarship).

Without full compliance, the effect of offering the scholarship to approved nominees is called the *intention-to-treat* (ITT). On the other hand, the effect of participating in the program for the scholars is called *treatment-on-the-treated* (TOT). In practice, some of those who were approved may not actually receive the scholarship as they may have (been) withdrawn / deferred / terminated or be inactive / on hold. With non-compliance in comparison group, the impact on the compliers is called the *local average treatment effect* (LATE). This is appropriate when some nominees who did not pass the evaluation were approved and receive scholarship.

2.3.2. Sampling

Drawing a sample requires defining the population of interest and identifying the sampling frame (Gertler, Martinez and Premand 2016). The population is defined as the group for which outcomes are measured and includes the geographic and other relevant characteristics. The population for this study includes the 152,688 HEI faculty as well as the non-teaching personnel whose number has yet to be determined by the CHED / K-12 PMU. The sampling frame is the most exhaustive list of the members of the population. Ideally, the sampling frame includes the entire population. Realistically, however, the sampling frame may be limited to available lists which may not be as comprehensive. The sampling frame for the study includes all faculty and staff nominated by their respective HEIs. As of 2017, there were 12,951 nominees for the Scholarship for Graduate Studies (Local), 7,907 for AY 2016-17 and 5,044 for AY 2017-18 (K-12 PMU n.d.). It must be noted that the sampling frame may be subject to coverage bias as the nominees are expected to be more able than non-nominees, given the selection process. This means that estimates from the sample may not be externally valid for the entire population. However, limiting the sampling frame to nominees ensures internal validity, that is, the comparability of the treatment and comparison groups.

To draw the sample, probabilistic sampling should be used, particularly stratified random sampling. Three strata will be used: personnel type, degree, and HEI type. The staff is divided into faculty and non-teaching. Degree applied for is either Masters or PhD. The HEI type is either Private or Public (including SUCs and LUCs).

In determining sample size, we determine whether the program is implemented through clusters, define the outcome indicator, define the minimum level of impact, determine the mean and variance of the outcome indicator, and set the statistical power and significance level (Gertler, Martinez and Premand 2016). A cluster is the level of intervention apart from the level where outcomes are measured. In this case, we may define clusters at the HEI level, both from the sending and delivering side. Sending HEIs nominate the scholars while delivering HEI admit and train the scholars. While nominations are guided by certain criteria, the quality of nominations may still vary across SHEIs. Admission, retention and completion requirements also vary by DHEI. Both of these may have an effect on the selection and completion of scholars; thus the relevance of clustering by higher education institution.

The second step in determining the sample size is defining the key outcome indicators that the program aims to improve. Based on the discussion on the project's logical framework in Section 0, the key outcome indicators are the "Number of scholars who completed graduate degrees" and the "number of teaching and non-teaching staff with relevant graduate degree". It must be noted that while the former indicator pertains precisely to the program beneficiaries, the latter applies to the general population of interest and may be influenced by other factors.

Thirdly, the minimum level of impact must be determined for the outcome indicator chosen. This is the least expected difference in the outcomes between the beneficiaries and the comparison group to be able to conclude the success of the project. For the "number of teaching and non-teaching staff with relevant graduate degree", the minimum level of impact would be based on the program targets and the counterfactual estimates. As discussed earlier the target for the proportion of HEI personnel with master's degrees ranges from 45 to 50 percent. The counterfactual estimate based on a historical trend of the proportion of faculty with master's degrees is 44 percent. This puts the minimum level of impact for HEI personnel with master's

degree at 1-6 percent. The target for the proportion with PhD degrees ranges from 18 to 20 percent while the counterfactual estimate based on historical trend is 14 percent, placing the minimum level of impact at 4-6 percent.

Estimating the minimum level of impact for the "Number of scholars who completed graduate degrees" is a bit tricky. Firstly, there is no specified target. Secondly, while the project may want all its scholars to complete the degrees for which they are granted scholarship, or a target of 100 percent, this may not be realistic. Thirdly, as mentioned earlier, the number of grantees is less than the target scholars. This means that even if all scholars completed their degrees by project end, this would still be less than the target recipients. Moreover, the number of scholars who completed their graduate degrees may not be enough to reach the target of HEI personnel with relevant graduate degrees. How then do we the judge the impact of the project? Our solution is to measure the change in the number of faculty with graduate degrees between 2015 and 2021 as a proportion of those with no / lower graduate degrees in 2015. In 2015, there were 61,925 faculty members with master's degrees. This is expected to increase to 77,114 by 2021 even without the transition program. The difference of 15,189 is 21 percent of those without graduate degrees in 2015. With the transition program, the number of faculty members with master's degrees is expected to increase to between 78,887 (min.) and 87,652 (max.) by 2021, or 24 and 32 percent of those without graduate degrees in 2015, respectively. Comparing the improvement in skills between the program targets and the counterfactual gives a minimum level of impact of 3 to 11 percent. Applying a similar technique for faculty members with PhD degrees, 8 percent of those with master's degrees in 2015 are expected to obtain their PhD by 2021, even without the transition program. With the program, a minimum of 20 and a maximum of 25 percent of faculty with master's degrees are expected to earn their PhD's. These estimates yield a minimum level of impact of between 12 and 17 percent. In short, the transition program is expected to increase the number of faculty with master's and doctorate degrees by at least 8 percent and 12 percent, respectively, compared to without the project. With these measures, we can assess the benefits of the scholarship according to the targets set for the project.

Fourthly, benchmark values of outcome indicators need to be estimated. These refer to the mean and standard deviations of continuous variables or proportions of categorical variables. In this study the relevant values are the proportions of HEI staff with master's and PhD degrees. In 2015, the population of interest was distributed as follows: 47 percent have no graduate degrees, 41 percent have master's degrees, and 13 percent have PhD's. For the sampling frame in 2016, 50.1 percent of the nominees were bachelor's degree holders, 45.6 percent were master's degree holders, and 2.4 percent were PhD degree holders.

Fifth, we need to determine the levels of significance and power (Gertler, Martinez and Premand 2016). The significance level is the likelihood of concluding that the program has an impact when there is none (also known as Type I error). It is typically set at 5 percent. This means that there is a 5 percent chance of finding an impact even though this does not exist. It implies 95 percent confidence level in concluding a program's impact. Power is the likelihood of finding an impact given that it exists. The evaluation has high power if the risk of not finding an impact if it exist is low (also known as Type II error). A commonly used power is 0.8. It indicates an 80 percent chance of finding an impact where it exists. The power may be increased at the cost of a bigger sample size.

With the abovementioned considerations, we determine the sample size using the Stata command *sampsi*[2]. Assuming a pre-intervention proportion of HEI faculty having a master's degrees of 21 percent in 2015 and a minimum detectable effect size of 3 percentage points, a one-sided test, 5 percent significance level and 80 percent statistical power and equal sample size per treatment arm, the sample size for MA/MS scholars is 2,461 each for the treatment and comparison groups (Table 2). Increasing the minimum detectable effect sizes to 7 and 11 percentage points will reduce the corresponding sample sizes for each treatment arm to 494 and 216, respectively. For the PhD scholars with pre-intervention proportion of 8 percent, detecting a minimum increase of 4 percentage points and using the same assumptions will require a sample of 744 each for the treatment and comparison groups (Table 3). Increasing the minimum detectable effect size to 6.5 and 9 percentage points will reduce the required sample size to 322 and 188, respectively. Using the minimum detectable effect size of 3 percentage points for MAs and 4 percentage points for PhDs, will require a total sample of 6,410. The samples for the treatment and comparison groups of scholars for the master's and doctorate degrees will be stratified as in Table 4, based on the distribution of nominees for 2016 and 2017.

Table 2. Sample size: Master's degree nominees, power=0.8, alpha=.05

Minimum Detectable Effect	Treatment	Comparison	Total
3 pp	2,461	2,461	4,922
7 pp	494	494	988
11 pp	216	216	432

Table 3. Sample size: Doctorate degree nominees, power=0.8

Minimum Detectable Effect	Treatment	Comparison	Total
4%	744	744	1488
6.5%	322	322	644
9%	188	188	376

[2] Using *sampsi,* "(t)he required sample sizes for a two-sample test of equality of proportions (using a normal approximation with a continuity correction) are

$$n_1 = \frac{n'}{4}\left[1 + \left\{\frac{2(r+1)}{n'r|p_1 - p_2}\right\}^{\frac{1}{2}}\right]^2$$

$$n_2 = rn_1$$

where α is the significance level, $1-\beta$ is the power, $z_{1-\alpha/2}$ is the $\left(1-\frac{\alpha}{2}\right)$ quantile of the normal distribution, and $r = n_2 - n_1$ is the ratio of the sample sizes.

$$n' = \frac{\left[z_{1-\frac{\alpha}{2}}\{(r+1)\overline{pq}\}^{\frac{1}{2}} + z_{1-\beta}(rp_1q_1 + p_2q_2)^{\frac{1}{2}}\right]^2}{r(p_1 - p_2)^2}$$

and $\bar{p} = (p_1 + rp_2)/(r+1)$ and $\bar{q} = 1 - \bar{p}$ (Fleiss, Levin and Paik 2003, 76)." "The formulas for one-sided tests can be obtained by replacing $z_{1-\alpha/2}$ with $z_{1-\alpha}$."

Table 4. Sample distribution by strata

	Public	Private	Total
1. Master's			
a. Faculty	11.0%	12.1%	23.1%
b. Staff	39.0%	37.8%	76.9%
2. Doctorate			
a. Faculty	3.4%	3.3%	6.8%
b. Staff	61.4%	31.8%	93.2%

2.3.3. Data generation

Primary data will be gathered using a survey questionnaire (see Appendix A). The survey will be conducted online. The questionnaire has four parts. The first part asks the respondents personal characteristics. The second part asks about the scholarship and graduate study applied for. The third part asks about the sending and delivering institutions. The fourth part asks about the nominee's prospects upon completion of the study.

3. Institutional Development and Innovation Grants

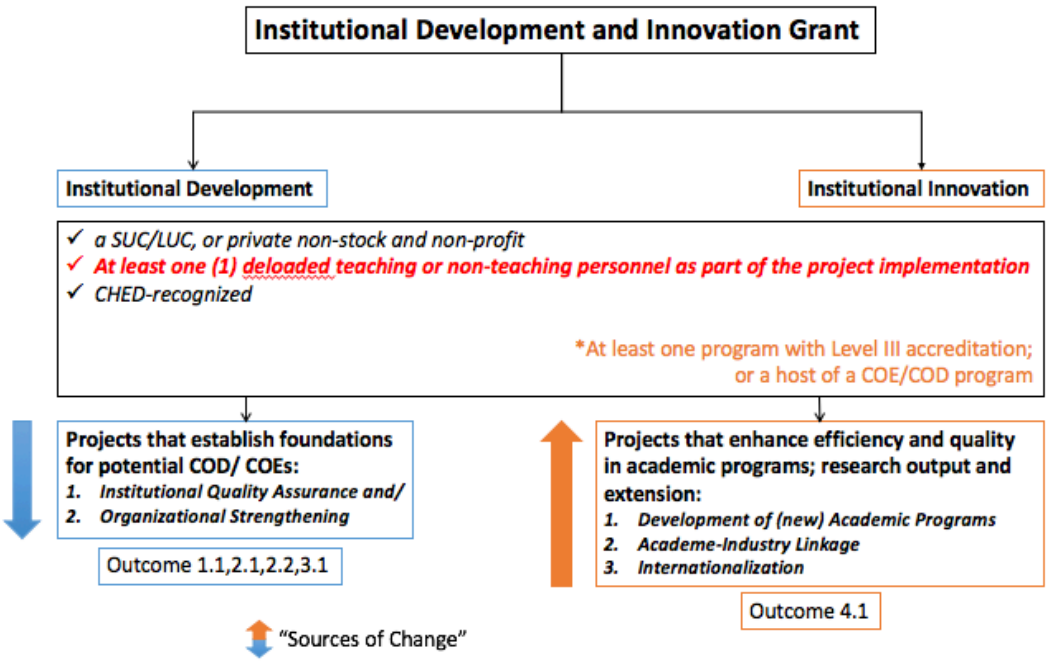
3.1. Sub-project background

The CHED K to 12 Transition Program aims to take advantage of the transition period of the K to 12 basic education curriculum by upgrading Philippine higher education. Toward this end, the Commission on Higher Education (CHED) offers the Institutional Development and Innovation Grants (IDIG) to fund initiatives that strengthen the qualifications and capacity of higher education institutions (HEIs) in order to respond and be relevant to local, regional, national, and global priorities. Its main thrust is to strengthen the role of HEIs across the country as providers of superior *quality* education as well as catalysts of innovation and positive change in the domains of nationalism, inclusive growth and development; and global competitiveness.

3.2. IDIG Overview

The IDIG is unique among other CHED-funding initiatives in that it explicitly requires that proposal submissions include in the research team at least one de-loaded faculty or staff member during the transition to the K-12 system. Any CHED-recognized Higher Education Institution, regardless of type (Public, Private or Local University or College) may apply to for two main grant categories; institutional development and institutional innovation, with the latter having an additional requirement of holding a Level III accreditation or hosting a COE/COD. The development category is geared towards the improvement of systems, processes, instructional content, and pedagogies that would enable any CHED-recognized HEI to meet higher standards. The innovation category is for initiatives that add new value and/or enhance HEI efficiency and quality in academic programs, research outputs and extension projects, and response to local and international industry needs.

Figure 11. Key features of the IDIG



3.3. Theory of Change

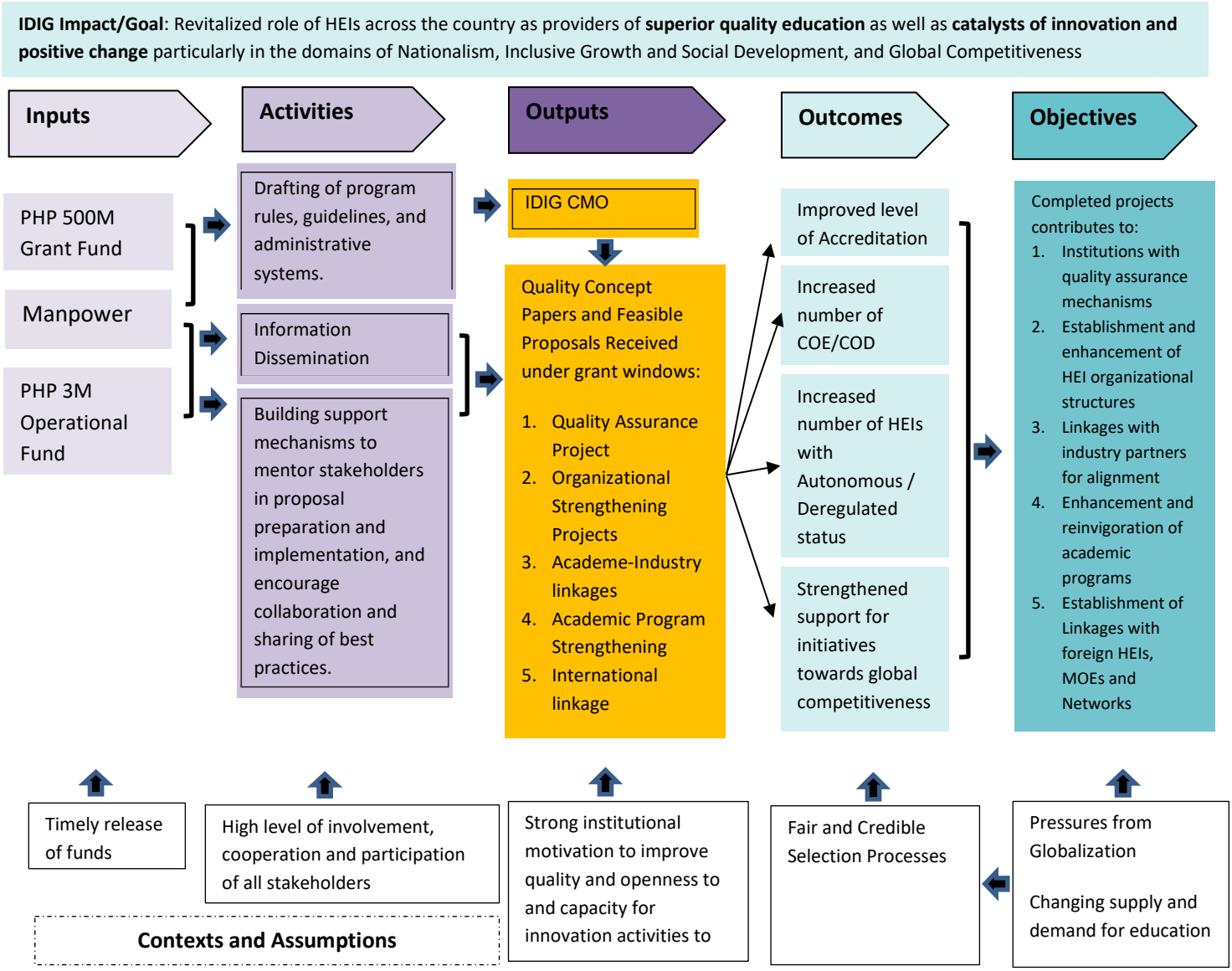
Figure 12 shows a reconstructed Theory of Change that relates how increased availability of public funding could improve the provision of quality education and enable higher education institutions to spur innovation and positive change. Necessarily, the presence of Quality Assurance mechanisms is an important element if one were to ensure the provision quality education, that is, 'having those systems, procedures, processes, and actions intended to lead to the achievement, maintenance, monitoring and enhancement of quality' (Woodhouse, 1998). Akareem and Hossain (2016) argue that the need to assure a standard of quality is important for modern higher education institutions' survival in what Ehrman (2006) calls a buyer's market where students are buying higher education from universities via the curriculum, faculties, library, resources offered. Similarly, graduate employability signals quality brought about by the alignment between curricular training and industry needs. Thru benchmarking (Focus 2013) and knowledge exchange thru linkages, HEIs can foresee areas for improvement of administrative processes and institutional models by examining processes and models in other institutions and adapting their techniques and approaches. Further exposure to different long-held structures and value-orientations (i.e. departmental and collaborative / interdisciplinary) may contribute in increasing innovation efforts (Swanger, 2016). Several studies have emphasized the importance of funding alternatives to higher education outcomes. For example, by design, innovation funds respect university autonomy while encouraging institutions to think holistically about their planning and development. Experience with these types of funds has shown how they "encourage program evaluation and reinforce accreditation efforts". In cases where accreditation agencies work in close coordination with the innovation fund managers and the awards committee, the latter can ensure that innovation proposals reflect the results of these evaluations and attempt to address the weaknesses identified by the accreditation process (Marquis, 2000). However, the availability of increased public

investment for education could not be the be-all, end-all solution to quality and innovation aspirations. It needs to be accompanied by the following:

a) Academic community participation in the evaluation processes.
b) Workshops, technical assistance and other supports for the preparation (and revision) of funding applications.
c) Timely and effective methods for disseminating the fund's experiences.
d) Strict adherence to procedures and defined timetables are necessary for Innovation Funds to become appropriate and effective instruments for quality enhancement.

Larger contextual factors such as the pressures of competitiveness due to globalization and the changes existent with the changing supply and demand for higher education offer challenges to the delivery of and quality of higher education practices.

Figure 12. IDIG Theory of Change



3.4. Sub-project background (including review of design and implementation)

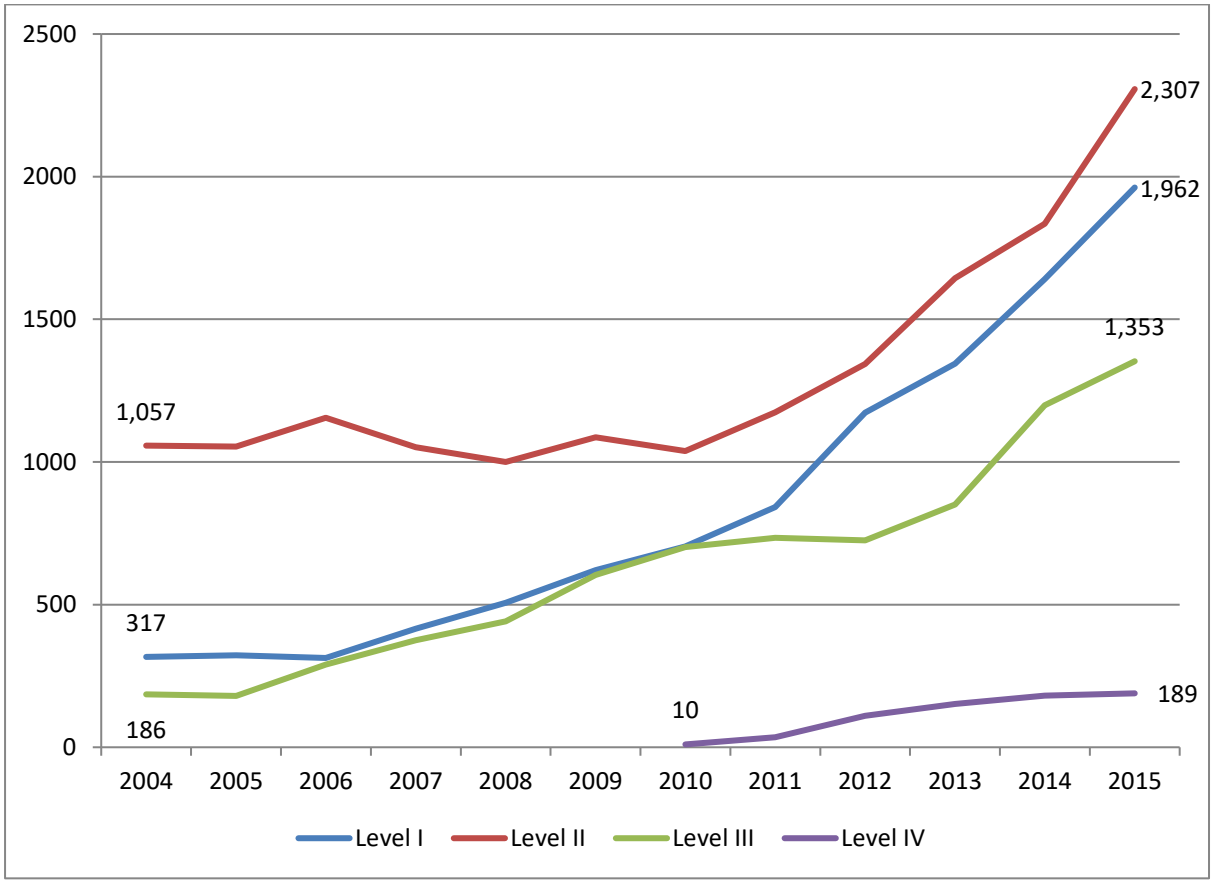
The impact of the IDIG would be the improvement in the quality of tertiary education, like the Scholarship for Graduate Studies and will no longer be discussed in detail.

3.4.1. Purpose

The general outcome objective of the IDIG is to upgrade Philippine higher education. The specific outcome objectives are as follows:

1. Contribute in the improvement of Accreditation level of HEIs
2. Support initiatives of HEIs towards acquiring of COE/COD status
3. Contribute in the increased number of HEIs with A/D status
4. Support HEIs' initiatives towards global competitiveness

Figure 13. Number of accredited programs by level



Source of data: CHED Higher Education Indicators 2016.

For the first objective, the target is to increase the number of HEIs that climbed up in accreditation level by 10 percent. Available statistics include two related indicators. A close indicator is the number of HEIs with accredited programs; however, it does not have a breakdown by accreditation level. Another indicator is the number of accredited programs by accreditation level (Figure 13). While this is indicator is not the same as the outcome indicator, it is the closest there is. The figure shows the number of Level I programs increasing from 317

in 2004 to 1,962 in 2015 while the number of Level II programs increased from 1,057 to 2,307 over the same period. The number of Level III programs increased from 186 to 1,353 between 2004 and 2015 while the number of Level IV programs rose from 10 to 189 over the same period. The numbers of Levels I to III programs rose in a cubic trend with forecast values of around 4,000, 6,500, and 2,200 by 2021. The historical average increase in HEIs that climbed up from accreditation level I to level II is 9.3 percent. The average increase from accreditation level II to level III is 8.2 percent while the average increase from level III to level IV is 4.7 percent. This puts the annual historical average across levels at 7.4 percent. This means that it is expected to grow by 43 percent by 2021. Based on this, the target of 10 percent seems low considering that the expected accomplishment would be higher even without the program.

For the second objective, the targets are to increase the number of additional HEIs with COE Programs by 50 percent and an additional 50 new HEIs with CODs. As of 2016, 72 HEIs have COE programs. Increasing this number by 50 percent means that 36 new HEIs are expected to have COE programs by 2021. In 2016, 110 HEIs had CODs. The target is to increase this to 160 HEIs with CODs by 2021. Without a historical trend, it is difficult to assess whether the target is high or low.

The third objective is to contribute to the increased number of HEIs with Autonomous or Deregulated status. The target is to increase the number of Autonomous/ Deregulated HEIs by 10 percent. As of May 2015, there were 53 autonomous HEIs and 11 deregulated HEIs, for a total of 64. By April 2016, the autonomous HEIs rose to 59 and while the number deregulated HEIs increased to 16 for a total of 75, or a total increase of 17 percent. The target of 10 percent means that only 8 new HEIs are expected to be autonomous or deregulated over the 5-year transition period. This seems low considering the 17 percent increase over just a two-year period.

The fourth objective is to support HEIs' initiatives towards global competitiveness. The relevant indicators are the number of universities with increase in foreign student enrollment and the number of graduates employed in foreign companies. However, no numerical target was specified.

3.4.2. Output

The key output is the provision of IDIG grants. The indicators are number of grants approved and awarded, the number of projects implemented, and the number of projects completed during the transition period. The logical framework has no specified targets. However, data from the PMU shows a target of 288 new projects reviewed and funded for Institutional Development and Innovation Grants. This is distributed as follows: 69 for 2016 and 59 for 2017 (K-to-12 PMU 2017), and the balance of 100 presumably for 2018. As for the accomplishment, 88 grants were awarded in 2016. Of these, 55 were Institutional Development grants while the remaining 33 were Innovation grants. These represent a total of three percent of HEIs availing of IDIG in 2016. The budget utilization report for 2017 presented a revised target of 125 Innovation Grants availed by HEIs and an accomplishment of 231 (Vital 2018).

3.4.3. Inputs

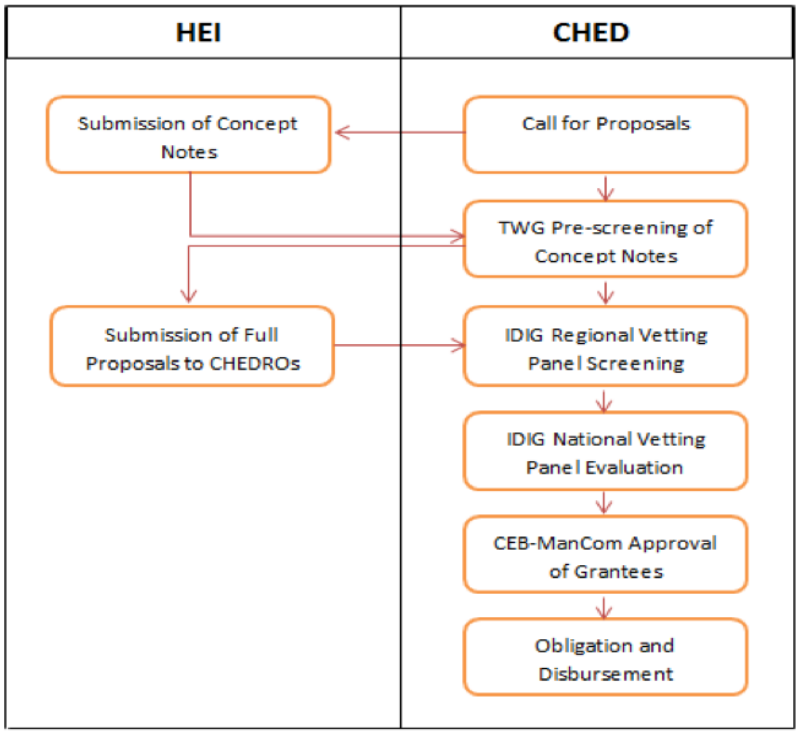
Based on the logical framework, the inputs for the project consist of PHP 500 million Grant Fund for 2016, PHP 3 million Operational Fund for 2016, and manpower. Data from the PMU further shows grant budgets of PHP 450 million for AY 2017-18 and PHP 500 million for AY

2018-19. The Guidelines for Institutional Development and Innovation Grants set the budget ceilings for the Institutional Development and Institutional Innovation at PHP 2-5 million and PHP 8-12 million per project for AY 2016-17, respectively.

3.4.4. Activities

The selection of IDIG awardees is a multi-level vetting process (Figure 14). The first level is the staff-level vetting where each proposal is classified according to the grant category and/or discipline and assessed whether it is eligible for two 'gates'. These gates serve as a prompt to prioritize a proposal for the next vetting level presided upon by the Technical Working Group (TWG). The first gate assesses if the proposal's topic is aligned with regional priority areas[3] while the second gate tags the proposing HEI as small, medium, or large; where priority is placed on small HEIs (with 1,000 student population or less).

Figure 14. IDIG selection process



The next vetting level is presided by the TWG. The panel approves or disapproves a proposal via consensus (there are usually 3-4 TWG panel members present). TWG members may also recommend revisions. In the next level, Regional Vetting Panel (RVP), proposing HEIs are required to submit the full project proposal. This is vetted and scored by the RVP, which includes one regional technical expert, the Regional Director, and the Permanent Alternate Focal Person. The panel scores each full project proposal. The ones that pass are elevated to the National Vetting Panel (NVP) level. The scoring is specified as an attachment in CMO 33.

The NVP level is composed of the TWG panel. All proposing HEIs who reached the NVP level are required to do a presentation and oral defense of their project in front of the panel and the

[3] Priority areas were determined according to the common disciplines tagged as 'priority' in the following documents: CHED Memorandum Order 33 s. 2016, DTI Industry Roadmap, and DOLE Labor Market Profile.

IDIG team. The TWG members score each proposing HEI. The scores are averaged, and the proposals ranked from highest to lowest. Based on the ranking, the proposing HEIs are assigned to their respective categories. Once the two categories have been filled up, the final list is forwarded to the CEB-MANCOM for final approval.

Table 5 shows the breakdown of the proposals by category and by approval rate in 2016. More applications were received in the Institutional Development (ID) category (379) compared to the Innovations category (171). There were more applications in ID coming from the private HEIs while the number of public HEIs that applied in the Innovations category was almost twice the number of applications from the private HEIs. In both cases, the approval rates of applications coming from public HEIs are higher than those coming from the private institutions.

Table 5. IDIG applications and approval rates by category and type of HEI, 2016

Institutional Development	*Total HEIs*	*No. of Concept Papers Received*	*Approved Concept Paper*	*RVP - Approved*	*NVP - Approved*	*Awarded*	*Approval Rate*
Public	682	122	61	35	24	19	2.8
Private	1706	257	131	71	31	36	2.1
Total	**2388**	**379**	**192**	**106**	**55**	**55**	2.3

Innovation Grant	*Total HEIs*	*No. of Concept Papers Received*	*Approved Concept Paper*	*RVP - Approved*	*NVP - Approved*	*Awarded*	*Approval Rate*
Public	682	102	53	33	18	19	2.8
Private	1706	69	46	23	16	14	0.8
Total	**2388**	**171**	**99**	**56**	**34**	**33**	**1.4**

Source: K-to-12 PMU.

To roughly assess whether those who were the specific targets of the grants were able to qualify for a grant, we use the individual profiles of the awardees checking whether their HEI has at least a COE/COD. We assume that the Institutional Development grant should cater more to those HEIs without a COE/COD (thus the need for a grant) while the Innovation grant awardees should be schools with a COE/ COD (or at least to be Level III accredited) as stipulated in the rules. These assumptions were confirmed by Table 6:

Table 6. IDIG recipients with/without COE/COD

Category	*With COE/COD?*		*Total*	*N*
	Yes	*No*		
Institutional Development	23.64	**76.36**	100	55
Innovation	**90.91**	9.09	100	33

Awards were also categorized by HEI enrollment size (Table 7). Half of the grantees in each category belong are medium-sized HEIs (enrollment of 1,000-9,999). However, there were smaller HEIs (enrollment <1,000) for Institutional Development, while Innovation Grants recipients tend to be large HEIs (enrollment>10,000). The latter may be because more established (i.e. larger HEIs) are more likely to have higher accreditations (i.e. Level III and

up) or have COE/COD programs, which as mentioned earlier is a criterion to avail of an Innovation grant.

Table 7. IDIG grantees by HEI size, 2016

Category	HEI Enrollment Size			
	Small	Medium	Large	All
Institutional Development	20	28	7	55
Innovation	4	15	14	33
Total	**24**	**43**	**21**	**88**

Source: K-to-12 PMU.

While the grant ceilings are between two million and PHP 5 million, the approved budgets for the awardees range from as low as PHP 481,000 to a little more than the published cap at PHP 5.4 million, averaging around PHP 3 million. The published ceilings for the Innovations grant range from PHP 8 million to PHP 12 million with most of the proponents fully utilizing the said amounts as the approved grants average at PHP 11 million (see Table 8). The approved budget for both categories of the IDIG in 2016 is PHP 547 million.

Table 8. Approved grant amounts by category, 2016

Category	*Mean*	*S.D.*	*Min*	*Max*
Institutional Development	3,628,363.00	1,380,057.00	481,800.00	5,424,260.00
Innovation	11,200,000.00	1,271,190.00	8,000,000.00	12,000,000.00

In terms of distribution, a range between 1 and 8 grants were approved for each region with HEIs from Bicol receiving the greatest number of grants, overall. Region 11 had the greatest number of Institutional Development grants (7 grants) while HEIs from the Central Visayas were awarded the greatest number of Innovation Grants (5 grants).

Table 9. Regional distribution of IDIG grants by region, 2016

Region	*No of Grants*			*% Distribution*		
	ID	*IG*	*All*	*ID*	*IG*	*All*
1	5	0	5	9.09	0	5.68
2	3	0	3	5.45	0	3.41
3	3	2	5	5.45	6.06	5.68
4A	5	3	8	9.09	9.09	9.09
4B	2	1	3	3.64	3.03	3.41
5	4	4	8	7.27	12.12	9.09
6	4	3	7	7.27	9.09	7.95
7	2	5	7	3.64	15.15	7.95
8	4	0	4	7.27	0	4.55
9	2	1	3	3.64	3.03	3.41
10	2	2	4	3.64	6.06	4.55
11	7	0	7	12.73	0	7.95
12	3	1	4	5.45	3.03	4.55
ARMM	1	0	1	1.82	0	1.14
CAR	1	2	3	1.82	6.06	3.41
CARAGA	2	2	4	3.64	6.06	4.55
NCR	1	4	5	1.82	12.12	5.68
NIR	4	3	7	7.27	9.09	7.95
Total	55	33	88	100	100	100

3.5. Review of literature

3.5.1. Quality education as state policy

The link between education and development has been time and again proven to be inextricable. As Burgess (2016) summarized, education is crucial to human capital formation in which a country's stock of skills is an important driver for growth and prosperity at the macro level and an important determinant of inequality and social mobility at the individual scale. Echoing this principle, the 1987 Constitution over and above the recognition of education as a right, has explicitly mandated that the state "shall protect and promote the right of all citizens to *quality* education at all levels" within an education system that ensures relevance to "the needs of the people and the society" (Article XIV Sec. 1 and 2). Owing perhaps to the particular historical development of the Philippine educational system wherein the public higher education was originally meant to supply the professional needs of the colonial administration's programs and activities and that the development of private higher education was left to the "initiative of enterprising Filipinos" (Alcala 1999) to address the unanticipated demand for tertiary education, a peculiar regulatory framework to ensure quality education as a public good became emergent.

At present, the Philippines formally recognizes the complementary role of public and private institutions in education within what has become a "trifocal system" with the authority to supervise and regulate higher education vested on a Commission on Higher Education (CHED). Reiterating constitutional imperatives, the Higher Education Act of 1994 which created the CHED empowers the agency to protect "the right of all citizens to affordable *quality* education" covering all degree-granting programs in "all post- secondary institutions, public and private" (RA 7722). The same law mandates CHED to "set minimum standards for programs and institutions of higher learning".

3.5.2. Quality assurance: Mechanisms and initiatives

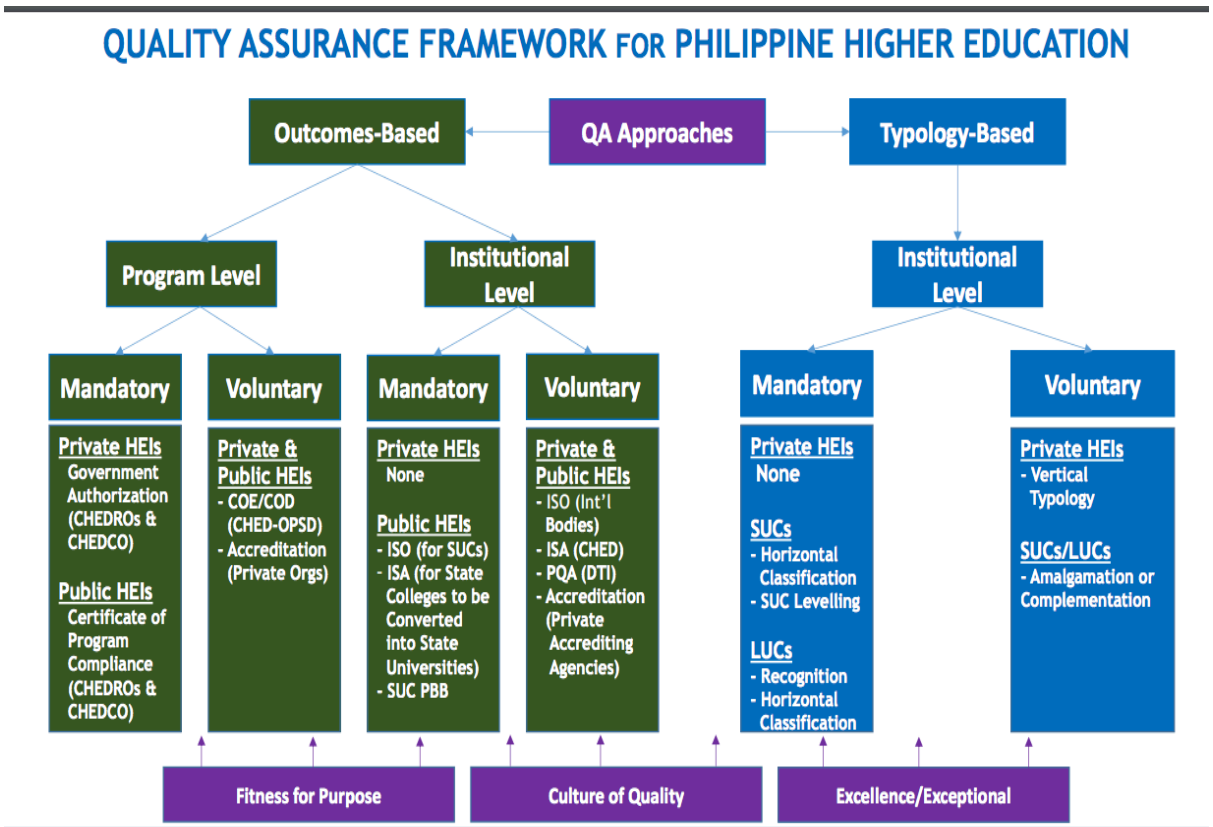
CHED defines quality as the "alignment and consistency of the learning environment with the institution's vision, mission, and goals demonstrated by exceptional learning and service outcomes and the development of a culture of quality. In exercising its function of overseeing the quality of tertiary education, CHED approaches quality assurance either by program outcomes or by HEI typology some mechanisms are mandatory while others discretionary on the part of HEIs. Specifically, a "Policy Standards to Enhance Quality Assurance (QA) in Philippine Higher Education"[4] was released in cognizance of the paradigm shift to an outcomes-based education and in view of developing appropriate QA mechanisms suitable to a particular HEI type. Figure 15 broadly outlines these QA mechanisms.

Under the outcomes-based approach, private higher educational institutions at the minimum level must secure government authority obtained from CHED in order to operate. Compliance to specific standards towards the receipt of government authority is obtained either by permit or recognition[5]. On the other hand, public institutions such as State Universities and Colleges (SUCs) or Local Universities and Colleges (LUCs) must have a certificate of program

[4] CMO 46 s. 2012
[5] CMO 40 s.2008

compliance. At the invitation of the CHED Technical Panels, or upon the initiative of HEIs, degree programs may be applied for as Centers of Excellence and Centers of Development (COEs/CODs) on top of the mandatory QA mechanisms.

Figure 15. Quality Assurance Framework for HEIs



Source: Imperial, 2014.

At the institutional level, public HEIs are mandated to subscribe to external certifications such as ISO compliance, an Institutional Sustainability Assessment (ISA), or comply with the performance-based bonus (PBB) system. Within this outcomes-based approach to QA, accreditation for private higher educational institutions is used as an important hallmark for quality assurance. Using the typology-based approach, quality assurance is determined at the institutional level whereby higher education institutions mandatorily undergo a horizontal classification system (Public HEIs) or a vertical typology (Private HEIs). To lay the predicate for our discussion on the expected impacts of the IDIG, we will in turn briefly describe three quality assurance practices, these are: 1) COE/COD, 2) Accreditation, and 3) Vertical typologies.

3.5.2.1. Accreditation. Accreditation is seen as a system of evaluation based on the standards of an accrediting agency. It is a means of assuring and improving the quality of education thru the assessment of programs by external reviewers using predetermined standards and tools. The accreditation system in the Philippines started in 1957 through the Philippine Accrediting Association of Schools, Colleges and Universities (PAASCU). Several other external accrediting agencies have since been formed (Table 10).

Table 10. Accrediting agencies in the Philippines

Accrediting Agency	Year of Establishment
Philippine Accrediting Association of Schools, Colleges, and Universities (PAASCU)	1957
Philippine Association of Colleges and Universities Commission on Accreditation (PACUCOA)	1973
Association of Christian Schools, Colleges, and Universities Accrediting Agency, Inc (ACSCU-AAI)	1976
Accrediting Agency of Chartered Colleges and Universities in the Philippines, Inc. (AACCUP)	1987
Association of Local Colleges and Universities Commission on Accreditation (ALCUCOA)	2003

While accreditation is voluntary and done by private external institutions, it is encouraged[6] by CHED to which all results are endorsed by the accrediting agencies for final leveling and recognition. Generally, there are four levels of accreditation as shown in Table 11.

Table 11. Levels of accreditation: Processes and validity

Accreditation Level	Process/ Criteria	(Cumulative) Benefit	Validity
Level I	• Application for Accreditation; • On-site Visit	• Administrative and Financial Deregulation • Curricular Revision • Authority to Graduation • CHED priority in awards/ partnerships • Accredited status for use in marketing collaterals • Limited visitation/ inspection and supervision	2 years
Level II	• Same as Level I		3-5 years
Level III	• Performance of graduates in licensure exams • Research projects, • Strong link with other schools and agencies, • Library Services • Community extension programs, • Publications Record • Faculty Development program	• Authority to offer new programs • Privilege to apply for authority to offer graduate education, extension, and transnational education	3 years
Level IV	• Strong research and publication projects, • Internationally acknowledged teaching and learning methodologies, • Global linkages, and • Contribution of social and educational privileges regionally and nationally	• Full autonomy for the program • Authority to offer graduate level programs allied to existing Level IV programs	3 years

Adapted: Conchada and Tiongco (2015) / CMO. No 40 s.2008.

[6] CMO No. 1 s. 2005

In a review of the accreditation system in the Philippines, Conchada and Tiongco (2015) have opined that the voluntary nature of the accreditation process has on one hand preserved the ability of HEIs to maintain a level of their academic freedom but on the other hand may have created a sense of complacency among HEIs. The multiplicity of accrediting agencies with similar but varied methods of assessment also allows HEIs to shop for the accrediting agency which are more closely related to their respective institution's programs and goals. In the same study, those institutions that have undergone accreditation reported to have shown an improvement in their programs because of the experience of preparing for and receiving feedback on their internal and external quality assurance practices.

3.5.2.2. Center of Excellence/Center of Development (COEs/CODs). CHED has implementing guidelines for COE/CODs for various program areas. However, programs are generally awarded as Center of Excellence or Centers of Development based on having demonstrated excellent performance in the following criteria:

1) Areas of instruction (45%)
2) Research and publication (30%)
3) Extension and linkages (20%)
4) Institutional qualifications (5%)

Aside from being a signal of quality, HEIs with programs that are awarded COE/COD status receive priority in the selection as CHED institutional partner with regards to other developmental packages and are entitled to receive other non-monetary benefits, subsidies, and/or awards. Unless otherwise revoked, COE/COD status is valid for 3 years under regular monitoring.

3.5.2.3. Vertical typology (and horizontal classification). Tying both the use of COE/ COD to establish program excellence and accreditation to measure institutional quality, vertical typology operates as an overall quality measure for HEIs depending on their chosen horizontal classification. HEIs may opt to get classified as Professional Institutes, Colleges, or University, depending on their specific thrusts. Quality for purposes of vertical typology suitable to each HEI horizontal type is then premised on three important factors: 1) alignment and consistency of the learning environment with the HEI's VMG; 2) demonstration of exceptional learning and service outcomes; and 3) development of a culture of quality. Quality is reflected in the three levels in the vertical typology (Table 12):

Table 12. HEI vertical typology level

Vertical Typology	Quality Characteristic
Autonomous HEIs	Evidence of **outstanding** performance consistent with their horizontal type, e.g., research and publications for universities; creative work and relevant extension programs for colleges; and employability or linkages for professional institutes
Deregulated HEIs	Evidence of **very good performance** consistent with their horizontal type
Regulated HEIs	Institutions **still needing** to demonstrate good institutional quality and program outcomes

Like the listed benefits of Accreditation, specific privileges concerning administrative, financial, curricular, and supervisory autonomy/ independence are accorded by vertical HEI type.

3.6. Proposed evaluation design

3.6.1. IE design

Given available resources for the IDIG, project coverage is limited. Moreover, the annual allocation makes the timing of implementation phased over time. Eligibility is open to all state and local universities and colleges as well as private higher education institutions. However, the candidate institutions for institutional development must be recognized by CHED, while candidates for institutional innovation must also have Level III program accreditation or a center of development or excellence. Applications are assessed in terms of the project's technical merit, relevance and developmental nature or value-added, and demonstrated capacity of the HEI to deliver the stated goals. Based on these criteria, project proposals are scored by the Regional Vetting Panel. Only proposals with scores of 50 and above are endorsed to the National Vetting Panel. Based on the above considerations, the appropriate evaluation method is Regression Discontinuity.

As mentioned in the previous section, regression discontinuity requires satisfaction of certain conditions. First, a continuous eligibility index that allows ranking. As mentioned above, project proposals are scored based on technical merit, relevance, and capacity to deliver. Second, there must be a clearly defined cut-off score above which the nominees are classified as eligible for the program. The cut-off score is set at 50 percent. Proposals with a score of 50 or more are endorsed to the national level; otherwise, they fail. Third, the scoring system including its cut-off must be used exclusively for selection into the program and not for other programs. To our knowledge, the evaluation scores are used only for the grant program. Finally, the scoring system must not be subject to manipulation. Impact is measured as the difference in the outcomes at the cut-off for grant recipients just above the cut-off and non-recipients just below the cut-off.

The objective of the impact evaluation is to determine the effect of receiving a grant X_i on the institutional outcomes, Y_i. The model for institutional outcomes is like that for individual outcomes and can be written as:

$$y_i = \alpha + x_i\beta + (z_i - c)\rho + x_i(z_i - c)\gamma + \varepsilon_i$$

where y_i is the institutional outcome, x_i is grant status (1 received and 0 otherwise), z_i is the grant evaluation score/rating, c is the eligibility threshold (assumed here to be 50), and β is the impact estimate. With full compliance, this is known as the average treatment effect (ATE).

When institutions comply with their corresponding assignments (i.e. grantee or non-grantee) based on their evaluation score, the regression discontinuity design is said to be sharp. In this case, receipt of grant x_i deterministically depends on the eligibility score z_i:

$$x_i = \begin{cases} 1 \; if \; z_i \geq 50 \\ 0 \; if z_i < 50 \end{cases}.$$

Given the cut-off score, $z^* = 50\%$, proponents with a score equal to or above the cut-off, $z_i \geq z^*$ receive the grant, $x_i = 1$, while proponents with a score below the cut-off, $z_i < z^*$, don't receive the grant, $x_i = 0$.

However, if institutions on either side of the cut-off do not comply with their assignment, the regression discontinuity design is said to be fuzzy. This is the case if some proponents who

passed the evaluation did not receive the grant or if some proponents who failed the evaluation somehow received the grant.

In case of imperfect compliance, receipt of the grant x_i is a probabilistic function of the eligibility score z_i:

$$x_i = f(z) \equiv E[x_i|z_i = c] = \Pr[x_i = 1|z_i = c]$$

To correct for non-compliance, the model becomes an instrumental variable model with the evaluation score as the instrument. Other possible instruments are the evaluation result (pass/fail) and the Commission decision (approved/disapproved). A valid instrument must be exogenous and relevant. The evaluation score is exogenous to the proponents as it determined by the program. It is also relevant; it is highly correlated with the treatment (receipt of the grant).

3.6.2. Sampling

As in the previous section, drawing a sample requires defining the population of interest and identifying the sampling frame (Gertler, Martinez and Premand 2016). The population is defined as the group for which outcomes are measured and includes the geographic and other relevant characteristics. The population for the IDIG includes the 2,388 HEIs as of AY 2015-16. The sampling frame is the most exhaustive list of the members of the population. Ideally, the sampling frame includes the entire population. A master list of all HEIs is available for AY 2016-17. Using this as the sampling frame ensures external validity. An alternative sampling frame is the matrix of all proposal submissions in the regions submitted to the Central Office as mandated in the IDIG guidelines, but this has yet to be obtained. However, this does not ensure external validity but allows for internal validity as the grantees may be much more like non-grantees than all other HEIs in the master list but did not apply for a IDIG. The sampling frame for the Institutional Innovation grant may be obtained from the list of accredited HEIs and list of Centers of Development and Centers of Excellence.

To draw the sample, probabilistic sampling should be used, particularly stratified random sampling. Two strata will be used: grant type and HEI type. The grant type is either Institutional Development or Institutional Innovation. The HEI type is either Private or Public (including SUCs and LUCs).

In determining sample size, we determine whether the program is implemented through clusters, define the outcome indicator, define the minimum level of impact, determine the mean and variance of the outcome indicator, and set the statistical power and significance level (Gertler, Martinez and Premand 2016). A cluster is the level of intervention apart from the level where outcomes are measured. In this case, clusters may be defined at the regional level were preliminary screening is conducted by the Regional Vetting Panels. While evaluation is guided by certain criteria, the quality of screening may vary across regions. This may influence the selection and successful completion of projects; thus, the relevance of clustering at the regional level.

The second step in determining the sample size is defining the key outcome indicators that the program aims to improve. Based on the project's logical framework, the key outcome indicators are the Number of HEIs that climbed up in Accreditation level, Number of additional

HEIs with COE Programs, Number of additional HEIs with COD Programs, and Number of Autonomous/ Deregulated HEIs.

Thirdly, the minimum level of impact must be determined for the outcome indicator chosen. This is the least detectable difference in the outcomes between the beneficiaries and the comparison group to be able to conclude the success of the project. For the "Number of HEIs that climbed up in Accreditation level", the minimum level of impact corresponds to the target of 10 percent. However, as noted earlier, this must be on top of the 43 percent expected accomplishment even without the program. For the number of additional HEIs with COE Programs, the minimum detectable impact is the target of 50 percent. For the number of additional HEIs with COD Programs, the minimum detectable impact is the target of 50 new CODs. For the number of Autonomous/Deregulated HEIs, the minimum detectable impact is 10 percent. However, as mentioned earlier, this should be on top of the counterfactual increase of 17 percent per annum over the five-year transition period.

Fourthly, benchmark values of outcome indicators need to be estimated. These refer to the mean and standard deviations of continuous variables or proportions of categorical variables. For the number of HEIs that climbed up in accreditation level, these are the average increases in HEIs that climbed up from accreditation level I to level II of 9.3 percent, from accreditation level II to level III of 8.2 percent, and from level III to level IV of 4.7 percent. The baseline number of HEIs with COE Programs is 72 while the baseline number of HEIs with COD Programs is 110. The baseline number of Autonomous/Deregulated HEIs is 75.

Fifth, as with the scholarship evaluation, we need to determine the levels of significance and power (Gertler, Martinez and Premand 2016). The significance level is the likelihood of concluding that the program has an impact when there is none (also known as Type I error). This is typically set at 5 percent. This means that there is a 5 percent chance of finding an impact even if it does not exist. It implies 95 percent confidence level in concluding there is a program's impact if it exists. Power is the likelihood of finding an impact given that it exists. The evaluation has high power if the risk of not finding an impact if it exists is low (also known as Type II error). A commonly used power is 0.8. It indicates an 80 percent chance of finding an impact where it exists. The power may be increased at the cost of a bigger sample size.

With the abovementioned considerations, we determine the sample size using the stata command *sampsi*. Assuming a minimum detectable effect of 10 percentage points and using a one-sided test with a 5 percent significance level and 80 percent statistical power, the sample size for IDIG Grant is 411 each for the treatment and comparison groups. However, this is more than the planned number of recipients (288). If we include all the recipients and use a 10 percent level of significance, the power decreases to 40 percent. The program may not have enough power to estimate a meaningful effect size given the outcomes it has identified.

3.6.3. Data generation

To systematize data collection, an instrument composed of the following specific blocks of questions is further proposed, a sample tool is attached as Appendix B:

4 Page Questionnaire consisting of 3 Question Blocks
Block A. Proponent Information
Block B. Proposed IDIG Team Composition and Profile
Block C. HEI Capsule Information and Program Quality

Supplemental Information:
*Control Information
**Checklist of Faculty and Non-teaching Data Entry Forms (EFORMs 5a, 5b, 7)

4. Summary and Next Steps

The Enhanced Basic Education Act of 2013, among others, added two years in secondary education thereby delaying entry into higher education by two years. This was expected to displace teaching and non-teaching personnel in higher education. To mitigate the impact, the law mandated the Commission on Higher Education (CHED), the Department of Education (DepEd) and the Technical Education and Skills Development Authority (TESDA) to develop and implement adjustment programs. The CHED K to 12 Transition program is one of those programs.

This paper describes the impact evaluation design for the CHED K to 12 Transition Program. It focuses on two of the biggest components of the program packages, namely, (a) scholarships for graduate studies and (b) institutional development and innovation grants. The scholarships for graduate studies aim to enhance the knowledge and skills of higher education institution personnel and improve the quality of teaching in higher education. The project hopes to increase the proportion of personnel with master's degrees from 41 to 50 percent and those with doctorate degrees from 13 to 20 percent. Nominees surpass the target number of scholars and the actual number of grantees for PhD studies exceeds the target. However, the grantees for masteral studies are only 71 percent of the target, making the outcome target unlikely to be achieved. The low accomplishment is attributed mainly to slow nomination and disbursement processes.

The impact evaluation design depends on the available resources, the eligibility criteria, and the timing of implementation. Given the limited coverage of the program, the selection of participants based on certain criteria summarized into a score that can be ranked and the supposed cut-off score, and the phasing of program implementation, the most appropriate evaluation strategy is regression discontinuity. The population for this study includes the all HEI teaching and non-teaching personnel. However, the sampling frame is limited to the faculty and staff nominated by their respective HEIs. Notwithstanding this, the sampling frame ensures internal validity, that is, the comparability of the treatment and comparison groups. To draw the sample, probabilistic sampling will be used, particularly stratified random sampling, using personnel type, degree, and HEI type as strata. In determining sample size, the key outcome indicator is defined as the number of scholars who completed graduate degrees. The minimum level of impact is 8 percent for master's scholars and 12 percent for PhD scholars. A 5 percent level of significance and 80 percent power will be used. With these considerations, the estimated sample size for master's scholars is 2,461 each for the treatment and comparison groups while for PhD scholars, the sample size is 744 for each group. Primary data will be gathered using an online survey questionnaire.

The K to 12 Transition Program is aimed at enhancing the quality of higher education institutions, among other things, by helping them in improving their accreditation level, acquire centers of development and excellence status, autonomous and deregulated status, and in their global competitiveness. Toward this end, CHED hopes to provide a total of 288 grants for Institutional Development and Innovation over the transition period.

This study aims to develop an impact evaluation design for the Institutional Development and Innovation Grants and review the project design and initial implementation. Given the available resources, project coverage is limited, and implementation is phased over time. Eligibility is open to all HEIs, but selection is based on technical merit, relevance, and capacity to deliver. The assessment scores project proposals with those on or above the cut-off score endorsed to the national level for approval. Based on these considerations, the appropriate evaluation method is Regression Discontinuity.

The study population includes all HEIs with the sampling frame obtained from a master list of HEIs, although alternative sampling frames may be obtained from the matrix of proponents submitted by the regions to the Central Office. The sampling frame for the innovation grant may be obtained from the lists of accredited HEIs and CODs/COEs. Probabilistic sampling will be used stratified by grant type and HEI type. Based on the abovementioned outcome indicators, the minimum detectable impact is 10 percent and may be larger for certain outcomes. Given these considerations and depending on the significance level and power, all 288 grantees may have to be surveyed, or included in a census. Even at this sample size, the power for detecting the impact on the primary outcomes of the program is below the normal 80 percent.

The next step is the engagement of consultants and a survey team to conduct the survey of HEI personnel required for evaluation of the scholarship grant and a census of HEIs that received the IDIG grant and an equivalent number of non-grantees. The survey/census will be conducted over a two-month period including the review and revision of the questionnaire, preparation of coding and data-entry forms, training of enumerators, pilot-testing, and finalization of the questionnaire; fieldwork including interviews, data entry, and quality control; and data-set preparation including data validation / cleaning, and codebook and data dictionary preparation. Appendix C provides the Term of the Reference for the survey team.

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6. Appendices

APPENDIX A. Questionnaire for Scholarship

K-to-12 Transition Baseline Study -
Scholarship for Graduate Studies Questionnaire

Commission on Higher Education
Philippine Institute for Development Studies

IDENTIFICATION AND CALL CARD

REGION _____ Code: _____

PROVINCE _____ Code: _____

MUNICIPALITY _____ Code: _____

NAME OF RESPONDENT _____

EMAIL _____

MOBILE NO. _____

TELEPHONE NO. _____

INTERVIEW RECORD

INTERVIEWER'S NAME _____

INTERVIEW DATE _____

TIME START _____ TIME END _____

RESULT OF SURVEY _____

INTERVIEWER'S SIGNATURE _____

SUPERVISOR _____

FIELD OFFICER _____

OFFICER EDITOR _____

ENCODER _____

RESULT OF SURVEY	
1 - COMPLETED 2 - NOT AVAILABLE 3 - POSTPONED 4 - REFUSED	5 - PARTLY COMPLETED 6 - TERMINATED 7 - OTHERS, SPECIFY:

Introduction and Consent
Good morning/afternoon. I am _____ [SHOW I.D.], a researcher from PIDS and works jointly with CHED. We are conducting a survey regarding the scholarship grant of CHED's K-to-12 Transition Program for graduate studies. If you may, we would like to ask for your participation in our baseline study. This survey would collect some personal information, about your scholarship and graduate study, your sending and delivering institution, and your prospects upon completion. Any information you will disclose we shall keep in strictest confidentiality. This survey is voluntary. And should we come across a survey question you do not feel comfortable responding to, we shall skip that item and move on to the next. We hope for your participation for your responses are valuable. At this point do you have questions about the survey? May you spare some time to answer the survey?

Screener

S1 **Nomination by SHEI or application through CMO 51 for displaced personnel**
Before we proceed to the main questionnaire, can you please tell me whether you have been nominated by a sending higher education institution for the CHED K-to-12 scholarship grant for graduate studies?

No, I personally applied for the scholarship under CMO 51 for displaced HEI personnel.	0
Yes, I was nominated by a sending higher education institution.	1

S2 **Approval of scholarship**
Was your scholarship approved?

No	0
Yes	1

Note to FI:
If scholarship was approved, ask S3. Otherwise, go on to the main questionnaire already.

S3 **Status of scholarship**
If your scholarship has been approved, what is your status as a scholar?

Active status		Inactive status	
Active	1	Inactive	5
Deferred	2	Ineligible	6
On leave-of-absence	3	On-hold or under investigation	7
Completed	4	Terminated or withdrawn	8

Note to FI:
- **If status is under Active status, go on to the main questionnaire.**
- **But if status is Inactive status, terminate survey and thank respondent. Record contact and encode TERMINATED as result of survey.**

Main Questionnaire

I. Personal Characteristics

In this first section, we shall ask you some of your personal characteristics, educational attainment, position, and competency. Shall we begin?

Q1 **Name of respondent**
What is your name?
Note to FI: Kindly follow the format: Last name, First name, Middle name.

Q2 **Sex of respondent**

Female	1
Male	2

Q3 **Birth date of respondent**
When is your birthday?
Note to FI: Kindly follow the format DD/MM/YYYY.

Q4 **Teaching or non-teaching personnel**
Are you a teaching personnel or a non-teaching personnel?

Teaching Personnel	1
Non-teaching Personnel	2

Q5 **Highest educational attainment**
What is your highest educational attainment before scholarship?

Tech-Voc	1
College graduate	2
Some masteral units	3
Master's degree graduate	4
Some PhD units	5
PhD graduate	6

Q6 **Mother's educational attainment**
What is your mother's highest educational attainment?

No education	1
Some elementary	2
Elementary graduate	3
Some high school	4
High school graduate	5
Some Tech-Voc	6
Tech-Voc graduate	7
Some college	8
College graduate	9
Some Masteral units	10
Master's degree graduate	11
Some PhD units	12
PhD graduate	13
Post-Doctorate	14

Q7	**Father's educational attainment** What is your father's highest educational attainment?

No education	1
Some elementary	2
Elementary graduate	3
Some high school	4
High school graduate	5
Some Tech-Voc	6
Tech-Voc graduate	7
Some college	8
College graduate	9
Some Masteral units	10
Master's degree graduate	11
Some PhD units	12
PhD graduate	13
Post-Doctorate	14

Q8	**Years of education** What is your total number of years of education?
Q9	**Years been working** How many years have you been working?
Q10	**(If respondent has been a teaching personnel.) Years been teaching** How many years have you been teaching?
Q11	**Licensure exam** Have you passed any licensure exam?

No	0
Yes	1

Note to FI: If response is Yes ask Q12. But if No, proceed to Q13.

Q12	**(If response in Q11 is Yes.) Licensure exam passed and rating/score** What licensure exams have you passed and what is your rating/score in each?

Licensure exam	Rating/Score

Q13	**Civil Service Eligibility** Do you have civil service eligibility?

No	0
Yes	1

Note to FI: If response is Yes ask Q14. But if No, proceed to Q15.

Q14	**(If response in Q13 is Yes.) Civil service eligibility and rating/score** What is your civil service eligibility and your rating/score?

Civil Service Eligibility	Rating/Score

II. Scholarship and Graduate Study

We shall now move on to the section about the scholarship and your intended program of study. Shall we proceed?

Q15 **Type of scholarship**

What type is your scholarship?

Local	1
Foreign	2

Q16 **Level of program of study**

What is the level of your program of study?

Masters	1
Doctorate	2

Q17 **Expected number of years of study**

What is your expected number of years of study?

Q18 **Program of study**

What is your program of study?

Q19 **Classification of program of study**

Not to FI: Identify the PSCED classification of program of study at the Broad Group, Field Level, and the Program Level.

Classification	PSCED
Broad group	
Field level	
Program level	

Q20 **Kind of scholarship**

What kind is your scholarship?

Full scholarship	1
Thesis grant	2
Dissertation grant	3

Q21 **Reason for taking graduate studies**

What is your reason for taking graduate studies? Multiple response is possible.

Deloading	1
Displacement	2
No salary	3

Q22 **How study would enhance the SHEI**

How would your study enhance the capability of the SHEI to achieve its mission, vision and goals?

Q23 **How study would enhance the SHEI's host region and/or the country**

How would your higher degree enhance the capability of the SHEI's host region and/or the country to achieve stated regional and/or national development goals?

Q24	**How a higher degree would help enhance own discipline or profession** How would your higher degree help you enhance your discipline or profession?
Q25	**Nomination for the scholarship** When were you nominated for the scholarship? Kindly specify month and year. (If personally applied for the scholarship under CMO 51, when did you apply?)
Q26	**Reception of approval** When did you receive approval or rejection of the scholarship? Kindly specify month and year.
Q27	**Awareness of evaluation score** Are you aware of your evaluation score? No: 0 Yes: 1 **Note to FI: If response is Yes ask Q28. But if No, proceed to Q29.**
Q28	**(If response in Q27 is Yes.) Evaluation score** What was your evaluation score?
Q29	**Expected benefits from the scholarship**

Benefit	Amount (in PhP)	Frequency
a. Tuition and fees		
b. Monthly stipend		
c. Book allowance		
d. Transportation allowance		
e. Thesis or dissertation allowance		
f. Group insurance		
g. Early completion incentive		
h. Dissemination grant		
i. Reserch grant		
j. Others (please specify):		

Q30	**Still pursue graduate studies even if no scholarship** Had you not received the scholarship, would you still pursue graduate studies? No: 0 Yes: 1 **Note to FI: If response is Yes ask Q31. But if No, proceed to section III. Sending and Delivering Institution.**
Q31	**(If response in Q30 is Yes.) Source of finance for graduate studies if without the scholarship** How would you finance your studies without the scholarship? Multiple response is possible. Own resources: 1 Family resources: 2 Loan: 3

III. Sending and Delivering Institution

Now let's talk about your sending institution and delivering institution. Shall we proceed?

Note to FI: If respondent is a displaced HEI personnel and personally applied for the scholarship under CMO 51, replace current Sending HEI as previous affiliated HEI; particularly, in Q32 through Q40. And skip items Q41, Q42 and Q43 since these questions do not apply.

Q32	**Sending institution** Name of current Sending Higher Education Institution
	Note to encoder: **Q32a. Institutional code of SHEI according to CHED. Kindly encode: _____**
Q33	**Type of Higher Education Institution** What type of HEI is your current SHEI? Public 1 Private 2
Q34	**Years worked for the current SHEI** How many years have you been in current institution?

Q35	**Annual salary at time of entry** What is your annual salary at time of entry, (in PhP)? **Note to FI: If respondent can recount only the monthly salary, manually approximate the annual salary by multiplying the monthly salary by twelve months.**
Q36	**Rank/designation in current SHEI** What is your rank/designation in your SHEI
Q37	**Salary grade** What is your salary grade?
Q38	**Current annual salary** How much is your current annual salary, (in PhP)? **Note to FI: If respondent can recount only the monthly salary, manually approximate the annual salary by multiplying the monthly salary by twelve months.**
Q39	**Current teaching load** How many units or hours per week is your current teaching load?
	Number of units or hours per week
Q40	**Teaching discipline** What discipline are you teaching or your teaching specialization? **Note to FI: If respondent has no teaching discipline or specialization, (possibly because a non-teaching personnel), skip this question.**
Q41	**Counterpart or bridge funding** Does your current SHEI provide counterpart or bridge funding? No 0 Yes 1 **Note to FI: If response is Yes ask Q42. But if No, proceed to Q43.**

Q42	**(If response in Q41 is Yes.) Kind of counterpart or bridge funding** If your SHEI provides bridge funding, what kind? Multiple response is possible. Balance of salary: 1 Advance benefits: 2
Q43	**Expectation to receive salary on top of scholarship** Did you expect to continue to receive your salary on top of your scholarship? No: 0 Yes: 1
Q44	**Delivering institution** Name of Delivering Higher Education Institution
	Note to encoder: **Q44a. Institutional code of DHEI according to CHED. Kindly encode: _____**

Q45	**Geographic information of DHEI** **Note to encoder: Please encode the PSGC of the region, province, and municipality of the DHEI.**

	Geographic info	PSGC
Region		
Province		
Municipality		

Q46	**(Ask this only to those whose scholarship has been approved, refer to S2.) Units of study load** Number of units of study load taken in DHEI

IV. Prospects upon Completion of Study

We are now at the last section of the survey, which is about your prospects upon completion of study. Shall we still proceed and conclude the survey?

Q47	**Plan after completion of degree** What do you plan to do upon completion of your degree? Return to SHEI: 1 Apply to another HEI: 2 Work in another occupation or industry: 3 **Note to FI: If response is to Return to SHEI, ask Q48 and Q49. But if the response is either to Apply to another HEI or Work in another occupation, ask Q48 only.**
Q48	**Expected position or rank** What position or rank do you expect to obtain when you finish your degree?
Q49	**(If response in Q47 is to Return to SHEI.) Expected earning upon returning to SHEI** How much do you expect to earn as annual salary upon returning to your SHEI, (in PhP)? **Note to FI: If respondent can estimate only a monthly salary, manually approximate the annual salary by multiplying the estimated monthly salary by twelve months.**

END OF SURVEY
THANK THE RESPONDENT

APPENDIX B. IDIG Questionnaire

K12 Transition Baseline Study

2018

IDIG Questionnaire

Commission on Higher Education
Philippine Institute for Development Studies

IDENTIFICATION AND CALL RECORD

REGION _____

PROVINCE _____

INSTITUTIONAL CODE (BY CHED)

NAME OF HEI _____

NAME OF MAIN RESPONDENT _____

DESIGNATION _____

EMAIL _____ MOBILE NO. 0 9

TELEPHONE NO Area Code Telephone Local

INTERVIEW RECORD

	1	2	3	FINAL VISIT
DATE				DAY MONTH
INTERVIEWER'S NAME				YEAR INTERVIEWER'S CODE
RESULT*				RESULT*
NEXT VISIT: DATE TIME				TOTAL NO. OF VISITS

Result codes:

1 Completed
2 Not available/ not in the office
3 Postponed
4 Refused
5 Partly completed
6 Others, specify _____

To be filled out by Field/ Office Personnel Only:

SUPERVISOR	FIELD EDITOR	OFFICE EDITOR	ENCODER
Name and signature Date	Name and signature Date		

BLOCK A. Proponent Information

INTRODUCTION AND CONSENT

Hello. My name is _____and I am working for a study jointly conducted by the CHED and PIDS. This survey will tackle the various programs and services of CHED during the K12 transition. We would very much appreciate your participation in this survey. Whatever information you provide will be kept strictly confidential and will not be shown to other persons.

Participation in this survey is voluntary, and if we should come to any question you don't want to answer, just let me know and I will go on to the next question; or you can stop the interview at any time. However, we hope that you will participate in this survey since your views are important. At this time, do you want to ask me anything about the survey?

May I begin the interview now?

Signature of Interviewer: _____ Date: _____

1 Respondent agrees to be interviewed ..... GO TO A1
2 Respondent does not agree to be interviewed ..... END. THANK THE RESPONDENT.

AA RECORD THE TIME STARTED. HOUR ..... MINUTES .....

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIPS / CHECKS
A1	Has your HEI applied for the CHED K-12 Institutional Development and Innovations Grant?	YES ..... 1 NO 2	→ END INTERVIEW AND VERIFY SAMPLE
A2	What year did your institution apply for the IDIG?	ENTER YEAR	
A2b	Which department, office, or unit initiated the proposal?	_____	
A3	Which category of the grant did you apply for?	Institutional Developmen ..... 1 Institutional Innovation ..... 2 Both 3	GO TO: → A3.a1 → A3.b1 CONTINUE

A3.a1 Under which component under the **Institutional Development** category does your proposal fall under? (CIRCLE ALL THE APPLIES)	A3.a2 For each encircled item in A3.a1, ask respondent: Please provide title for the proposal under…: (LIST TITLE IN LINE WITH CIRCLED OPTION IN A3.a1)	A3.a3 Was this IDIG proposal… 1- APPROVED 2- DISAPPROVED	A3.a4. Please enter the name of unit/department that inititated the IDIG proposal:
Institutional Quality Assurance ..... A	_____	1 2	_____
Organizational Strenghening of HEI ..... B	_____	1 2	_____

A3.b1 Under which component under the **Institutional Innovation** category does your proposal fall under? (CIRCLE ALL THE APPLIES)	A3.b2 For each encircled item in A3.b1, ask respondent: Please provide title for the proposal under…: (LIST TITLE IN LINE WITH CIRCLED OPTION IN A3.b1)	A3.b3	A3.b4 Please enter the name of unit/department that inititated the IDIG proposal:
Research, Development and Extension ..... A	_____	1 2	_____
Development of Academic Degree ..... B	_____	1 2	_____
Academe-Industry Linkage C	_____	1 2	_____
Internationalization ..... D	_____	1 2	_____

*ASSUMES ONLY 1 GRANT HAS BEEN APPROVED. Guideline provides up to 3 grants depending on HEI size.

NOTE: WRITE THE TITLE OF APPROVED IDIG PROPOSAL HERE _____; USE THIS AS REFERENCE FOR A4 to A11

A4	Has your proposal been applied as a collaboration?	YES ..... 1 NO 2	CONTINUE → SKIP TO A8
A5	Is your institution the designated lead HEI for this proposal?	YES ..... 1 NO 2	→ SKIP to A7 if A4 ==1; Otherwise skip to A8
A6	Please provide the name of the lead HEI	_____	
A7	Please provide the name/s of your collaborating HEI/s	1) _____ 2) _____ 3) _____	
A8	What was the amount of the grant that has been approved for the proposal that you submitted?		VERIFY:IF ID <= PHP 5M VERIFY: IF II <= PHP 12M
A9	What was the proposed duration of the grant? *ENTER AS MM-YYYY to MM-YYYYY	- to -	

A10 What might your institution be doing without the project or grant?	LAY-OFF FACULTY/ STAFF 1 EMPLOY FACULTY/ STAFF ON A PART-TIME/ REDUCED LOAD BASIS 2 REORGANIZE STAFFING 3 SOURCE OTHER FUNDING TO RETAIN FACULTY/ STAFF 4 OTHERS, SPECIFY:_____ 5	

A11	a. Type of Benefit	b. Will the grant provide this type of benefit?		c. Amount (Enter in Pesos)	d. Frequency (Encircle approriate code)
	i. Receive Salary	1 - YES	2 - NO		1 2 3
	ii. Receive Honoraria for additional work	1 - YES	2 - NO		1 2 3
	iii. Receive monthly allowance	1 - YES	2 - NO		1 2 3
	iv. Receive research sub-grant	1 - YES	2 - NO		1 2 3
	v. Receive book allowance	1 - YES	2 - NO		1 2 3
	vi Receive publication support	1 - YES	2 - NO		1 2 3
	vii. Travel incentives	1 - YES	2 - NO		1 2 3
	viii. Group insurance	1 - YES	2 - NO		1 2 3
	ix Others, specify: _____	1 - YES	2 - NO		1 2 3
					1 2 3

A11d: 1 - One-time
2 - Monthly
3 - Others, specify in blank

A. Proponent Info

BLOCK B. IDIG GRANT PROPOSED TEAM

NO. QUESTIONS AND FILTERS — CODING CATEGORIES

(PLEASE PROVIDE ADDITIONAL OCMMENTS IN BLANKS PROVIDED OPPOSITE THIS SECTION)

	B1	B2	B3	B4	B5	B6	B7
	Enter the names of the Faculty/ Staff member who was included in the IDIG proposal:	Enter what category of HEI personnel does this member fall into. 1-Faculty 2- Research, Extension, Professional Staff (REPS) 3- Administrative Staff	From which unit doies the name in B2 come from? (Enter as names of College and Department; Research Center or Institute; or University Office)	What month and year has staff member started working in the HE? (Enter as MM-YYYY)	What was staff member's highest educational attainment? (See B6 codes below)	Was this staff member affected by the K-12 transition? 1- YES 2- NO	Please Enter staff member's designation in the proposed IDIG grant. (e.g. Team Leader, Principal Investigator, Research Associate, Assistant, etc.)
1				-			
2				-			
3				-			
4				-			
5				-			
6				-			
7				-			
8				-			
9				-			
10				-			

1	Bachelors
2	Master's Units
3	Master's Graduate
4	Doctoral Units
5	Doctoral Graduate/ PostDoc

B. IDIG Team Info

BLOCK B. HEI General Information		
NO. QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
We'd like to understand your Institution in more general terms, kindly answer the following questions		
C1 What year did your institution start operating?	YEAR ☐☐☐☐	
C2 Does your institution have other campuses?	YES . . . . . 1 NO 2	→ SKIP TO C4
C3 Is this the main/ flagship campus?	YES . . . . . 1 NO 2	
C4 Does your Institution have Deregulated/ Autonomous status?	DEREGULATED 1 AUTONOMOUS 2 NO 3	
C5 Is your institution recognized by CHED?	YES . . . . . 1 NO 2	
C5a Enter type of recognition received from CHED	_____	
C6 Is your institution accredited by any higher education accrediting body?	YES . . . . . 1 NO 2	→ SKIP TO C7
C6a Which accrediting body has given you accreditation? A PAASCU B PACU-COA C ACSCU-AAI D AACUP E ALCU-COA X Others, Specify	C6b What level of Accreditation was given to you by this body? I II III IV Other _____ I II III IV Other _____ I II III IV Other _____ I II III IV Other _____ I II III IV Other _____ I II III IV Other _____	
Program Quality As of 2015 (cf. CMO No38 s2015)		
C7 How many departments or programs in your institution have been granted Center of Development status?	ENTER NUMBER WRITE 00 IF NONE ☐☐	
C7.a Which departments are these? (CHECK NUMBER OF NAMES AGAINST TOTAL NUMBER GIVEN IN B7)	_____ _____ _____	
C8 How many departments or programs in your institution have been granted Center of Excellence status?	ENTER NUMBER WRITE 00 IF NONE ☐☐	
C8.a Which departments are these? (CHECK NUMBER OF NAMES AGAINST TOTAL NUMBER GIVEN IN B8)	_____ _____ _____	
C9 How many of your programs have existing international program certifications including joint offerings with foreign universities?	ENTER NUMBER WRITE 00 IF NONE ☐☐	
C9.a Which programs are these? _____ _____ _____ _____	C9b. From which international institution has the program been certified with? _____ _____ _____ _____	
Internationalization and International Linkages		
C10 How many foreign students are enrolled in your institution for the following academic years?	ENTER NUMBER, WRITE 0000 if none AY 2015-2016 _____ AY 2016-2017 _____ AY 2017-2018 _____	
C11 Is your university part of any university network in the Asia Pacific region?	ASSOCIATION OF PACIFIC RIM UNIVERSITIES A ASEAN UNIVERSITY NETWORK B OTHERS: X	

C12	Please indicate if any of your faculty or staff have participated in the following in **2015**?	YES	NO
a.	Participated in a Faculty-exchange program with a foreign university under a MOA	1	2
b.	Collaborative research with a foreign HEI/ Scientific institution outside the Philippines?	1	2
c.	Collaborative research with a foreign HEI/ Scientific institution within the Philippines?	1	2
d.	Awarded an International Patent/ Product Registration?		
e.	Published in an ISI journal?	1	2
f.	Presented a paper in an international conference outside the Philippines	1	2
g.	Presented a paper in an international conference in the Philippines	1	2
h.	Did consultancy work for a multilateral institution (UN System, ADB, WB)		
i.	Did consultancy work for an INGO (e.g. Red Cross, Oxfam, Save the Children etc.)	1	2

List of Attachments to be requested:			
Soft Copy of Faculty Information as submitted in the following CHED templates for 2016:	**COLLECTED**	DATE	NOT COLLECTED
A. CHED EFORM E.5A Faculty Data Entry Form	1	_____	2
B. CHED EFORM E.5B Non Teaching Entry Form	1	_____	2
C CHED EFORM E.7	1	_____	2

List of Attachments to be requested:			
Soft Copy of Faculty Information as submitted in the following CHED templates for 2016:	**COLLECTED**	DATE	NOT COLLECTED
A. CHED EFORM E.5A Faculty Data Entry Form	1	_____	2
B. CHED EFORM E.5B Non Teaching Entry Form	1	_____	2
C CHED EFORM E.7	1	_____	2

END OF SURVEY
THANK YOU!

C. HEI Info

APPENDIX C: Terms of Reference for Survey Firm

Philippine Institute for Development Studies
Baseline Survey for the CHED K to 12 Transition Program
Terms of Reference for Survey Firm

I. BACKGROUND AND RATIONALE

The CHED established the K to 12 Transition Program in late 2015, with the goals of mitigating adverse impacts on labor, and upgrading the qualifications of faculty. The Program effectively leverages the transition period to invest in the future of higher education, particularly through the following activities: (a) program for faculty and staff transferring to SHS; (b) graduate studies; (c) faculty development grants; (d) staff development grants, (e) innovation grants for HEIs, (f) materials development and training; and (g) program for small HEIs in collaboration with TESDA and DepEd.

For faculty and staff who will experience a lower workload during the transition to K to 12, the CHED designed the following development packages: (1) Scholarships for graduate studies and short-term training for professional advancement, (2) Development grants for faculty and staff, and (3) Innovation grants for institutions. The Program targets to give 15,000 scholarships (8,000 master's degrees and 7,000 doctorate degrees) to HEI personnel, while those who are not able to study full-time may avail of grants for activities such as retooling, research, community service, and industry immersion. Innovation grants are also available for institutions for funding the upgrading of their programs through international and industry linkages, research, and development of priority or niche programs.

The Philippine Institute for Development Studies (PIDS) seeks to procure the services of a Consultancy Firm to conduct a nationwide baseline survey for the impact evaluation of the transition program.

II. OBJECTIVES

The objective of the consultancy is to conduct a baseline survey of Higher Education Institutions (HEIs) and Teaching and Non-teaching personnel. The surveys are aimed at gathering information on HEIs' and personnel's participation in the transition program, the amount, frequency and quality of services and benefits received by HEIs and personnel before, with and without the program; outcomes experienced by the HEIs and personnel in relation to the program, and other institutional / individual, community and other contextual characteristics of the HEIs and personnel.

III. SCOPE OF WORK

A. Higher Education Institutions

A survey of HEIs will be conducted comprising of participating and non-participating HEIs. Each group is further stratified into public and private HEIs, the relative sizes depending on their relative shares. IDIG participating HEIs are divided into public HEIs and private HEIs. For

non-participating HEIs, the relative sizes are based on their population shares. PIDS will provide the sampling frame from which to draw the sample / sample to be surveyed.

B. HEI Personnel

A survey will also be conducted among teaching and non-teaching personnel eligible for scholarships for graduate studies comprising participating and non-participating personnel, both derived from a sampling frame of personnel nominated by HEIs. Each group will be further stratified into public and private HEI personnel, scholars for local graduate studies and scholars for graduate studies abroad, and teaching and non-teaching personnel.

IV. TASKS OF THE CONSULTING FIRM

1. Coordinate closely with the PIDS baseline study team at all stages of the survey
2. Recruit and train field staff / enumerators
3. Prepare reference manual for training and fieldwork (including quality standards and procedures)

Instrument review and Pilot-testing

4. Review and revise survey questionnaire as deemed appropriate, assessing adequacy, consistency, format, and phrasing of questions.
5. Coding questionnaires and develop and test Data Entry Forms including built-in consistency checks
6. Pilot test the survey questionnaire and data entry forms

Fieldwork – Quality Control

7. Coordinate the work of enumerators, supervisors, field coordinators, and logistical support staff and the data entry team including programmers, supervisors, and the data entry operators
8. Establish quality standards and quality assurance procedures in the survey activities including the preparation, data collection, data entry, and data cleaning and storage.

a. Enumerators immediately check the data after collection.
b. Supervisors / field coordinators conduct random checks. Supervisors conduct spot checks to ensure that enumerators collect data according to quality standards. Verification of data quality, e.g. through back-checks or quality audits

9. Minimize nonresponse, incomplete information and measurement errors in documenting responses, replacing respondents as appropriate, making quality checks for and revisiting respondents that have provided no or incomplete information as necessary. Properly code and record nonresponses and account for nonresponse rates.

Data Processing and Storage

10. Establish standards and procedures for data entry and train data entry operators
11. Digitize information collected from the survey using a data entry program. As much as possible, data entry is integrated in the data collection stage.
12. Validate the digitized information / data cleaning

13. Minimize data entry errors, e.g. through double-blind data entry procedure or computer-assisted field entry / electronic data collection.
14. Deliver data set with detailed documentation including a complete codebook and data dictionary and stored securely

V. QUALIFICATIONS OF CONSULTING FIRM

1. Competence and at least five year of experience in the design and implementation of nationwide surveys including questionnaire development, with preference for experience with surveys commissioned by national and international agencies
2. Ability to collect and deliver high-quality data using robust quality standards and procedures
3. Highly qualified team leader with at least a Master's degree in the Social Sciences and experience in managing survey
4. Field supervisors with at least a Bachelor's degree in the Social Sciences and relevant experience in field supervision / coordination and quality control
5. Availability of competent field staff / enumerators with experience in interviewing and data encoding
6. Data programmer / IT specialist with experience in coding questionnaires, developing data entry forms, developing survey data codebooks and data dictionary, processing, aggregating and managing data
7. submit technical and financial proposals

VI. INDICATIVE SURVEY WORK PLAN

Activity	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
1. Questionnaire						
a. Review and revise	X					
b. Coding and Data-entry forms	X					
c. Train enumerators		X				
d. Pilot-test		X				
e. Finalize		X				
2. Fieldwork						
a. Interviews			X	X		
b. Data entry			X	X		
c. Quality control			X	X		
3. Data set						
a. Data validation / cleaning					X	X
b. Codebook and data dictionary					X	X

VII. PROJECT DURATION

The proposed project duration shall be for **1 1/2 months**.

VIII. DELIVERABLES, SUBMISSION DATES AND PAYMENT TERMS

Deliverable	Main Contents	Submission Date	Percentage of Payment Releases
Inception Report	Work Plan Revised Questionnaire Data Entry Forms Staff complement	Week 1	20%
Training and Pilot-testing Documentation	Training and Fieldwork Manual (including Quality Standards and Procedures) Training and Pilot-testing Documentation Final Questionnaire Staff assignments	Week 2	20%
Fieldwork Report	Weekly report Issues and concerns, solutions	Week 3 & 4	20%
Data-set and documentation	Data-set in csv / Stata format, codebook, data dictionary	Week 5 & 6	40%