

Do Desperate Students Trade their Privacy for a Hope?

An Evidence of the Privacy Settings Influence on the User Performance

Tomáš Obšivač¹, Hana Bydžovská¹ and Michal Brandejs¹

¹Faculty of Informatics, Masaryk University, Brno, Czech Republic

Abstract

- Maintaining people's privacy should be the top priority. Sometimes certain level of privacy can be traded for a gain in another IS aspect.
- Some students voluntarily disclose their presence in the courses enrolled and on the examination dates registered.
- The disclosed students study results are worse than the results of the undisclosed ones. Disclosed applicants have better entrance exam results.

Keywords

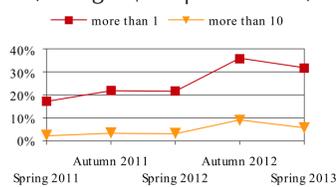
- information privacy
- social translucence
- educational information system
- student performance



Basic information privacy settings: are users allowed to see each other's existence, presence and activity? Such visibility is an important determinant of harm to privacy. Meanwhile, an essential social software feature, the social translucence, advised for systems supporting communication and collaboration among large groups of people, includes visibility of participants and their activities to one another. [2] → **Research question: Does lowered privacy pay off?**

Course Enrollment Disclosure

Courses with disclosed students (average 9,600 per semester)



	Disclosed Students	Undisclosed Students	Percentage Difference
Spring 2011	1.92	1.77	8.1%
Autumn 2011	1.91	1.82	4.8%
Spring 2012	1.90	1.78	6.5%
Autumn 2012	1.96	1.80	8.5%
Spring 2013	1.92	1.76	8.7%

Gained Grades Averages (AG)

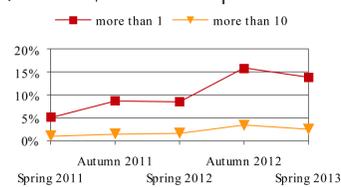
	Courses With Disclose	Courses w/o Disclose	Percentage Difference
Spring 2011	1.98	1.72	14.1%
Autumn 2011	2.16	1.97	9.2%
Spring 2012	2.18	1.95	11.1%
Autumn 2012	1.92	2.05	6.5%
Spring 2013	2.02	1.92	5.1%

Disclosed Students AG

- Students which disclose their course enrollment have gained a slightly worse AG.
- The disclose took place at the courses with worse AG assigned to disclosed students.

Examination Date Registration Disclosure

Exam dates with disclosed students (500 to 1,350 courses per semester)



	Disclosed Students	Undisclosed Students	Percentage Difference
Spring 2011	2.15	1.77	19.4%
Autumn 2011	2.06	1.82	12.4%
Spring 2012	2.13	1.77	18.5%
Autumn 2012	2.19	1.80	19.6%
Spring 2013	2.21	1.75	23.2%

Gained Grades Averages (AG)

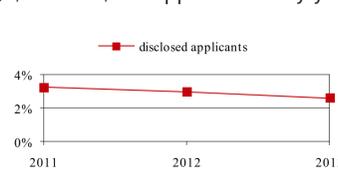
	Courses With Disclose	Courses w/o Disclose	Percentage Difference
Spring 2011	2.03	1.90	6.6%
Autumn 2011	2.75	1.86	38.6%
Spring 2012	2.70	1.84	37.9%
Autumn 2012	2.37	1.80	27.3%
Spring 2013	2.37	1.83	25.7%

Disclosed Students AG

- Students which disclose their exam registration have gained notably worse AG.
- The disclose took place at the courses with higher AG assigned to disclosed students.

Application for Study at the University Disclosure

Disclosed applicants (1,100 to 1,350 applicants every year)



	Disclosed Applicants	Undisclosed Applicants	Percentage Difference
2011	59.00	50.55	15.4%
2012	59.04	49.87	16.8%
2013	60.58	53.92	11.6%

Entrance exam results (higher is better)

	Disclosed Applicants	Undisclosed Applicants	Percentage Difference
2011	47.15	35.83	27.3%
2012	48.27	32.85	38.0%
2013	47.55	33.85	33.7%

The application success [%]

- Applicants which disclose their county of residence have better entrance exam results.
- Disclosed applicants had greater probability of application success.

Discussion

- Disclosure options are the advanced IS MU feature. It is not advertised.
- No evidence in the research results to support the change from opt-in to opt-out visibility so far.
- There is an educational intention to support acquaintance among students.
- Results vary according to the faculty and corresponding style of study.

Conclusions

- Students in need of help appear to look for a classmate assistance.
- We have to prepare a student survey to answer the research question.
- Disclosures, as a student characteristics, can be used to increase a student performance prediction accuracy. [3]
- The future study should extend this research in the area of subgroup discovery.



Masaryk University Information System (IS MU) <https://is.muni.cz/>

Being developed since 1999, Web-based IS MU hosts numerous applications utilized for managing study-related records, e-learning tools and those facilitating communication inside the University. • Used by more than 30,000 users a day. • Key networking and communication tool. • 23% users with two-way friendship connections (156,000 friendships in total). • 680,000 course discussion boards posts a year (15 per user).

References

- [1] Bélanger, F., & Crossler, R. E., 2011. Privacy in the digital age: a review of information privacy research in information systems. In *MIS Quarterly*, Society for Information Management and The Management IS Research Center Minneapolis, MN, USA, Volume 35, Issue 4. ISSN 0276-7783.
- [2] Erickson, T., & Kellogg, W. A., 2000. Social translucence: an approach to designing systems that support social processes. In *ACM Transactions on Computer-Human Interaction*, Volume 7, Issue 1, Pages 59–83.
- [3] Bayer, J., Bydžovská, H., Géryk, J., Obšivač, T., & Popelínský, L., 2012. Predicting drop-out from social behaviour of students. In *Proceedings of the 5th International Conference on Educational Data Mining (EDM 2012)*. Chania, Greece. Pages 103–109. ISBN 978-1-74210-276-4.

Acknowledgements

We would like to thank all colleagues of IS MU development team for the support. This work has been partially supported by Faculty of Informatics, Masaryk University.
Contact: surname@fi.muni.cz