

**Improving Teachers' Workflow and Task Management  
through A Digital Task Organizer  
and Extensible Toolkit**

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# **IMPROVING TEACHERS' WORKFLOW AND TASK MANAGEMENT THROUGH A DIGITAL TASK ORGANIZER AND EXTENSIBLE TOOLKIT**

## **Introduction**

The teaching profession has been called as the noblest of all professions, for indeed, no other profession could exist without it. As such, teachers are expected to possess all the qualities and the skills needed to perform all the duties that a teacher has. This includes class management skills that helps a lot in providing a permissive and stimulating atmosphere that encourages pupils to raise questions and suggest alternative solutions to problems. As such, the teacher have always had a lot of things to do: preparing and teaching lessons and teaching devices, marking student output, counseling the students, and a countless other things that are supposed to facilitate learning.

However, recent changes in curriculums and national policies have also brought changes to the work of teachers. As the K-12 program under the Revised Basic Education Curriculum became effective a few years ago as of writing, teachers have been required not only to adjust their lessons and teaching styles to the new program but also to do countless paper works for monitoring a lot of things, such as the students' proficiency in English and the students' BMI (body mass index). These changes added new burden to the already burdensome work of the teachers. Due to the growing workload of teachers, some have experienced contemplating of

leaving the teaching profession itself. This is aside from the accompanying issues of teachers being underpaid as well and the students being overworked too. Being underpaid means that some teachers have to do other things in order to augment their already small take home pay and unwittingly pay for their surmounting loans, all the more taking away from what little time they have for themselves and their family.

The issue of teachers being overworked has also been observed in countries other than the Philippines where teachers are also overworked. Some have even avoided promotions, as ascending to higher positions potentially means additional work. Teacher's performance are also affected adversely by too much workload. Because of these impacts, it is, therefore, imperative that this issue is addressed to mitigate its effects on teacher performance and on education itself.

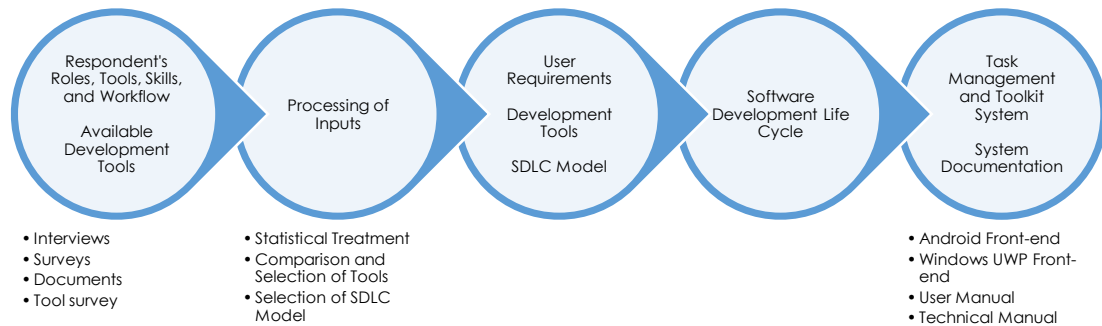
One of the things that can be used to deal with the ever increasing work load not just of teachers but also of everyone else is time management. Some studies have linked proper time management of teachers to better teacher performance. As such, the numerous tasks of teachers can be dealt with better through time management.

Many tools are already available to assist people with time management and managing their tasks. Task organizers can be found being sold in various stores. Likewise, in these days of automation,

applications for task and time management have also been available for quite some time as of writing. There are even apps that are designed for use by teachers. Incidentally, many teachers already appear to have mobile phones and, at least, an access to computers, which, all the more, makes the utility of these apps even more appealing. However, some of these only feature task management features, whereas teachers' work have several dimensions. A teacher is not only an instructor: they also are managers, clerks, administrators, counselors, and other things as well. In order to accommodate such a multifaceted set of roles, a teacher might need to mix and match apps available on app stores just to have the right mix of features. However, maintaining multiple apps just for a single line of work can prove to be grueling and inconvenient. As such, it will be preferable to have a single system to manage all teacher roles in one place. This system should have everything under one application and should be designed with the roles and capabilities of teachers in mind.

It is, therefore, the position of the proponents that a task manager and tool kit that is tailor-fit for teachers and other academic personnel be developed for their ever-evolving needs.

## Conceptual Framework



The foregoing paradigm represents the logical proceeding of the study in question. Inputs, which comprise of respondent information and information about available development tools, are to be rigorously gathered through interviews, surveys, documentary analysis, and tool surveys. Once the data are gathered, the responses will be summarized through the use of statistical treatment and rating scales. The summarized data will then be interpreted to be considered in the formulation of the user requirements. Furthermore, the development tools surveyed will also be compared and tested, from which an appropriate tool set will be selected. An appropriate SDLC model will also be selected, depending on the user requirements, user participation, and other contingent constraints. After the initial user requirements are specified, the software development life cycle will then commence until the desired system meets the requirements.

## Statement of the Problem

This study aims to clearly define the daily roles, functions, and workflow of teachers, school administrators, and office personnel involved in the academic sector, hereinafter referred to as the “respondents,” in order to engineer a set of specific requirements for developing and documenting a task organizer and toolkit system that is tailor-fit for their needs. Specifically, the study aims to answer the following inquiries:

- 1) Which of the following roles does each respondent perform in their work?
  - a) Pedagogical
  - b) Guidance
  - c) Administrative
  - d) Clerical
  - e) Technical
- 2) How are the following being managed by the respondents at work?
  - a) Students and classes
  - b) Coworkers and Subordinates
  - c) Documents (lesson plans, records, reports, etc.)
  - d) Tasks
  - e) Work-related activities and events
  - f) Facilities

- 3) What other kinds of information and resources do the respondents manage and how are these organized?
- 4) What kinds of gadgets/electronic devices do the respondents own or use at work?
- 5) How are gadgets being used by the respondents in their work?
- 6) How much skill and experience do the respondents have in using gadgets?
- 7) What other tasks can be done or accomplished through the use of smartphones and computers?
- 8) How can existing computer-based systems be described according to the following:
  - a) Functions and features
  - b) Frequency of use
  - c) Ability to interface with other systems
  - d) Authorization level
- 9) Can the aforementioned systems be replaced or, at least, complemented by the proposed system?
- 10) Can gadget use by students complement the classroom efforts of the respondents?
- 11) What suggestions and preferences can the respondents share to further improve the design of the proposed system?

## **Objectives of the Study**

The main objective of the study is to understand the nature of work of the professionals in the academic sector in order to formulate a sound set of system requirements in the development of a task management application. Toward this end, the following secondary aims need to be accomplished:

- 1) Create a profile for the respondents according to the following categories:
  - a) Work roles
  - b) Usage of gadgets/electronic devices
  - c) Computer-based systems used at work
- 2) Create a profile for the resources managed in the work setting, which includes but is not limited to the following:
  - a) Students and classes
  - b) Coworkers and subordinates
  - c) Documents
  - d) Tasks
  - e) Work-related activities and events
  - f) Facilities
- 3) Create a profile for the existing computer-based systems in terms of the following attributes:



- a) Functions and features
  - b) Frequency of use
  - c) Ability to interface with other systems
  - d) Authorization level
- 4) Identify the tasks, processes, situations, and management roles where the proposed system can be designed for use.
  - 5) Determine whether gadget use of students will be relevant in designing the system requirements.
  - 6) Decide whether suggestions and preferences of respondents can be accommodated.
  - 7) Select the appropriate development tools to meet the respondents' requirements.

### **Scope and Delimitation**

This study shall focus on the roles and workflow of respondents that can be assisted by the different types of management systems. The respondents of the study shall include teachers, school administrators, and office personnel in the academic sector. As such, the study will also deal with administrative and clerical issues as well as pedagogical issues. The respondents shall also come from selected schools and offices that would agree to participate in the study. In addition, gadget use by students will also be observed upon approval by the participating schools.

This study will also look at existing management and information systems that are already in place in the school and academic settings and how these can be replaced or adapted to interface with the proposed system. Restricted management systems may also be studied, but the degree of liberty in doing so will depend on the authorization level that the respondents' respective parties are willing to grant to the proponents for this study.

Software development tools selection will also be dealt with in this study. The study will not look at these tools in depth. However, these tools shall be considered according to utility and practicality.

The development cycle will also focus on creating an extensible system that can accommodate changes, particularly in cases where there are changes in policies and workflows. As a corollary, a developer kit should also be designed to address the related issue of independent plugin development.

Finally, this study will initiate a cross-platform development but more effort shall be exerted for the Android and Windows UWP versions as these promises more usability in the projected use-case scenarios for the respondents.

## Bibliography

- Benn, M. (2014, April 16). *Education's culture of overwork is turning children and teachers into ghosts*. Retrieved March 11, 2018, from The Guardian:  
<https://www.theguardian.com/commentisfree/2014/apr/16/culture-overwork-teachers-children-ghosts-schools>
- BusinessTips (Ed.). (2017, September 5). *10 Tips For Better Time Management*. Retrieved March 11, 2018, from Business Tips Philippines:  
<https://businesstips.ph/10-tips-for-better-time-management/>
- Clerigo, E. S. (2016, July 13). *DepEd XI warns teachers of overwork*. Retrieved March 11, 2018, from Davao Today:  
<http://davaotoday.com/main/economy/education/deped-xi-warns-teachers-of-overwork/>
- Cockroft, S. (2015, March 31). *Four out of 10 new teachers don't last a YEAR in the classroom because they are put off by 'exhausted and stressed colleagues' says union boss*. Retrieved March 11, 2018, from Daily Mail Online: <http://www.dailymail.co.uk/news/article-3020255/Four-10-new-teachers-don-t-YEAR-classroom-exhausted-stressed-colleagues-says-union-boss.html>
- de Dios, A. C. (2012, July 5). *When Teachers Are Underpaid ....* Retrieved March 11, 2018, from Philippine Basic Education:  
<http://www.philippinesbasiceducation.us/2012/07/when-teachers-are-underpaid.html>
- DO 9, s. 2005 - *Instituting Measures to Increase Engaged Time-on-Task and Ensuring Compliance Therewith*. (2005, March 2). Retrieved March 11, 2018, from Department of Education:  
<http://www.deped.gov.ph/orders/do-9-s-2005>
- Harris, C. (2017, March 1). *'To retain our best teachers we need to stop killing them with planning, marking and meetings'*. Retrieved March 11, 2018, from Tes - Education Jobs, Teaching Resources, Magazine & Forums: <https://www.tes.com/news/school-news/breaking-views/retain-our-best-teachers-we-need-stop-killing-them-planning-marking>
- Khan, H. A., Farooqi, M. K., Khalil, A., & Faisal, I. (2016, December). Exploring Relationship of Time Management with Teachers' Performance. *Bulletin of Education and Research*, 38(2), 249-263. Retrieved from [http://pu.edu.pk/images/journal/ier/PDF-FILES/18\\_38\\_2\\_16.pdf](http://pu.edu.pk/images/journal/ier/PDF-FILES/18_38_2_16.pdf)

- Laguador, J. M., & Agena, E. M. (2013, July). Time Management and Teaching Performance among Maritime and Engineering Faculty Members: Basis for an Intervention Plan. *International Journal of Academic Research in Progressive Education and Development*, 2(3), 42-61. doi:10.6007/IJARPED/v2-i3/24
- Llego, M. (2017, January 28). *New Teachers: "The Struggle is Real."*. Retrieved March 11, 2018, from TeacherPH: <https://www.teacherph.com/new-teachers-struggle-real/>
- Lover, R. B. (2016, March 22). *60-hour weeks and unrealistic targets: teachers' working lives uncovered*. Retrieved March 11, 2018, from The Guardian: <https://www.theguardian.com/teacher-network/datablog/2016/mar/22/60-hour-weeks-and-unrealistic-targets-teachers-working-lives-uncovered>
- Mingoa, T. R. (2017, June 20-22). Filipino teachers' stress levels and coping strategies. *DLSU Research Congress 2017*. Manila, Philippines: De La Salle University. Retrieved March 11, 2018, from <http://www.dlsu.edu.ph/conferences/dlsu-research-congress-proceedings/2017/LLI/LLI-I-020.pdf>
- Read, L., & Atinc, T. M. (2017, March). *Philippines Case Study*. Brookings Institution, Global Economy and Development Program. Brookings Institution. Retrieved from <https://www.brookings.edu/wp-content/uploads/2017/03/global-20170307-philippines-case-study.pdf>
- Sahito, Z., Khawaja, M., Murad Panhwar, U., Siddiqui, A., & Saeed, H. (2016, December 12). Teachers' Time Management and the Performance of Students: A Comparison of Government and Private Schools of Hyderabad, Sindh, Pakistan. *World Journal of Education*, 6(6), 42-50. doi:10.5430/wje.v6n6p42
- Teachers to DepEd: Stop dehumanizing us, RPMS is anti-labor and anti-teacher! | Alliance of Concerned Teachers*. (2014, September 15). Retrieved March 11, 2018, from Alliance of Concerned Teachers: <http://www.actphils.org/content/teachers-deped-stop-dehumanizing-us-rpms-anti-labor-and-anti-teacher>
- Toplikar, D. (2007, March 12). *Survey: Teachers overworked, lack sufficient time to plan*. Retrieved March 11, 2018, from LJWorld.com: [http://www2.ljworld.com/news/2007/mar/12/survey\\_teachers\\_overworked\\_lack\\_sufficient\\_time\\_pl/](http://www2.ljworld.com/news/2007/mar/12/survey_teachers_overworked_lack_sufficient_time_pl/)