

Lärlärdom, Högskolepedagogisk konferens 2012

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Blekinge Tekniska Högskola
Karlskrona

Rapportserie från avdelningen för Höskolepedagogisk utveckling

No 2013:01

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Titelsida

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LÄRARLÄRDOM

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Inledning

Högskolepedagogisk utveckling har under senare år fått en tydligare och mer framträdande roll vid universitet och högskolor. Under senare år har också ett allt större fokus riktats mot utbildningens resultat. Frågor som rör kvaliteten i undervisningen blir därmed centrala. Att utveckla och stödja lärares pedagogiska skicklighet samt belysa villkoren för den undervisning som bedrivs inom högre utbildning är angeläget. Behovet av en gemensam samlingspunkt för pedagogiska och didaktiska diskussioner där BTH:s och Högskolan i Kristianstads lärare kan träffas och föra dessa diskussioner tillsammans och över ämnesgränser är stort. Genom att anordna en årlig högskolepedagogisk konferens vill vi främja ett utbyte av erfarenheter från den dagliga undervisningen och insikter kring det lärande som möjliggörs.

Lärlärdom 2012 gick av stapeln på Blekinge Tekniska Högskola den 15 augusti och samlade ett femtiotal deltagare.

Sofia Ask, lektor i svenska språket vid Linnéuniversitetet höll en uppskattad inledande föreläsning med titeln **Mellan vetenskap och profession**.

Studenters skrivande inom akademien har olika stark koppling till de yrkesverksamheter som studenterna förbereds för. Frågan är om skrivandet av akademisk text kan generera färdigheter som är relevanta i olika professioner och i andra kontexter än den ursprungliga. Det finns en akut diskrepans mellan universitetsutbildningens krav på vetenskapligt skrivande och yrkesverksamhetens krav på praktiskt professionskunnande. Det akademiska skrivandet beskrivs ibland som en isolerad färdighet som bara är användbar just inom utbildningen och inte som ett verktyg i yrkeslivet. Samtidigt vet vi att långt många fler yrken än förr är helt eller delvis skriftburna och att arbetsmarknaden ställer ökade krav på kommunikationsförmåga i tal och skrift. Det här förhållandet påverkar hur utbildningar utformas och väcker frågan om universitetsmiljöerna måhända måste ompröva vad ett examensarbete i en professionsutbildning är och vad det skulle kunna vara.

Följande artiklar är publicerade från konferensen

”Offentligt” grupprov – en studie av alternativ examination i juridik för samhällsplanerare

Ingrid Persson, *Sektionen för planering och mediedesign, Blekinge Tekniska Högskola*

Artikeln behandlar en alternativ examinationsform i en obligatorisk kurs i juridik på masterprogrammet i *Fysisk Planering* vid Blekinge Tekniska Högskola. Ett avslutande ”offentligt” grupprov har ersatt en tidigare salstenta i kursen. Genom förändringen har examinationens genomförande också fått funktionen av en inläringssituation. Studenterna förbereder teman i grupper. Ett syfte med detta är att underlätta den individuella inläsningen genom att strukturera stoffet.

Internationalisation and the Culture of Academic Writing in English

Jane Mattisson, *School of Learning and Environment, Kristianstad University*

By examining the relationship between the culture of internationalisation and the use of English in university classrooms, this paper demonstrates that the acquisition of one of the most important academic skills, i.e. writing in English, is efficiently achieved with the aid of process writing combined with peer reviewing. International students learn from one another under the guidance of the teacher as they adapt previous knowledge to the demands of the Swedish university classroom.

Knowledge Dump: That's not what I wipedityped hyped TYPED! A Consideration of the Pedagogical Implications of Using Word Processors and their Affect on Writing

Teri Schamp-Bjerede, *School of Education and Environment, Kristianstad University*

The author of this paper assess the use of word processors as helpful tools, or hindrances in writing, and questions what these programs have affected, and how these effects are revealed by the users in connection to writing skills. By reviewing how writing skills are acquired, and how word processors are used, the author compares and contrasts ways in which those affects are exposed, and highlights instances of reliance that users have on word processors, and the tools found embedded in the programs.

Skrivande, diskursiv praktik och didaktiska relationer

Thomas Hansson, *Sektionen för Management, Blekinge Tekniska Högskola*

Vad kännetecknar värdefull kunskap, hur ser en bra pedagogisk design ut, vilket syfte har verksamheten, vem är kommunikatören och vilka kontexter möjliggör produktivt lärande? Genom att utifrån pedagogiska frågeord analysera problematiken kring kunskapsinnehåll och metod antar författaren en didaktisk utmaning. Den består i att analysera ansökningstexter och undervisningssituationer utifrån sambandet mellan svar på vad-, hur- och varförfrågor.

Students experiences of PBL in the nursing program at Blekinge Institute of Technology (BTH). A cross-sectional descriptive study.

Terese Ericsson & Carmen Sadikovic, *School of Health Science, Blekinge Institute of Technology*

This paper investigates issues related to the teaching method Problem Based Learning at the School of Health Science at Blekinge Institute of Technology. The School of Health Science (HAL) at Blekinge Institute of Technology (BTH) has been using PBL for approximately ten years. The aim of this study was to describe and compare students' experiences of PBL at the nursing program at BTH. Furthermore the aim was to explore if there is a glitch between PBL practice and PBL policy at HAL. A descriptive and analytical quantitative method was both used.

Attitudes, obstacles and promoters to research among medical doctors: A pilot study

Lena Sandin Wranger, *School of Health and sciences, Blekinge Institute of Technology*, and *Division of Geriatric Medicine, Lund University*, Peter Anderberg, *School of Health and sciences, Blekinge Institute of Technology*

The aim of this study was to analyze factors either promoting or being obstacle in medical doctors' choice between two levels of education. The first level was a shorter course in basic scientific education, (FoUST), resulting in a certificate. The alternative given was a course in research methodology, (FoU), resulting in

30 Credits at the University of Lund. This study will focus on attitudes towards research and results will be implemented in future courses, in an attempt to make them more relevant for both students and clinicians, regarding content and pedagogy.

Den inledande föreläsningen samt ytterligare tre presentationer finns inspelade och finns på Medieportalen på Blekinge Tekniska Högskola.

<http://tuba.bth.se/medieportal/play/510/Lararlardom-pa-BTH>

1. "Offentligt" grupprov – en studie av alternativ examination i juridik för samhällsplanerare

Ingrid Persson

Sektionen för planering och mediedesign

Blekinge Tekniska Högskola

Abstract – Artikeln behandlar en alternativ examinationsform i en obligatorisk kurs i juridik på masterprogrammet i *Fysisk Planering* vid Blekinge Tekniska Högskola. Ett avslutande "offentligt" grupprov har ersatt en tidigare salstenta i kursen. Genom förändringen har examinationens genomförande också fått funktionen av en inläringssituation. Studenterna diskuterar, med varandra och med ett lärarlag, olika juridiska problem utifrån praktikfall. Avsikten med seminariet är att stimulera studenternas inläring i flera steg och bädla för systemförståelse av hur rättsregler styr fysisk planering. För att underlätta inläsningen inför examinationen förbereder studenterna i grupp ett antal teman. Dessa teman behandlar problemområden i planeringspraktiken och kopplingen till relevanta lagrum. Ett syfte med det förberedande grupparbetet är alltså att underlätta den individuella inläsningen av kurslitteraturen genom att använda grupper som resurs för strukturering av stoffet. Ett annat syfte är att ge studenterna tillfälle till gemensam diskussion och reflektion även före det avslutande seminariet. Studenternas förberedande grupparbeten finns tillgängliga på lärplattformen, men granskas inte av lärarna. Studenterna uppmanas att vara kritiska när de tar del av gruppinformation. Kanske har de själva upptäckt andra lösningar. Vid genomförandet av det "offentliga" grupprovet ingår studenterna i nya grupper. Vid utvärdering av det muntliga seminariet rekommenderade de allra flesta studenterna denna examinationsform även i fortsättningen framför en återgång till skriftlig salstenta.

Nyckelord – alternativ examination, "offentligt" grupprov, muntlig examination, juridik, samhällsplanering, fysisk planering, constructive alignment

1. Inledning

Masterutbildningen i fysisk planering vid Blekinge Tekniska Högskola behandlar planeringsdilemman, gränsöverskridande planering och relationen mellan samhällsförändringar och planering. Som en av förberedelserna inför ett kommande yrkesliv behöver studenterna kunskap och förståelse för hur rättsregler styr fysisk planering.

Artikeln behandlar erfarenheter från ett examinerande muntligt slutseminarium i kursen *Juridik för samhällsplanerare* fr.o.m. år 2011 kallad *Legala förutsättningar för samhällsplanering*. Kursen är obligatorisk under första året av masterprogrammet. Studenterna ska, enligt kursplanen, efter kursen ha utvecklat översiktlig kunskap om gällande rättsregler inom relevanta områden för fysisk planering. Kursen behandlar de centrala lagkomplexen för planering och byggande utifrån nationella förhållanden, relationerna mellan olika lagar och den praktiska tillämpningen av dessa i fysisk planering. Kursen behandlar även vissa speciallagar om miljö- och tillståndsfrågor i planeringen samt orienterar om relevanta

lagsystem för planering och byggande på europeisk nivå. Kursen berör också de legala förutsättningarna för den planerande tjänstemannen; förvaltningslagen och kommunallagen. Examinationen i kursen sker genom tre muntliga seminarier och artikeln behandlar det tredje och avslutande seminariet.

2. Bakgrund

När jag år 2011 blev kursansvarig hade kursen sedan tidigare en avslutande salstenta, vilken jag ansåg hade intressanta frågor. Problemet som jag såg var att en skriftlig tentamen tenderade att fokusera på inläring av typen ”studenterna stormläser dag och natt inför sina prov, går upp och skriver – och glömmer” (Trowald, 1997:18). Avsikten med att istället införa ett examinerande muntligt seminarium var att stimulera studenternas inläring i flera steg och bädda för systemförståelse.

Före det avslutande muntliga examinationstillfället ska studenterna nu först tillsammans bearbeta juridiska problem hämtade från tillämpningen. Därefter diskuterar studenterna under seminariet även med lärlaget. Lärlaget kan utifrån kompletterande kompetenser, som jurist respektive planerare, med en formulering lånad av Marianne Döös, ”låta det vi lärt om lärande i arbetet komma till nytta även i undervisningssammanhang” (Döös, 2004:74).

Den centralt antagna utvärderingsenkäten för högskolans kurser, som studenterna får med e-post efter avslutad kurs, är generellt utformad. För att utvärdera enskilda moment under en kurs går det att lägga till ytterligare frågor. Jag har istället valt att göra en separat utvärdering direkt efter genomfört seminarium, vilken ligger till grund för uppsatsen.

3. Syfte

Syftet med artikeln är att närmare undersöka studenternas erfarenheter av det avslutande muntliga seminariet i kursen *Juridik för samhällsplanerare/Legala förutsättningar för samhällsplanering* och att diskutera hur upplägget kan bidra till studenternas lärande, utifrån målet att studenterna ska vara aktivt kunskapssökande och reflekterande. Det tredje seminariet ersätter sedan två år tillbaka en tidigare avslutande summativ tentamen utformad som salstenta.

4. Teoretiska utgångspunkter

Robert Barr och John Tagg har uttryckt nödvändigheten av att förändra undervisningen från lärarinstruktioner till ett lärandeperspektiv i en internationellt uppmärksammat artikel ”From Teaching to Learning – a New Paradigm for Undergraduate Education”(1995). Med utgångspunkt i deras resonemang har Karin Nykvist senare beskrivit utmaningarna att pröva nya vägar i undervisningen utifrån ett svenskt perspektiv: ”Jag tror att vi står och väger emellan två paradigmer, det lärarcentrerade och det studentcentrerade, och att vi måste finna vår plats.” (Nykvist, 2008:19)

I en brytningstid mellan instruktion och lärande har examination fortsatt betydelse. Examination innebär en *formell* kontroll av att studenterna har uppnått kursmålen i enlighet med högskolelagen. Men examinationen kan också uppfattas ha en *pedagogisk* funktion, vara ett led i kunskapsutvecklingen (Trowald, 1997). Trowald har beskrivit hur examination kan utformas som en inläringssituation i form av ett ”offentligt” grupprov. Enligt Trowald kan själva provtillfällets utformning möjliggöra produktion av gemensam kunskap och förståelse till skillnad från individuell reproduktion av fakta. Det är alltså fråga om att inte bara behärska fakta utan att sträva mot att kunna bilda meningsfulla sammanhang och strukturer. Eftersom långtidsminnen lagras som meningsfulla helheter fungerar inläring bättre om man bearbetar fakta genom

att till exempel koppla samman dem i orsakskedjor. ”Människan vill inte bara registrera saker, utan vill *förstå* dem och förståelse består (bland annat) i att se sakens hela sammanhang”(Hansson, 2011:144). Det skulle också kunna beskrivas, enligt Marianne Döös, som en situation av kollektivt lärande genom dialog, samtal och gemensam reflektion (Döös, 2004). Ett ”offentligt” grupprov förutsätter också en individuell insats, både egen inläsning och aktivt deltagande under seminariet. Att vi går in i en inlärningsituation med olika förutsättningar är väl känt:

Som regel går vi in inlärningsituationen med kvalitativt skilda uppfattningar om de fenomen som aktualiseras där och – som regel – lämnar vi inlärningsituationen med andra, men fortfarande skilda uppfattningar. – Att ta fram och överbrygga dessa ”förståelseklyftor” måste enligt vår åsikt vara en mycket väsentlig uppgift på alla utbildningsnivåer (Marton et al, 1999:7).

Att producera gemensam kunskap skulle då kunna betyda att student såväl som lärare skapar nya insikter när praktikfall diskuteras i förhållande till det legala ramverket. Att göra det i en strukturerad samtalsform möjliggör gemensam reflektion med målsättningen att:

Welcome student questions that give you an opportunity to think out loud to demonstrate a discipline in action. Don't answer every question yourself. Turn student questions into opportunities for all of the students to think their way to a satisfying answer and experience a satisfying process (Halonen, 2011:313).

Syftet med kursen är att ge möjlighet för studenterna att förstå varför det finns rättsregler och hur de fungerar som redskap vid samhällsplanering. Studenterna har sedan tidigare erfarenhet av olika planeringsfrågor och med den bakgrunden gäller det nu hur de ska kunna få en förståelse för sammanhang. Biggs menar att ”Cognitive growth lies not just in knowing more, but in restructuring what is already known in order to connect with knowledge” (Biggs, 2007:93). Biggs har utvecklat en 3 p modell; *presage*, before learning takes place; *process*, during learning; *product*, the outcome of learning (Biggs, 2003:19). Biggs 3 p modell kan vara användbar för konstruktion av mål, undervisningsformer och examination och därmed möjliggöra studenternas förståelse av helheten, att finna den röda tråden (constructive alignment).

Att i professionsinriktad inläring arbeta med realistiska problem är inte ovanligt. Till exempel använder medicinska utbildningar casepedagogik i sitt professionslärande (Nordquist et al, 2011). I många sådana sammanhang av lärande finns, enligt pedagogen Bernt Gustavsson, såväl etiska överväganden som ett visst mått av osäkerhet:

Den tekniska rationalitetens användning av vetenskaplig kunskap förutsätter att det finns en entydigt exakt och vetenskaplig form av kunskap, som är möjlig att direkt och oförmedlat använda i det praktiska handlandet. De praktiska situationer som människor i olika yrken allt oftare ställs inför, karaktäriseras i stället av osäkerhet. Dessa situationer består i konflikter mellan olika och ofta motsatta alternativ (Gustavsson, 2002:87).

Lärande kan beskrivas som en aktiv process som sker i dialog med tidigare kunskap och utifrån förståelsen av ett visst fenomen. Undervisning kan då uppfattas som ”en organiserad process som ofta leds av en lärare eller handledare (eller studenter) och som syftar till att öka deltagarnas lärande om något” (Nordquist et al, 2011:64). Med en sådan utgångspunkt blir det, enligt Nordquist et al, centralt att påverka och utöka förståelsen av ett visst fenomen både i undervisning och i lärande.

I de exempel som diskuteras av studenter och lärare under seminariet finns inga exakta svar. Förståelsen grundar sig istället på att bli medveten om alternativa val och de möjligheter och svårigheter som olika handlingsvägar kan leda till. Oklart strukturerade problem kan upplevas som svårigheter av en del studenter, men kan också ses som en metod som underlättar utveckling av kritiskt tänkande enligt Anna Hedin (Hedin, 2006). En väsentlig förutsättning för att uppnå ett fungerande klimat för lärandet är att skapa en trygg och avspänd atmosfär. Först då vågar studenten (och läraren) diskutera utan att känna sig hämmade av risken att "blotta" sig. Det gäller också att som lärare vara medveten om att en muntlig form inte är självklar eller passar för alla studenter.

5. Seminariet

Förberedelser för lärarlaget

Lärarlaget består av en jurist och en planerare, tillika kursansvarig. Vi har tidigare samarbetat under vår gemensamma tid på Boverket i rollerna som chefsjurist respektive planeringsexpert på plan- och bygglagen. Utifrån de yrkeserfarenheter som vi har samlat på oss över åren, diskuterade vi inledningsvis vilka juridiska "typfall" och "teman" från praktiken som skulle kunna vara pedagogiskt användbara. Vi konstruerade därefter teman för första årets seminarieupplägg utifrån infrastruktur, landskap, strand, tätort, vindkraft och riksintresse. Andra årets teman behandlade infrastruktur, energi, kustnära landsbygd och tätort.

Dessa teman bröts ner i ett antal specificerade frågeställningar, exempelvis för tema *kustnära landsbygd*:

Ägaren till en lantgård i Skåne planerar att bygga mer på sin fastighet och funderar på om ett nytt hus kan användas för konferens eller som stall. Dessutom vill ägaren bygga sommarbostad för sina barn, nära havet, antingen på en lucktomt i ett planlagt område (äldre plan för fritidsbebyggelse) i närheten av ett fiskeläge, eller längre bort där det inte finns någon detaljplan.

Efter synpunkter från första årets studenter bifogade vi följande år även illustrationer för att underlätta förståelsen av de beskrivna planeringsproblemen. Lärarlaget tog också från början fram ett antal generella frågeställningar som studenterna skulle använda för samtliga teman enligt följande mall:

A. Struktur. Rättsreglernas syften. För vad? Varför? Rättsreglernas inriktning. Kunskapsstöd och förebygga? Styra planering och/eller utformning? Tillsyn och kontroll i efterhand? Reglernas plats i systemet? Tidigt, sent?

B. Verktyg. Ger rättsreglerna verktyg att Hindra? Lindra? Främja? Vad ger stöd att använda verktygen?

C. Aktörer. Nivå/sektorer? Vilka processer/samråd? Vilka aktörer? Ansvar, roll? Genomförandeproblematik?

Studenterna fick på så sätt tillgång till en förtryckt tabell där de kunde skriva in sina svar. Lärarlaget bifogade också en skiss på ytterligare ett tema "Mast". Studenterna fick detta tema som illustrationsexempel på hur de skulle använda tabellen. Studenterna delades in i grupper om fem personer första året och tre andra året. Det senare för att få tillräckligt antal teman för diskussionen. Därefter fick vi som lärare förbereda oss genom egen inläsning.

Förberedelser för studenterna

Studenterna delades in i smågrupper och fick varsitt tema att förbereda. Andra året med en mindre studentgrupp gjorde kursansvarig ett urval av teman. Varje studentgrupp fick i uppgift att förbereda

sitt tema genom att, med hänvisningar till litteraturen, besvara frågorna under rubrikerna A. Struktur, B. Verktyg och C. Aktörer. Resultatet av grupparbetet lade sedan kursansvarig ut på den digitala lärplattformen så att alla studenter kunde ta del av alla gruppers material. På så sätt kunde varje student få tillgång till en struktur för inläsning. Studenterna fick också uppmaningen att vara kritiska vid inläsningen eftersom någon granskning inte hade skett från lärarhåll. Ett syfte med det förberedande grupparbetet var att underlätta den individuella inläsningen av kurslitteraturen genom att använda grupper som resurs för strukturering av stoffet. Ett annat syfte var att ge studenterna tillfälle till gemensam diskussion och reflektion.

Genomförande

Seminarier genomfördes utifrån de principer för offentligt grupprov som Trowald (1997) har beskrivit. Fem/tre studenter är gången bildade expertpanel och förde ett samtal med varandra och med de två lärarna utifrån ett tema åt gången. Expertpanelens sammansättning bestod av en student från olika förberedande tema. Panelen fick sitt seminarier tema när samtalet började. Övriga studenter var tyst publik. Efter 45 minuter var en paus inlagd. Under den följande 45 minuterna ställde publiken frågor till expertpanelen. Frågorna diskuterades först av expertpanelen och om ingen kunde resonera om svaren gick frågan över till lärarlaget. Till sist fick expertpanelen själva utvärdera sina prestationer.

Den offentliga dialogen pågick under sammanlagt 1½ dag år ett, respektive 1 dag år två (färre kursdeltagare), där alla ingick i ett tema som expertpanel och som publik i övriga teman. Alla studenter måste förbereda sig på alla teman. Studenterna uppmanades i kursens inledning att ha teman och typfall i bakhuvudet under föreläsningarna. Genom en sådan förberedelse skulle frågor till föreläsare kunna underlätta förståelsen för vad rättsreglerna har för syften och funktion. Det handlar alltså om att få förståelse för systemen och sambanden, inte att kunna detaljerna.

6. Studentenkäten

Studentenkäten kompletterade den ordinarie utvärderingen dels under höstterminen 2011, när seminariet hölls för första gången som alternativ till salstentamen, dels under vårterminen 2012 då seminariet genomfördes för andra gången. Enkätens uppläggning är kvantitativ med kvalitativa inslag, (Troost, 2012).

Första året deltog totalt 34 studenter i kursen, av dessa besvarade 30 studenter enkäten. Svarsfrekvensen var alltså 88 % och bortfallet 12 %. De svarande bestod av 20 kvinnliga och 9 manliga studenter, en student angav inte kön. Andra året deltog 13 studenter i kursen och samtliga besvarade enkäten, alltså 100 %. Fördelningen var 9 kvinnliga och 4 manliga studenter.

Kursansvarig deltog som lärare i båda seminarierna tillsammans med samma juridiska expert, inlånad som gästlärare. Studenterna besvarade enkäten direkt efter genomfört seminarium. Enkäten innehöll sju frågor som gällde genomförandet av seminariet. Studenten skulle ange svarsalternativ utifrån en femgradig skala där 1 var lika med instämmer inte alls, 3 var lika med ok och 5 var lika med instämmer helt. Enkätens frågor innehöll också en rad för eventuella synpunkter. Frågorna var: *Seminariets mål var tydliga, Det var tydligt hur jag behövde förbereda mig, Examinationen på seminarium 3 krävde att jag verkligen förstod vad kursen gick ut på, Lämplig arbetsbelastning inför seminarium 3, Det förberedande arbetet i grupp underlättade för mig att nå kursens lärandemål, Jag har fått tillräckligt med information om hur mina kunskaper kommer att bedömas, Lärarna gav återkoppling på seminariet för att få oss att förstå sammanhangen.*

Den åttonde och sista frågan gällde examinationsformen” och hade istället för en femgradig skala tre svarsalternativ; ”Jag rekommenderar ett muntligt seminarium 3 även i fortsättningen”, ”jag rekommenderar återgång till skriftlig salstenta”, ”För mig spelar det ingen roll om det är muntligt seminarium eller skriftlig tenta”.

Studenterna skulle ange om de var kvinnliga respektive manliga studenter, i övrigt var svaren anonyma. Enkäten samlades in av studenterna efter 10-15 minuter.

7. Analys av studenternas svar

Seminariets mål var tydliga

Efter det första grupprovet svarade 18 studenter av trettio, att målen för seminariet var ok, alltså gav en trea på en femgradig skala, medan 8 studenter gav en fyra. Inte någon student instämde helt i påståendet att seminariemålet var tydligt. Ingen ansåg att målen ”inte alls” var tydliga. Studentgruppen som gav betyget 2 var fyra av trettio. En av de senare studenterna kommenterade: ”Eftersom vi aldrig [har] haft dessa typer av sem[inarier] skulle jag vilja ha mer tydlighet i vad som väntas av mig”. Det kan uppfattas som att det fanns ett glapp mellan mål och instruktion, vilket också en student, som ändå tyckte att målen var ok, alltså värt en trea, påpekade: ”Målen [var] tydliga men inte instruktionen!” Året därpå, då lärarlaget försökte bli tydligare i instruktionerna var studentgruppen mindre och samtliga på kursen besvarade enkäten. Då var det en av tretton studenter som inte alls instämde och en student som gav betyget 2. Men nu instämde en student helt i påståendet att seminariets mål var tydliga. Gruppen som gav betyget 3 hade minskat något liksom även gruppen som gav betyget 4. Någon student som gav en 3:a ansåg att ”Det var inte helt klart hur diskussionen skulle fungera”. Väldigt få studenter gav överhuvudtaget någon fritextkommentar på denna fråga.

Det var tydligt hur jag behövde förbereda mig

Första året gav sju av de trettio studenterna betyget 2, medan fem studenter gav betyget 4 och två instämde helt. De flesta av studenterna, fjorton personer, gav betyget 3. Någon student kommenterade att: ”Det var svårt eftersom vi inte hade någon aning om vad som väntade”. Denna uppfattning kom fram i flera kommentarer. Eftersom vi i lärarlaget inte heller hade genomfört ett seminarium av detta slag delade vi studenternas oro. Året därpå hade vi, som jag nämnde tidigare, försökt bli tydligare i våra instruktioner. Av de totalt tretton studenterna gav fem betyget 3 och fem gav betyget 4 på en femgradig skala. År 1 var det två studenter av trettio och år 2 en av tretton som inte alls instämde i att det var tydligt hur förberedelserna skulle göras. År två var det förvånansvärt nog ingen student som gav omdömet 5, vilket två av trettio studenter hade gjort året innan.

Examinationen på seminariet krävde att jag verkligen förstod vad kursen gick ut på

Första året gav fyra av trettio studenter omdömet 3, medan nio gav omdömet 4 och sexton studenter gav omdömet 5 (instämde helt). Året därpå gav en av tretton studenter omdömet 3, medan sex studenter gav omdömet 4. Lika många gav omdömet 5 (instämde helt). Inget av åren hamnade studenternas bedömning under 3. Sammantaget gav alltså tjugofem av trettio studenter första året omdömet 4 – 5 på en femgradig skala. Året därpå var det 12 av tretton studenter som satte betyget 4 – 5. En student menade första året att: ”seminarium 3 gav chans att visa det jag lärt mig och lite knyta ihop säcken med frågor”. En annan student kommenterade år 2: ”Det var som en examination över hela kursen”. Målet att ge studenten möjlighet till systemförståelse istället för fragmenterad detaljkunskap, kan anses vara väl uppfyllt.

Lämplig arbetsbelastning inför seminariet

Sex av trettio studenter gav första året omdömen mellan 1 och 2 av 5 möjliga, medan ingen av andra årets studenter gav lägre än omdömet 3. Sju av trettio gav omdömet 3 första året, medan tre av tretton gjorde detsamma andra året. I det första årets enkätsvar gav drygt hälften av studenterna, sjutton av trettio, betygen 4 till 5. Året därpå var det tio av tretton som gjorde detsamma. En förklaring kan vara att de oklarheter som fanns första året hade minskat. En student från den först omgången ansåg till exempel att: "I början av kursen kändes det som att [det blev] för mycket fokus på sem[inarium] 3. Verkade läskigt/svårt/för stort när det presenterades. När man väl kom igång helt ok." Andra årets studenter kommenterade inte sina svar på denna punkt.

Det förberedande arbetet i grupp underlättade för mig att nå kursens mål

Av studenterna i den första omgången instämde sjutton av trettio helt i påståendet medan tio studenter gav omdömet 4. Det betyder att 90 % av första årets studenter gav omdömen mellan 4 och 5. Övriga studenter gav betyget 2 och 3. Andra året gav ingen student omdömen under 3. Fem av tretton studenter instämde helt medan sex gav omdömet 4. Två studentkommentarer från första året: "Satte mig väl på spåret & sparade oerhört mycket tid som gick på inläsning" respektive "Det var jättebra och en trygghet, jag är inte ute och cyklar". Några andra medstudenter var mer kritiska: "Ingen enhetlig struktur, grupperna tog i många fall upp samma paragrafhänvisningar. Men det underlättade för att börja leta själv." respektive: "P.g.a otydliga beskrivningar på vad förarbetet skulle innehålla var det t.ex. ojämn nivå mellan grupperna. Vissa grupper hade inte förberett tillräckligt för min inläsning. Så man behövde i stort sett göra om deras arbete. Hade varit bra med bättre instruktioner & exempel hur det skulle se ut." Från andra årets studenter fanns endast en kommentar: "Svårt att veta vad som skilde hindra, lindra och främja". Trots detta gav denna student omdömet 5.

Jag har fått tillräckligt med information om hur mina kunskaper kommer att bedömas

Av första årets studenter gav tjugo av trettio studenter omdömen mellan 3 och 4 medan sex av tretton andra årets studenter gav samma omdömen. En student av trettio första året, och en student av tretton andra året, instämde helt i påståendet. Andelen studenter som gav omdömet 2 var första året sju av trettio, alltså en femtedel. Året därpå ansåg fem av tretton, nästan två femtedelar detsamma. Vad denna ökning beror på är oklart. Första årets studenter kommenterade till exempel att: "Innan seminariet sas det aldrig exakt hur mycket man skulle delta" respektive "Fortfarande oklar[t] mellan underkänt/komplettering". En kommentar från andra årets studentgrupp: "Det framgår inte vad som krävs för att bli godkänd på seminariet". Vid den här typen av seminarium kan det finnas svårigheter att avgöra vad som ska vara godkänd nivå. Studenternas systemförståelse är viktig. Genom att vara aktiv i såväl panel som publik skulle studenterna visa att de hade förstått även genom insiktsfulla frågor. Detta poängterades i förväg. Även om Trowald menar att "en kunnig lärares subjektiva, eller snarare intuitiva, värdering av ett svar är sannolikt ganska objektiv (Trowald, 1997:15) kan en sådan värdering vara svår att förmedla. Här finns en del att fortsätta att reflektera över.

Lärarna gav återkoppling på seminariet för att få oss att förstå sammanhangen

Av första årets studenter var det en student av trettio som gav omdömet 2 och fem omdömet 3 av 5 möjliga. Fjorton av trettio som instämde helt medan tio gav omdömet 4 av 5. Det innebär att tjugofyra av trettio studenter gav omdömen mellan 4 och 5. Några studentkommentarer var: "Bra med diskussion i grupp efter att 'expertpanelen' fått sin tid" "Bra med lärarkommentarer". I andra årets enkät föll den här frågan bort av misstag, men muntliga kommentarer i anslutning till seminariet kan tolkas vara i linje med tidigare studentuppfattningar.

Examinationsformen

Två av trettio studenter första året och en student av tretton andra året rekommenderade återgång till salstenta. Av sammanlagt 43 studenter var det alltså tre som ville återgå till salstenta. En av dessa ansåg att: ”jag tycker att det blir väldigt olika förutsättningar för olika personer att visa vad de kan på ett seminarium. Speciellt med flera olika fall, av olika typ”. Av första årets studenter svarade 28 studenter av 30 att de rekommenderade ett muntligt seminarium även i fortsättningen. Andra året ansåg 12 av 13 studenter att den muntliga examinationen skulle vara kvar. Exempel på studentkommentarer: ”Jag har lärt mig mer nu än om det varit skriftlig tenta”, ”Kul med en annan form av seminarium som kan öppna till diskussion och frågeställning som detta gav”, ”jag har lärt mig mer än vid en traditionell tenta”, ”Jag tycker att tentan såg rätt trevlig ut, men jag föredra seminariet, jag lärde mig mycket under diskussionen, och det var bra att man kunde ställa frågor”. Under båda dessa år var närvaron 100 % i studentgrupperna. En svårighet med ett muntligt seminarium är givetvis hur frågan ska lösas om någon student av någon anledning uteblir. Det alternativ som ur pedagogisk synpunkt är mest naturligt är att studenten får gå in i nästa års seminarium. Det kan dock ställa till problem med anledning av att studenten har rätt att få fler tentamenstillfällen under en period. Examinationen kan då lösas genom enskild muntlig eller skriftlig tentamen. Men det pedagogiska momentet av gemensam reflektion minskas avsevärt respektive uteblir. Några av de förslag på förbättringar som kom upp första året är åtgärdade. Studenterna får nu i förväg veta *när* de ska ingå i expertpanelen och olika teman är illustrerade med exempel. Den svagaste punkten för ett sådant här upplägg är att synliggöra bedömningskriterierna. Här finns en del att arbeta vidare med.

8. Avslutande reflektion

Biggs menar att hela den pedagogiska situationen behöver ses i ett sammanhang (presage, process, product). Avsikten med att förändra examinationen från salstenta till ”offentligt” grupprovet var att stimulera studenternas lärande i flera steg och att bädda för systemförståelse. Varje student kan sägas ha ett visst mått av förförståelse av hur rättsregler kan fungera i samhället. För att förstå lagstiftningen som ett system, en spelplan för planeringens aktörer och vad som kan hända när aktörerna agerar, krävs insikt i spelets regler. Men den som till exempel spelar schack vet att det finns olika öppningar och utgångar, även om spelreglerna är förutbestämda. Det finns alltså ett mått av osäkerhet i spelet. Att känna till att det finns osäkerhet även om spelreglerna är förutbestämda är en del av en generell systemförståelse. Som Gustavsson (2002) framhåller karaktäriseras praktiska situationer i yrkeslivet av ett mått av osäkerhet. För att kunna hantera denna osäkerhet och behärska en praktik behöver man kunna känna igen vissa situationer. ”Förtrogenhet kräver att man har överblick över det man gör” (Gustavsson, 2002:89). Förtrogenhet kräver en lång yrkeserfarenhet till skillnad mot de teoretiska kunskaper studenten skaffar sig på högskolan. Det vi kan göra på högskolan inom professionsinriktade utbildningar är att försöka organisera processer som kombinerar teori och praktik för att ”kunna påverka och utöka förståelsen av ett visst fenomen både i undervisning och lärande” (Nordquist et al, 2011:64).

När examinationen inte stannade vid en formell kontroll av kunskaper, utan också fick en pedagogisk funktion, vid det ”offentliga” grupprovet efter Trowalds modell, påverkade det såväl lärarrollen som studentrollen. Examinationsformen innebar att både lärarlaget och studentgruppen kunde få tillfälle att ”tänka högt/think out loud” (Halonon, 2011:313). De juridiska ”typfall” och ”teman” som lärarlaget hade hämtat från sin praktiska erfarenhet syftade till att öka deltagarnas lärande om juridiska tillämpningar men också om regelsystemet. Lärarlaget kunde använda sig av sin förtrogenhet med ”verkliga fall” och omforma den professionella erfarenheten i kombination med pedagogisk kunskap. Den reflektiva praktiken utgick från två perspektiv; juristens och planerarens, vilka också blev synliga i samtalet med studentgruppen, där lärarlaget kunde komma till olika uppfattningar.

Det är tydligt att studenterna uppskattade formen för själva seminariet och att det förberedande grupparbetet underlättade inläsningen. Hansson (2011) anser att inläring fungerar bättre ”om man *bearbetar* fakta, till exempel genom att hitta likheter med tidigare kända fakta, koppla samman fakta i orsakskedjor, relatera dem till en grundläggande teori eller gemensam orsak, leta efter eventuella motsägelser och liknande” (Hansson, 2011:144). Det förberedande grupparbetet innebär att studenterna med hjälp av ett antal generella frågeställningar skulle strukturera de abstrakta lagreglernas information. De skulle också förbinda den legala strukturen med konkreta planeringssituationer utifrån teman.

Döös menar att ”Individen skapar sin omgivnings användningsmöjligheter likaväl som omgivningen tillhandahåller eller erbjuder vissa förutsättningar” (Döös, 2004:77). De förutsättningar som förberedelse och genomförande av seminariet innebär, erbjuder studenten möjlighet till såväl individuellt som gemensamt lärande stegvis i processen. Att det då kan finnas en del oklarheter i strukturen av teman att arbeta med är inte bara av ondo, utan kan vara en hjälp för att utveckla studentens kritiska tänkande (Hedin, 2006). Däremot är det inte bra om studenterna uppfattar ett tema som för brett, så att det mesta går att behandla utan fokusering. Balansen mellan komplexitet i olika teman kan lärarlaget behöva arbeta vidare med, förslagsvis med inspiration från medicinsk casemetodik (Nordquist et al, 2011).

En majoritet av studenterna har i de två separata kursutvärderingarna uttryckt att de föredrar ett muntligt seminarium även i fortsättningen. En majoritet av studenterna ansåg att det ”offentliga” grupprovet krävde att de verkligen förstod vad kursen gick ut på. Målet att ge studenterna möjlighet till systemförståelse istället för fragmenterad detaljkunskap, kan anses vara väl uppfyllt. Dock kan kriterierna för bedömning behöva bli tydligare. Hittills har ingen student uteblivit från den muntliga examinationen, men frågan om hur detta kan lösas om/när en sådan situation uppkommer är också en viktig del av kursutvecklingen framöver.

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2. Internationalisation and the Culture of Academic Writing in English

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Abstract: By examining the relationship between the culture of internationalisation and the use of English in university classrooms, my paper demonstrates that the acquisition of one of the most important academic skills, i.e. writing in English, is efficiently achieved with the aid of process writing combined with peer reviewing. International students learn from one another under the guidance of the teacher as they adapt previous knowledge to the demands of the Swedish university classroom. As the lingua franca and the means by which students are most commonly assessed, English has a particularly important role to play in the international classroom. The conventions of academic writing must be learned and practised. With the aid of process writing and peer reviewing, students hone their writing skills at the same time as they improve their critical faculties. In this way, they are better able to demonstrate their knowledge and improve their results

Keywords: Academic writing in English; process writing; peer reviewing; international students

My paper addresses the relationship between the culture of internationalisation and the use of English in university classrooms. I focus primarily on academic writing in English, arguing that process writing combined with peer reviewing is a particularly effective method in the international classroom. English is the means by which students create and take advantage of the culture of internationalisation and the practices which characterise their group. Approximately one quarter of the world's population speak and/or write English. Indeed, English is "recognized by more countries as a desirable lingua franca than any other language" (Crystal, 2001:6). As I hope to demonstrate, the kind of English that is spoken and written at college or university has a profound impact on the process of internationalisation, the quality of learning and the educational results achieved.

R.C. Gardner's socio-educational model acts as a frame for the following discussion as it takes into consideration the cultural/symbolic elements of different ethno-linguistic communities. While the model specifically addresses the situation of the second language learner, it can equally well be applied to all learning in an international, English-speaking environment. Briefly, the model incorporates four interrelated aspects of second-language learning: the social and cultural environment; individual differences among learners; the setting, and learner outcomes (Ellis, 1994).

Students' beliefs about language and culture are determined by their social and cultural environment. According to Gardner, individual learner differences are determined primarily by motivation and language aptitude. Where motivation is encouraged, and language proficiency is integrated with cultural values, beliefs and attitudes, learning can be increased. The strength of Gardner's model is that it explains the relationship between setting and proficiency by identifying a number of intervening variables, including attitudes, motivation and self-confidence.

A successful learning context is based on the principle that “[u]nderstanding other ways of seeing things is understanding each other and understanding each other is a highly efficient way of assisting each other in understanding things better” (J. Bowden and F. Marton, 1998:293). International students bring to the classroom a variety of social and academic cultures, different levels of motivation and aptitude, different expectations, a variety of views of what is appropriate behaviour in the classroom, and different opinions about what constitutes “good” learning as well as “good” spoken and written English.

It is important to recognise that language is not only a tool by which knowledge is transmitted but also a creator of knowledge. As Barker and Galasiński demonstrate, language does more than reflect an outside reality, it largely “constructs and constitutes” it (Barker and Galasiński, 2001:1). It is the medium through which our perception of both ourselves and our surrounding world is constructed and communicated (Barker, 2003:88). Knowledge is historically constructed and culturally and socially contextualised in language (Moate, 2010:38-45). There is a constant process of negotiation “between what is own and what is foreign, what is part of one’s identity and what is new and challenging” (Sercu, 2000: 74); this leads to the gradual adoption of an “international identity” (Arnett, 2002; Lamb, 2004; Pavlenko, 2002).

1. Internationalisation and Culture

Culture is “a way of life based on a signifying order . . . that is passed . . . from one generation to the next” (Danesi and Perron, 1999:23). It implies a relationship. As Norton argues, culture is “how people understand their relationship to the world, how that relationship is constructed across time and space, and how people understand their possibilities for the future” (Norton, 1997: 410). In order to function in a culture, one must participate in what Danesi and Perron describe as “the signifying order of the founding or conquering tribe (or tribes)” (Danesi and Perron, 1994:24). The educational system constitutes a special kind of culture in which teachers are the tools of the dominant culture – a culture with which it is necessary to comply.

Internationalisation is an important aspect of the culture of higher education (Montgomery, 2010:3). It is a process that has been set in motion by globalisation as national institutions of higher education reach out to other national institutions in order to reflect new commercial and political orders. Internationalisation has implications for all academic disciplines (Trouillot, 2003) and has not only influenced their thinking but also the content and structure of courses and programmes.

The social and cultural context created by the presence of international students has attracted surprisingly little academic investigation and few studies have been conducted on its nature and implications (Montgomery, 2010:19). The function of English in the international classroom is an extremely important part of this context. Indeed, without a lingua franca, there can be no internationalisation.

Views of what is incorporated in the term ‘internationalisation’ vary considerably (Knight, 1997; Gunn, 2005; Fok, 2007). Stone, for example, observes that defining internationalisation is an invitation to “seduction into a quagmire of potentially unsatisfying responses” (Stone, 334). There are few recommended overarching approaches that aim to promote international perspectives among staff and students (Montgomery, 2010:132). In addition, there seems to be little connection between policy and practice. The United Kingdom, where there is a long tradition of internationalisation, is a case in point. Here, there is only a doubtful link between institutional Internationalisation of the Curriculum rhetoric and its impact on actual practice largely due to the lack of knowledge about how to implement internationalisation. There are, in fact, few foundations for “valid, recognisable categories of good practice” (Spiro and Henderson, 1, in C. Montgomery, 2010:132).

2. Academic Writing in an International Context

In a world where the majority of research results are published in English, it is important that students master the conventions of academic writing in English. This is a process that is best facilitated by an interactive method that accommodates interaction on two levels: teacher/student and student/student.¹ The responsibility for the final product is ultimately the student's alone; it is, however, the teacher's responsibility to ensure that the production process is as smooth and efficient as possible.² As teachers, we must provide students with the knowledge and skills necessary to make wise decisions that lead not only to the achievement of a high grade but facilitate the adaptation of knowledge to new situations and demands.

2.1 *The special content/structure and language of academic texts*

The standard structure of research papers, IMRAD, i.e. introduction, method, results and discussion is a formula not only for writing up but also making the scientific enterprise appear logical.³ The language of a scientific article is designed to give the *appearance* of precision and objectivity. It is also, however, the language of rhetoric and persuasion. As part of the writing programme, students must learn to avoid strategies that are misleading, such as jargon, so-called straw-men arguments, omissions, overstatements and distortions – strategies that are easily misunderstood by the international student.⁴ Process writing enables students to experiment with different strategies and test their objectivity while at the same time preserving the persuasive power of the text.

Academic writing constitutes a hierarchy of overlapping processes or levels. At the bottom level, students put pen to paper or their fingers to the keyboard. The second stage incorporates the thinking that enables the text to be written and revised. At the third stage, one must consider the social context of the paper, i.e. its target group, purpose, and suitability for publication.⁵ At the bottom, keyboarding stage, it is useful for students to keep track of the changes they make and versions they produce. Earlier versions may not only contain important information but also mistakes and problems from which the student can learn. At the second, writing and thinking level, students should be encouraged to make notes about what they are writing and thinking about during the writing process.⁶ In this way, they become conscious of the reasons for and nature of the decisions they make and can trace progression in their thinking and writing. Such notes are also helpful when discussing with their peer(s).

The social aspects of academic writing, the third stage, include the purpose of writing, which can be divided into those that encourage, e.g. the desire to create new knowledge or gain approval, and those that impair progress, such as problems in getting started (sometimes more prevalent among international students), revising the text, finding one's voice and feeling inadequate (also more common among international students). Murray and Moore show that factors that facilitate and inhibit writing are strongly influenced by environmental factors such as the time available to write.⁷ By dividing the writing task into identifiable

1. Lennart Björk and Christine Räisänen (2003). *Academic Writing. A University Writing Course*. Lund: Studentlitteratur, p.7.

2. For a discussion of the features and extent of the student's responsibility, see George Watson (1987), *Writing a Thesis. A Guide to Long Essays and Dissertations*. London and New York: Longman, p.107.

3. James Hartley argues that the scientific enterprise is sometimes made to appear more logical than it actually is. See *Academic Writing and Publishing. A Practical Handbook*. (2008) London and New York: Routledge, p.8.

4. A wide range of such devices is analysed by P. Woods (1999) *Successful Writing for Qualitative Researchers*. London: Routledge, pp.63-80.

5. See, for example, T. Hedge (1993), *Writing*. Oxford: Oxford University Press (p.15 and passim).

6. This method is discussed by among others D. Cotton and K. Gresty (2006), "Reflecting on the think-aloud method for evaluating e-learning". *British Journal of Educational Technology*, 37(1), pp.45-54. The method works equally well in regular classroom teaching.

stages and specifying deadlines for these, students are given sub-goals, their work is marked at regular intervals throughout the writing process, and feedback is obtained from both the teacher and peers. In this way, students are better able to control the environmental factors that influence their work. At the same time, they receive intrinsic rewards such as personal satisfaction as they see that they are making progress. They also receive extrinsic rewards as the teacher and peer(s) are able to point to important steps forward in the research and writing processes.

The IMRAD model is particularly helpful for non-native speakers of English as it provides a structure. It does not, however, alleviate the special problems of writing in a foreign language. While students are aided by automated grammar and style checkers, a good knowledge of grammar is necessary to judge the validity of many of the automated suggestions. The boilerplate proposed by Jane Mattisson and Teri Schamp-Bjerede is a useful alternative.⁸ It also works best when the process writing method is adopted. Ideally, students writing at higher levels in English should have access to a native speaker, who is more aware of the subtleties and nuances that may not be noticed by non-native speakers. Such help can be given electronically, via e-mail and the Internet, and is easily incorporated into process writing.

3. Process writing and peer reviewing

Process writing has been defined as a series of “writing activities which move learners from the generation of ideas and the collection of data through to the ‘publication’ of a finished text.”⁹ It incorporates pre-writing activities (e.g. reading, brainstorming¹⁰ and mind mapping¹¹), using a range of sources, planning the writing in accordance with the model required (e.g. IMRAD), and drafting and revising.¹² In the model proposed here, students are given set tasks corresponding to the different stages and elements of the text, e.g. thesis statement, introduction, method etc. Progress is monitored throughout by the teacher and peer(s). The deadlines given for each stage ensure that the text is completed on time.

It should nonetheless be noted that while the writing process may appear to be neat and chronological, it is highly dynamic as the writer moves between writing and revision in accordance with the new directions of the thinking process and in response to feedback from both the teacher and peer(s). Process writing is acknowledged to be one of the most effective writing instructions available not only because it enables students to achieve the best results possible given the student’s ability and situation but because it provides a useful knowledge base for future writing tasks.¹³

7. R. Murray and S. Moore (2006), *The Handbook of Academic Writing: A Fresh Approach*. Maidenhead: Open University Press.

8. “The boilerplate: a new look at a familiar device. Writing in English for “digital natives” and “digital immigrants”. *Högskolepedagogisk debatt*. VFU, Handledning, Skrivprocess, Digitala Verktyg 1, 31-42. An early version of our project was presented at the “Lärlärdom” conference at Blekinge Institute of Technology in 2010. See “Reflections on Threshold Concepts as Applied to a New E-Learning Tool: A Pilot Study at HKR Spring 2010”. *Lärlärdom Högskolepedagogisk Konferens 2009-2010*. Report 2011:1, pp. 85-97.

9. C. Tribble (1996) *Writing*. Oxford: Oxford University Press, p.37

10. For an interesting study of the positive effects of brainstorming on the writing process see Zhenhui Rao (2007), “Training in brainstorming and developing writing skills”, *ELT Journal* 61/2, pp.100-106.

11. For an explication of mind mapping see Martin J. Eppler (2006), “A comparison between concept maps, mind maps, conceptual diagrams, and visual metaphors as complementary tools for knowledge construction and sharing”, *Information Visualization* 5/3, pp.202-210.

12. Arnold A. Goldstein and Peggy G. Carr (1996), “Can Students Benefit from Process Writing?” *National Centre for Education Statistics Report NCES-96-845*, pp.1-7 (p.2).

13. See, for example, Lennart Björk, Gerd Bräuer, Lotte Reinecker and Peter Stray Jörgensen (2003) eds., *Teaching Academic Writing in European Higher Education*. Dordrecht, the Netherlands: Kluwer; Paula Gillespie and Neal Lerner (2000). *The Allyn and Bacon Guide to Peer Tutoring*. Needham Heights, M.A.: Allyn and Bacon; and George Hillocks Jr. (1986) *Research on Written Composition*. Urbana: NCRE/ERIC.

Process writing presupposes that writing promotes language development, shapes our knowledge and “is an essential learning tool for any subject.”¹⁴ It also facilitates critical thinking by visualising the thinking process, “thereby making reflection and revision easier.”¹⁵ Process writing enables the student to move from description to analysis, taking advantage of the input of and support from the teacher and peer(s). At all stages, it is the writer who must decide what advice and critique to accept and what to reject; this is an important part of taking responsibility for one’s work. As a result, the student not only becomes a more proficient and effective writer but also a more competent and confident reader.

Peer reviewing yields similar positive results: as students review their peer’s work, they become more critical of their own. It is important to distinguish between academic and personal criticism; peer reviewing is concerned solely with the former. Students must be encouraged to provide constructive criticism, always beginning and ending with a positive observation. Peer reviewing focuses on four main areas: structure, argument (including conclusions and results), method and language/style.

All too frequently underestimated is the importance of the language of the writer.¹⁶ Peers must pay special attention to the adequacy of the language, and the conventions of academic English with respect to style, tone and vocabulary. This is often a more challenging task than critiquing the structure, method and argument of a text, particularly so for international students who may lack confidence.

To ensure that process writing and peer reviewing function efficiently, it is necessary to adopt a suitable model, often a variation of the IMRAD one described earlier. The use of a model is a controversial issue within the field of academic writing. Some researchers such as R. White and V. Arndt,¹⁷ for example, claim that what clearly differentiates a process-focused approach from a product-focused one is that the product, i.e. essay, report, or thesis, is *not* pre-conceived. As a contrasting viewpoint, I hope to show that process writing is in fact perfectly compatible with the use of a model. One of the most useful models within the field of academic writing in English is that proposed by Stephen Bailey.¹⁸ A modification of this model, implemented by the writer, is discussed in the following section.

4. A model for process writing with peer review

The model proposed here incorporates identification of subject, specification and evaluation of secondary material/data, selection and collection of key issues/data, note-taking, planning, conclusions, re-writing and editing. Linguistic and stylistic features are incorporated at every stage of the writing process, from draft to final version, although it is not until the final stages of writing that language and style become key issues. Above all, language and style must be consistent and appropriate to the task in hand.

The model discussed here assumes that pre-writing activities have been carried out, including mind mapping and brainstorming. Once the title of the text is established and the target group established, students must identify the areas and perspectives to be covered. All terminology must also be defined and the method identified and justified. When these components are complete and have been discussed with the

14. Lennart Björk and Christine Räisänen (2003). *Academic Writing. A University Writing Course*. Lund: Studentlitteratur.

15. *Ibid.*, p.22.

16. Richard Badger and Goodith White claim, for example, that process writing “is seen as predominantly to do with linguistic skills such as planning and drafting, and there is much less emphasis on linguistic knowledge such as knowledge about grammar”. See Richard Badger and Goodith White (2000) “A process genre approach to writing” *ELT Journal* 54/2, pp. 153-160 (154). Such a view fails to recognise the potential of process writing to improve students’ level of academic English.

17. R. White and V. Arndt (1991) *Process Writing*. Harlow: Longman.

18. Stephen Bailey (2006) *Academic Writing. A Handbook for International Students*. London and New York: Routledge.

student's peer(s), the text is submitted to the teacher for comment. At this stage, the teacher is able to raise possible problems related, for example, to the breadth of the topic, availability of secondary sources and potential ethical issues. Here traditions vary enormously from country to country.

With regard to the identification and evaluation of secondary material, students are required to submit titles at an early stage in the writing process. A range of sources is encouraged, including reports, reviews, articles and books. Internet sources are accepted where the academic affiliation of the writer is specified. Students are reminded that it is important to note the date of access of internet sites. They are instructed to keep an alphabetically arranged list of references from the very beginning. This should conform to the citing system specified and be complemented as the text progresses. At this crucial stage in the research process, students should discuss all important choices with their peer(s) before submitting their material to the teacher. Individual tutorials are arranged to discuss secondary material. These are also attended by the student's peer(s). During the tutorials, the teacher and students discuss not only the relevance of the chosen literature but its purpose i.e. is it designed to inform, persuade, describe or even entertain? Students learn that the answer to this question determines how they should use the chosen material.

As the student reads the secondary literature, notes should be made to identify the key issues and sections for the chosen topic. It may be useful to paraphrase key sections. Where possible, students can take advantage of one another's sources and compare notes on, or paraphrases of, key issues to check possible differences in interpretation. After approximately three weeks (depending on the scope of the topic and length of text to be produced) of assembling and evaluating secondary sources, students submit to the teacher a short written summary of the range of materials to be included in their text and a justification of their choices. At this point, students are beginning to acquire the conventions of writing in English in their particular discipline, including the level of language and style expected.

At the drafting stage, coherence is emphasised. Are the different elements of the text arranged logically, and do they contain information relevant to the topic? Depending on the level of the student, it may be necessary to revise the importance of topic sentences, the content and length of paragraphs, and transitions between paragraphs and sections. During the drafting stage, the student works closely with his/her peer(s). A deadline is set for submission to the teacher of a draft of the entire text and a brief review of the content of each section. While the teacher's advice is crucial, it is important to reiterate that it must always be the student's decision as to what shall be included or excluded. When the draft is complete, attention can be turned to the organisation of the main body and the internal organisation of paragraphs.

The introduction to the text is a vital component of the draft.¹⁹ At this point, students generally need a great deal of support from their teacher and peer(s). Process writing places considerable emphasis on a clear and authoritative introduction. The introduction should establish not only the crucial elements of the topic and the theory on which it is based but a clear indication of the writer's style and approach. It may need to be re-written several times as the writer becomes clearer about his/her approach. Once the introductory text is complete, it may need to be modified again, as the writer's thoughts and perspectives may change. At this point, students may experience writer's block.²⁰ Above all, it is the peer's responsibility, though also the teacher's, to help overcome this and enable the student to continue writing.

19. For a brief but excellent survey of how to write introductions see Björn Gustavii (2000) *How to Write and Illustrate a Scientific Paper*. Lund: Studentlitteratur, pp.46-7.

20. For an excellent discussion of this phenomenon and some useful suggestions for counteracting it see George Watson (1987). *Writing a Thesis. A Guide to Long Essays and Dissertations*. London and New York: Longman, pp.37-43.

The main body of the text is completed in different stages, each of which is discussed with the student's peer(s) before it is submitted to the teacher for comment. At this point, much of the editing work can be done electronically, though the student may wish to meet the teacher now and then to discuss specific problems. When most students have completed approximately one third of their text, it is useful to call together the class to discuss common problems. Students must also be reminded about the importance of correct referencing. As they approach their conclusion, an additional meeting can be held at which time students present their findings, discuss how they have used their secondary sources, and reflect on their conclusions. It is useful to remind students that readers may turn to the conclusion first to gain a summary of the main arguments or points.

The fear of writing a conclusion can to some extent be alleviated by encouraging students to return to the starting point, i.e. the title and the introduction. The possibility of incorporating suggestions for further research in the field can also be discussed. The support of the peer is crucial at this stage if the conclusion is to be more than a mere summary of the findings. Issues such as the limitations of the research and possible practical implications and proposals can be usefully discussed at this point.

The final stage, the re-writing and editing are given a prominent position in the process- writing model proposed here. The student's work has already been submitted several times both to the peer(s) and teacher. In the final stage, the entire text is assessed on the basis of its structure, content, language and style. Writing schedules must leave plenty of time for this process. At this point, the peer should focus on overall coherence as well as linguistic and stylistic appropriateness.

Following is a selection of guidelines for peer review of structure, argument, method and language/style.

Structure

Has the structure been defined and presented in the introduction? Is it logically developed throughout the text? Do the paragraphs deal with one idea at a time, are they logically arranged, and do they vary in length? How effective is the use of headings? Are the introduction and conclusion consistent with each other?

Argument

Is the argument firmly stated and logically developed? Has it been modified in the writing process? Does the conclusion support the main argument as specified in the introduction?

Method

Is the chosen method the most suitable for establishing the veracity of the argument/hypothesis? Has it been adequately explained to ensure the possibility of replication? Have its advantages and disadvantages been clearly stated and taken into consideration in the analysis of the results?

Language/style

Has the writer used grammar and speller checkers? Are there any concord errors? Is there a consistent use of British or American English?

With regard to style, is it sufficiently formal and correct for the target group and discipline? Is it consistent? Does the text contain repetitions and "pet" words and phrases? Is the length of sentences appropriate to the topic? Does the length of the sentences vary to avoid monotony and hold the reader's attention? Has

the writer expressed him-/herself concisely or is there a tendency to verbosity and inclusion of superfluous information? Is there an overuse of the passive form? Is the choice of tense appropriate and consistent? Is there an overuse of personal pronouns? Are contracted forms and jargon used? Are there any abbreviations that are not properly explained?

It is in the areas of language and style that peers are likely to face the greatest difficulty in giving constructive criticism because their knowledge and experience of reading academic texts in English may be limited. As already established, it is advantageous to seek the support of a native speaker, at least at the higher levels. Students may also wish to employ the services of a professional language corrector.

5. Final Remarks

Because English is the lingua franca in international classrooms and Academia continues to base its evaluation of students' performance in terms of their written production, attention must be paid to how we teach in English, and particularly, how we teach the special conventions of academic writing in English. This is particularly challenging when it comes to international students as their backgrounds and cultures are often very diverse and usually unfamiliar to the teacher. To return to the quotation cited at the beginning, "[u]nderstanding other ways of seeing things is understanding each other and understanding each other is a highly efficient way of assisting each other in understanding things better" (J. Bowden and F. Marton, 1998:293); nowhere is this more true than in the field of academic writing in English. Process writing accompanied by peer reviewing is an excellent system for enabling students of all nationalities to appreciate what it means to write "good" academic English. Process writing improves motivation; as R.C. Gardner's socio-educational model demonstrates, when language proficiency is integrated with cultural values, beliefs and attitudes, learning can be significantly increased. The growing presence of international students in our classrooms is very much welcomed by all universities; at the same time, it requires that we adapt our teaching methods to accommodate the new challenges that international students present in a Swedish context. Because process writing can be adapted to all levels, needs and backgrounds it is a particularly useful method in the international classroom and ensures that the best possible results are achieved irrespective of the student's starting point and knowledge.

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3. Knowledge Dump:

That's not what I ~~wiped~~ ~~griped~~ ~~hyped~~ TYPED!

A Consideration of the Pedagogical Implications of Using Word Processors and their Affect on Writing

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Abstract- We all learned how to shape letters in different ways; with a pencil or crayon, or maybe by writing in the sand. However, basic handwriting must be understood and accomplished before graduating into the difficult skill of cursive handwriting. Professor Chris Dede relates that technologies can unobtrusively alter how we process information and express ourselves. (2012) Today, the computer is used more often than not, when communicating in a written form; as such it has changed the way in which people communicate, for better and worse.

This author assess the use of word processors as helpful tools, or hindrances in writing, and questions what these programs have affected, and how these effects are revealed by the users in connection to writing skills. By reviewing how writing skills are acquired, and how word processors are used, the author compares and contrasts ways in which those affects are exposed, and highlights instances of reliance that users have on word processors, and the tools found embedded in the programs.

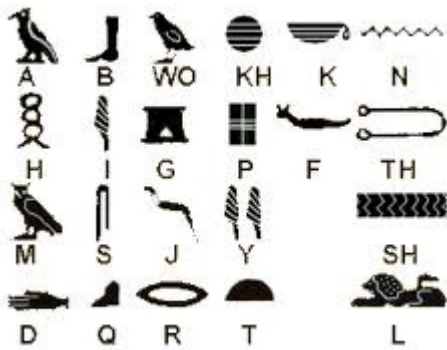
Keywords – 21st century skills, knowledge retention, skill-sets, word processor, writing

1. Introduction

We all learned how to shape letters in different ways; with a pencil or crayon, or maybe by writing in the sand. However, basic script must be understood and accomplished before graduating into the difficult area of cursive or so-called *joined-up* handwriting. Penmanship is still reflected upon and noted, and the beauty of any artistic endeavor to broaden ones skills possibly into calligraphy can reveal an artist within. Penmanship looks at writing with an implement that is used to make lines and curves that represent those symbols that are connected to and signify a word within a language in the most appropriate way, guided by family, teachers or even friends

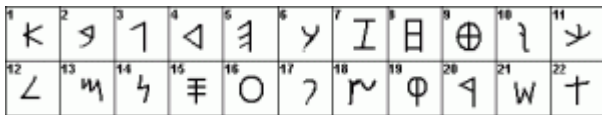
“Art was age-old when writing began” (Schmandt-Besserat, 2007), yet meaning was intended whether it be literal, or metaphorical. The earliest uses are thought to be connected to cuneiform writing, simple lines that conveyed meaning and information.

Image 1: Egyptian Hieroglyphs (Library: Thinkquest, 2012)



This progressed to actual pictographs that were representations of actual objects. As seen in Goldwasser (1995), the advent of actual hieroglyphs is most noticeable in Egypt (Image 1) where these images gave representations of sound to representations of images. Images that give meaning, is itself an area of research, and this is found as an influential area as icons are becoming used more often in our digital society. Moving into more recognizable writing and languages, one sees a critical step in writing evolution with the advent of the Phoenician alphabet. With its 22 “letters” representing only consonants, no vowels, this language became the basis for many writing scripts such as Aramaic, Hebrew, Greek, and the Latin alphabet. Learning to write became an art, a learned occupation that not everyone took for granted as we might do today.

Image 2: Phoenician Alphabet; approx. 1100 B.C. (BBC, 2012)



Penmanship as a skill attained in schools, seems to be taking a distinct place behind computer printed texts. In Wei (2009), Chinese and Western handwriting values are discussed. The heritage involved in writing and connects to values of the person that is writing. As a result this gives a subtler, deeper meaning that is seldom found in word processor texts. Wei goes further to intimate that “the humanization advantage of handwriting has been neglected by the designers, and the power of computers makes the designing forms more plentiful.” Even Foley (1966) recognized at an early stage the important artistic side of Chinese writing by commenting that a mood was “created by its use as decoration even though we are utterly unable to decipher it [the symbols/words].” Reviewing the benefits of handwriting as a medium that gives insight and artistic creation as an outlet is also importance. Yet, the need for computers as a multi-modal communication and writing tool cannot be doubted either. As with other scholastic disciplines such as reading and arithmetic, writing is a core skill and this knowledge, whether by hand or computer, is expected to be commonplace in our day and age.

2. 21st Century Writing

It is said that handwriting, with cursive letters, is to soon be phased-out of being taught in schools, becoming obsolete as it were, not needed as a skill for the 21st century student. The keyboard would then be taught as the main mode to facilitate textual input and received output. Yet the consequences of such a decision require further study. Looking at questions such as what would the consequences be during the changeover is only one. Students might not know or understand cursive writing; yet at the same time teachers might still employ it. What difficulties would then arise when papers or essays are returned? One can posit that those students not understanding cursive writing would have troubles reading comments and instructions from teachers still employing this method. One could also posit that there could be a lack of knowledge about documents that have been written in cursive, leading to a dramatic loss of understanding for future generations, this could be especially true for historical documents as to being read and researched.

Thoughtful consideration is needed before taking such a drastic measure such as the one mentioned above, even now many newer computers have recognition features for cursive handwriting. Others employ specialized alphabets that are a combination of writing, cursive writing and symbols. This regression back to symbols and signifiers, those that represent meanings, brings an amalgamation of different usages. Here also, we embrace the minimalistic, time-saving options by utilizing images instead of words. Time saving options are an item of necessity in our quick-paced, 24/7 digital life. Writing with a word processor such as MS Word, Adobe Acrobat, Open Office just to name a few, can have distinct benefits. Yet, is it a time saving agent to actually rely on these helpful tools time and time again? Influences of using computers and digital devices can be studied.

One specific instance is using the C-C-P (copy-cut-paste) function. This time-saving shortcut that allows writers to highlight, move quantities of text, copy and paste to and from multiple documents are options that most of us cannot work without. With formatting options, as well as dynamic presets (table of contents, etc.) and other tool options that most word processors possess, there is an opportunity to save time. We all use computers, and those that do not, have cell phones, or access keyboard input devices that are used to communicate to one or the other. While many people use word processors, many more use the built-in aids. The common auto-correct list (ACL) and grammar and spelling checker are two of the convenient aids that both of these word processing programs have. Spelling checks, language rule checks and even short phrases are already built-in, and can easily be added with a few clicks and key strokes; a language specific thesaurus is also an important function for many writers. These convenient and time saving aids have helped many people create better texts, especially when you are not writing in your native language. While we have come to expect helpful assistance from the word processor, there can be fallbacks when writing with word processors that have these built-in supports for the user.

There is an awareness needed by users, not necessarily connected only to knowing how to use these helpful tools and short-cuts, but linked to knowing *when* to make use of them, and *when not*. One *should* skim the “help” pages to acquire knowledge, yet if one truly wanted to, one could work with the program so as to be able to retain previous knowledge of writing while incorporating new understanding. When working with writing one needs to be note what is conveyed not only by the words one writes, but with the symbols, punctuation and layout. Possibly more important is that the writing is understandable. If a writer avails himself of these helpful tools too often, that previous knowledge of setting up an article, a CV, a spread sheet file, etc. could be unused, by not utilizing knowledge one has, there is a distinct possibility that one

loses it. What is left in its place is the process of knowing what button to push to create the reaction wanted for the computer, yet as seen with the new MS Word ribbon interface, re-learning what button to push now becomes time consuming instead. Schrage, referring to Akinson, comments on how

there's no shortage of "well-educated" college graduates who can't write intelligible synopses or manage simple spreadsheets. I know doctoral candidates in statistics and operations research who find adapting their superb technical expertise to messy, real-world problem solving extraordinarily difficult. Their great knowledge doesn't confer great skill. (2010)

3. Knowledge Retention vs. Knowledge Dumping

When does the writer give over control to the program? Why does the user choose to do so? When using word processors, such as MS Word or Google Docs, there is an inherent connection that the machine is more knowledgeable than the user. As seen, the user will choose to relinquish control and the decision making instances that the user is faced with become those that the program suggests. At most times, this is in connection to the built-in functioning grammar and spelling checker. This gives clues to the user, as to their own knowledge of these two areas. How is it then that the program becomes the controllant? And what are the subsequent consequences of trusting a machine?

Working with writing demands a certain belief in ones own inherent, learned knowledge in the writing ability one has. If a teacher instructs students that there is a need to be aware of how the tool (spelling / grammar checker) influences the writing, then there should be an affect that users will subsequently be on guard for these problems. When working with new texts, vocabulary or special topical terminology, a writer can be faced with a situation of not knowing if a colloquialism is n accepted part of writing. Language competence is posited by Bachman as being composed of two parts, organizational and pragmatic competence. (Bachman, as quoted by Jordon, 1990) Whereas organizational looks to grammar and textual abilities, pragmatic competence looks at the ability of the person when writing or speaking and their knowledge of usage and what is intended by the words, conventions and usage of these. An added area to be aware of is the effect that poor writers' writings have on excellent writers. By reading essays, emails and other documents, one is easily influenced by incorrect grammar and spelling if read repeatedly. Habitually reviewing these texts before being sent or delivered is of high importance, On-going bombardment of continuous poor writing can lead to a backwash effect where the excellent writers start to question their own knowledge about their writing skills.

Variability and at the same time completeness in sentences and paragraphs is imperative, so being able to use the grammar and spell-checker with a heightened sense of awareness is imperative, yet these are not the only questionable elements found in word processors. Noted also were issues with punctuation usage, contextually incorrect words, even subject-verb agreements (Krishnamurthy, 2006; Kies, 2012). Findings released proved that all of these items are limited as to their being complete aids, and should be more of a compliment to the practiced writer, and not a complete editor that the writer relies upon. Two types of writing that are pertinent are termed low-stakes and high-stakes writing. Low-stakes writing are those areas of notes, ideas, brain storming. These items go together and lead up to a final article, assignment or project. This type of writing uses different writing skills that are centered on the originator as it connects directly to the type of intelligence the writer has and employs; the organizational skills as well as the experience of the writer. Gardner's discussion (1989) on multiple intelligences is a foundation for student-centered learning types, where the individual is aware of their learning style and uses it for the best results. High-stakes

writing connects to those texts that are written and directly affect final grades, finished work, and other accomplishments. Both high- and low-stakes writing are part of the average student repertoire of work, and many employ the word processor for both of these types of stakes writing.

4. L2, Language and the Word Processor – Deconstruction

Derrida's deconstructionist ideas on texts and how "there is nothing beyond the text" (2000), plays into the need for a reader of the text. Only by having both text and reader, can a deconstruction take place. Opposite this is the computer program, here there is not only the program and the user, the text and reader respectively, there is also the multitude of cause and effect that is produced through the interaction of the two that goes beyond the text.

Programs have been developed to encourage writing, and self-learning for L2 (second language) learners. Milton and Cheng (2010) write about promoting language awareness when using word processors. Their discussion of different programs, such as *Check My Words* and *Word Neighbors*, comes back to the need for the user to choose to engage the program, and in turn, receive help. The motivational aspect is a noble one as they state that "teachers are typically called upon to provide individual support to large numbers of students who are often at various levels of acquisition and who have a wide range of motivational drives and individual needs." This self-help is what most teachers wish students to avail themselves of, yet, it is difficult to do more than suggest and tell the students to use these tools. This is the backbone of some problems when using these language tools. Many students, for multiple reasons, do not care to employ these self-help items, and thus do not avail themselves of the learning opportunity. Some have noted that it helps them to increase their work pace. As discussed above, one finds built in templates, spelling and grammar checkers that make quick work of the problems that are inherent in writing for all levels, yet especially for L2 learners.

Mozgovoy's (2010) article on the XDG Parser reviews basic problems that need to be addressed whenever using any type of grammar, spell-checker or computer program aimed at language help and tutoring. First noted is that the program is less developed than our language. As all languages are living objects flexible, moldable to circumstance, and a subject of constant change. Keeping abreast of these changes is time consuming as updating programmed software is not a one-off event. Many of these tools are not task dedicated, and as such are not content specific enough to be have an affect on the topic the writer is writing about; this leads to common errors, whereas a need for more specificity is not met. The different programs named are only a few of those available, yet they all have an inherent problem, the writer may either ignore the problem completely, or the writer is most often, given the answer.

Other problems are that these grammar and spell-checking tools are not always correct. As seen with many students even if the program "provide[s] authentic information about the patterns of language, ... the L2 writer must often decide which context is appropriate for a particular case." Milton and Cheng (2010) Those students that have experienced the problems of trusting a computer program, only to be corrected by the instructor, are then reluctant to continue to do so. During these situations it becomes paramount to have the teacher and student relate and communicate so that this knowledge comes to light, and the teacher is aware of these problems, thereby giving the students instructions as to how and when to use these tools.

A further consideration is the multitude of devices that are now used for writing. Many people today not only make use of personal computers, but laptops, slate computers, pda:s and mobile phones that they work with. The multitude of communication programs that are OS (operating system) to device specific must also be considered. Many programs, as compared to OS, have basic versions as well as so-called *light* versions that do not require the hardware standards that the basic versions employ. In Inches, et al (2010), their study concluded that *singleton* terms are problematic in short texts, these being blogs, chats, sms:s. These types of terms are used in context specific instances, and used only once in text sets. Many who use smart phones to produce texts must be especially careful before sending or uploading texts as the T9 algorithm can be unforgiving. T9, or intuitive word generator, has employs algorithms based on a multitude of different habits the user produces when he uses his smart phone. The T9 algorithm collects data. This data is checked against which words are possible when the input is given with the keyboard after each letter is typed. It then provides options so that you will not have to write out the full word, the algorithm can also be set to prioritize words that are frequently used by the phone user. The T9 is considered to be a time saving program, and possibly so. Yet, the user needs to be conscious of the results given, as these can be incorrect and misleading.

5. Hand-written vs. Computer-written Essays

As an important note about usage for grades, is to note that neither hand-written nor computer-written essays give you an advantage. Studies have shown rating bias in the past. Wolfe, et al (1993) notes that textual appearance changed and computer written essays were graded lower. In a study from the early 1990's Wolfe tells of 300 hand-written essays were scored on a 6-point scale. These same essays were then transcribed and written on a word processor and scored using the same scale. It was found that the essays from the word processors scored a mean average of 0.3 less than the hand-written ones. Handwritten, formal essays gave visual clues to the different drafts leading up to the final submitted piece of work. Items of language issues could not easily be ignored on paper drafts as most tutors use marking pens to highlight different issues they find, red for spelling, yellow for grammar, orange for unclear construction, etc. Over time though, the use of the word processor has prevailed. With the convenience and usefulness of this tool, studies now show that the word processor is used by most essay writers.

No significant difference exists between the scores of handwritten and computer-written student essays, according to a study produced by the Center for Advancement of Learning and Assessment (2008). This was a two-fold study. It reviewed the essay writer's quality of writing, as well as reviewing the rating and grading approach as a holistic process. The results gave credence to that there is no significant difference in the final product, nor could there be found any grading bias. What remained though was the comment "students tended to do more extensive preplanning for the paper-and-pencil essays than for the computer-based essays". (Florida State University, 2008) This comment can give insight to many writing and essay instructors. The planning stage is one of the most important areas for any writer, it is the starting point where plans are made and arrangements for the essay are decided upon. As many students use laptops in the classroom in this day and age, this pre-planning stage of any written essay needs to be given extra consideration, lest this stage be skipped to the detriment of the final draft.

6. The Correlation to Higher Education Pedagogy

Two main focuses of many, in the pedagogy field are the distinct areas of holistic and atomistic approaches in learning. Most teachers aim to have students that understand the connection between how knowledge is gained, and how it can be transformative and adaptable; being exploitable in many ways. Those who

use word processors often fall back upon an atomistic approach, using those built-in tools found in these programs, and can become ingrained in continuously employing this approach. These users though might not ever take the step to move into the deep or holistic approach when writing; not relying on these tools to do the written work, but relying on their learned knowledge and relying on these built-in tools as a type of interactive-tutor, helping to better a process.

Educators need to draw on pedagogical knowledge that can help them understand the difference how “the technology sets the beat and creates the music, while the pedagogy defines the moves.” (Andersson & Dron, 2011) One can then understand that this is a way in which instructors need to comprehend that technology is used as a tool, no more. That any pedagogy employed in this context is a developmental skill that is comprehensive. This ‘art’ that Andersson and Dron refer to then, must be understood in its own context as one, the difference between the art of writing, having knowledge on a deeper level and employing this as compared to surface knowledge, the knowledge a student of knowing what button or key to push to have the machine employ its knowledge of writing.

7. Summation

Technology is, among other items, altering the way in which we work, express ourselves and communicate. As technology is seen by many educators and students to offer new ways of teaching in order to enhance the learning process, it is also seen as raising students’ learning awareness; yet careful pedagogic consideration is required. The aids found in word processors are transforming the user and the knowledge that the user has; the user’s knowledge is now starting to be deconstructed and re-constructed by interaction with programs. However the original knowledge is not necessarily retained as new, easier shortcuts are attained by the user. Shortcuts allow all users of word processors to get away with subverting learned knowledge with that tool, and by doing so the teacher has altered the responsibility of employing knowledge from the topic being taught, in this case writing, to that of using word processor shortcuts and other conveniences in the program. We all use the embedded helpful tools, spelling and grammar checkers. We also avail ourselves of the synonym tool and make use of templates by passing the need to do this work ourselves.

Educators need to be aware of the helpful tools found in word processors and the knowledge building or knowledge “dumping” that can occur. Many students take for granted that these programs are correct, leaving off the need for reviewing and/or working with peers; in doing so teachers will need to address their own pedagogical skills when using word processors in assignments required of students. When writing, teachers must then choose correctly, employing pedagogical knowledge that promotes the learning of, and knowledge that the writing assignment is to help the student learn, rather than a student that knows which button to push. As a teacher, helping your students gain knowledge of the writing process, remember the reflective process of the knowledge they are gaining from the interactive and adaptive word processor. It is reflection of this knowledge that everyone needs to retain.

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4. Skrivande, diskursiv praktik och didaktiska relationer

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Abstract - Vad kännetecknar värdefull kunskap, hur ser en bra pedagogisk design ut, vilket syfte har verksamheten, vem är kommunikátören och vilka kontexter möjliggör produktivt lärande? Genom att utifrån pedagogiska frågeord analysera problematiken kring kunskapsinnehåll och metod antar jag en didaktisk utmaning. Den består i att analysera ansökningstexter och undervisningssituationer utifrån sambandet mellan svar på vad-, hur- och varförfrågor. Jag föreslår én modell för att studera innehållet i myndigheternas texter och en annan modell för att studera text-innehållsliga vad-hur nivåer i förhållande till praktik-kontextrelaterade vem-var nivåer. Genom att beskriva diskursiv praktik kring kunskapsbildning-lärande-förståelse och utbildning-undervisning-fostran når jag nämnda mål.

Nyckelord: syfte, kunskap, metod, diskurs, kontext

1. Introduktion

Grundläggande för skriftliga kommunikationsakter är att parterna söker samband mellan sändarens motiv, avsikt och syfte samt mottagarens tolkning av innehåll, betydelse och mening. Furberg (1982, s. 17) formulerar några frågor kring skrivande och text: Vad betyder det att skriva och vad innebär det att förstå det skrivna?

Genom att studera språklig medvetenhet och den diskursiva praktikens betydelse (Wells 2007) kan man synliggöra högskolelärares professionalitet såsom den framträder i en forskningsansökan. Ambitionen avser skrivande i allmänhet (Furberg 1982; Foucault 1993) och vetenskapligt skrivande (Wolcott 1990; Kamler & Thomson 2004) i en avgränsad högskolepedagogisk kontext, nämligen att (Jons, 2009, s. 7) ”integrera högskolepedagogisk forskning och teori i analysen av egen och andras pedagogiska praktik, samt utveckla den egna undervisningen.” Här handlar det om att utforska villkoren för vetenskapligt skrivande som det kan se ut i en forskningsansökan till Vetenskapsrådet.

Myndigheternas utlysningar, kriterier och instruktioner följer en mall. Sakkunniga expertgrupper beviljar bidrag utifrån forskarnas tidigare verksamhet och förmodade framtida framgång. Experterna utgår från språkliga formuleringar och tolkar innehållet i de sökandes texter. De gör, efter uttolkning av meningen hos texterna, en prognos över sannolikheten att en eventuell satsning ska betala sig i form av en budgetmässigt korrekt, språkligt klanderfri och vetenskapligt relevant rapport. Utöver tillämpning av generella riktlinjer prioriterar myndigheterna ansökningar inom angelägna insatsområden. Rutinerna för granskning och beviljning medför en risk för godtycke, särskilt vid bedömningen av förmodade framtida resultat. Det är ett rimligt krav att myndigheternas direktiv, instruktioner, rubriksättning, mallar och rutiner ska tillfredsställa den sökandes behov av diskursiv praktik.

2. Syfte

Vid fungerande kommunikation förhandlar parterna relationer, skapar öppenhet, synliggör delmålens betydelse i förhållande till övergripande mål, föreslår metoder och bistår med ledning. En fungerande diskursiv praktik (Macdonell 1987) med regelbundna möten, rutiner för förhandling och ett socialt perspektiv på skrivande är en förutsättning för rättvis arbetsfördelning, värdering, bedömning och beslut. Myndigheterna skulle kunna erbjuda informations- och idéstöd, diskutera ansökningstextens utformning, ange innehållskriterier, specificera omfattning, föreslå referenser m.m. Det övergripande syftet med att skriva en ansökan är att bli antagen, få anställning eller erhålla pengar. Underordnade syften är att delta i en kreativ process, lära nytt, sprida kunskap, få personlig utveckling, självkänsla och akademisk erkännande. I den här textens första del analyserar jag förutsättningarna för textbaserad kommunikation mellan myndighet och sökande utifrån innehållet i en forskningsansökan. Sedan studerar jag relationen mellan syfte (varför), avsett innehåll (vad) och vald metod (hur).

3. En ansökan

I en ansökan om forskningsmedel redogör inledningsvis de(n) sökande för historik, övergripande och specifika mål; en områdesöversikt med sammandrag av egen och andras forskning, nyckelreferenser inom området, genomförande och analys. Sedan följer teori, metod, tidplan och medverkandes roll, projektets betydelse för forskningen, samt en förteckning över egna studier och resultat inom området.

Populärvetenskaplig beskrivning

Enligt myndigheterna ska innehållets första del bestå av en ”populärvetenskaplig beskrivning”, textens ”tema” hos Uljens (2012). Här analyserar jag innehållet i en forskningsansökan utifrån Vetenskapsrådets rubriker. Jag använder en skönlitterär modell (Burke 1966), ursprungligen (Cicero) uttryckt som *vem, vad, när, var, varför, på vilket sätt och med vilka medel*. Roth & Lee (2007, s. 198) beskriver svaren på en liknande uppsättning frågor i en översiktlig presentation av verksamhetsteori. Idag kan man finna (skol)frågorna uttryckta som 5 W:s. Orden gör att man redan i den populärvetenskapliga beskrivningen kan besvara frågor om bl a. syfte (varför) precisera problem (vad) samt beskriva beteenden (hur) man undersöker diskursiva praktiker, undervisning eller verksamhetsutveckling.

Innehåller styrdokumentet utvärderingsbara mål, finns det kriterier för varje betygsnivå, finns det mål för lärande, omfattar målen pedagogiska teorier, utgår kurserna från praktiken, och i vilken utsträckning kopplar kursdeltagarna undervisningspraktiken till kursens kunskapsmål och arbetsmetoden?

Ansökningstexten innehåller frågor (Burke, *ibid.*) kopplade till aktören (vem) och instrumentet (hur). Det finns en ömsesidig förståelse för att den miljö (var) där aktörens handlingar sker påverkar projektets genomförande och resultat (vad).

Områdesöversikt

Nästa rubrik i Vetenskapsrådets instruktioner är ”områdesöversikt med sammandrag av egen och andras forskning samt nyckelreferenser inom området”. Uljens (2012) klassificerar sådant innehåll ”bakgrund till problemet och tidigare forskning” och ”projektets betydelse för forskningen inom området”. I en ”allmän bakgrundsformulering” ska den sökande motivera varför sådan forskning är intressant, forsknings- och samhällsrelevant samt av intresse för ämnet. Under rubriken ”egna studier inom området” efterfrågar

myndigheterna de(n) sökandes CV. Områdesöversikten omfattar *vad* man kan använda kunskapen till, *varför* man ska utveckla insikt och kunnande i ämnet, *vem* som har nytta av resultaten samt vilken typ av nytta forskningen bidrar med, exempelvis att man anlägger nya perspektiv på gamla problem.

Ämnesområdesöversikt

Under en snarlik rubrik redogör den sökande för ämnesvalets och metodens bakgrund och miljö, dvs. *var* man genomför projektet. Syftet och verksamhetsområdet står i fokus även om det finns flera syften. Uljens (2012) formulering avser ”tidigare forskning och bakgrund till problemet.” Det måste finnas flera referenser som beskriver den beforskade kontexten ur ett övergripande perspektiv.

Grunden för högskolepedagogiska kurser vid svenska lärosäten är en skrivning där utredarna i Lärarundersökningen (Högskoleverket 2003) argumenterar för kompetenshöjande åtgärder, interna kurser, behörighetskrav och skickliga lektorer/adjunkter (SFS 1993:100). Högskolepedagogikens karaktär består i en olycklig tudelning där man hävdar att lärare måste ha utbildningen, men även att de ”av särskilda skäl” kan avstå från att delta i poänggivande kurser.

Myndigheternas rubriker borde enligt Bärmark (1984, s. 16) omfatta ”Forskningens produktivitet, effektivitet, ekonomi, forskning, och utveckling.” I nästa exempel visar den sökande att fältet är beforskat samt påpekar brister, luckor och oklarheter i kunskapsbildningen.

Bakom benämningen ”högskolepedagogik” döljer sig specifik ämnesteori, lokalt utvecklad pedagogisk praktik och en generell pedagogisk teoribildning. I praktiken dominerar den senare, i form av utvecklings- och kognitionspsykologi (Kolb 1984) med nyckelreferenser som Elmgren och Henriksson (2010), Pettersen (2008) samt Ramsden (1992). En rapport från ett lokalt högskolenätverk (Lärlärdom, 2010) vittnar om ett liknande förhållande. Hansén och Forsman (2011) kompletterar nämnda referenser.

För ämnesområdesöversikten gäller avslutade handlingar i förfluten tid med ett bestämt syfte (varför). Historisk analys, bakgrund, introduktion – det finns många namn på relevanta och angelägna miljöbeskrivningar. Syfte och kontext (var) beskriver de utforskade situationernas, händelsernas, förloppens karaktär utifrån ett orsak-verkanperspektiv; dvs. gör så här, med detta mål för att nå avsett resultat.

Problem, syfte och mål

En vetenskaplig problembeskrivning ska leda fram till ett forskningsbart syfte och ett antal forskningsfrågor. Den sökande ska formulera problemet så att texten besvarar frågor eller uppställer hypoteser över vad man kan förvänta sig utifrån tidigare forskning. Uljens (2012) benämner myndigheternas ”övergripande och specifika mål” ”precisa frågor”. Bägge uttrycken avser en syftesbeskrivning i förhållande till ett relevant problem. Skillnaderna mellan begrepp som motiv, avsikt, syfte och mål är akademisk. Man kan argumentera för att *motiv* beskriver en individuell sfär, *avsikt* hör till behovstillfredsställelse, *syfte* är kopplat till forskning och att *mål* beskriver en situationsbunden sfär. Se ett utdrag ur ansökningstexten.

Till de relevanta forskningsfrågorna hör att (a) studera vilken *ämneskunskap* lärare utvecklar inom ramen för högskolepedagogiska kurser; (b) vilka är de nödvändiga *situationsfaktorerna* som medverkar till specifikt lärande; (c) hur synliggör man denna *praxiskunskap* i lärares undervisning?

Ett giltigt mål för projekt som avser studier och utveckling av högskolepedagogik är att testa metoder för att förstå hur andra tänker, dvs. att undersöka lärares didaktiska relation till hur studenter uppfattar förutbestämda kursmål och framväxande studie-, lärande- och kunskapsobjekt.

Metod (för att samla data)

Textinnehåll som myndigheterna benämner ”beskrivning av uppläggningsen, dvs. teori, metod, tidplan och medverkandes roll” kallar Uljens (2012) ”insamling av material”, ”population” och ”tidsplan för arbetet”. De(n) sökande formulerar en text kring vilken typ av kvantitativa och/eller kvalitativa data de avser att samla in för att besvara syfte och forskningsfrågor. Härur framgår den sökandes avgränsningar, en validitetsdiskussion och ett resonemang kring olika typer av empiri. Det är viktigt att myndigheten kan skapa sig en bild över urval, metod och materialinsamling. Först en övergripande text om en vetenskapligt motiverad projektmetod.

Ett sätt att utveckla högskolepedagogisk verksamhet är att bilda ett nätverk bestående av utbildningsanordnare med komplementära kompetenser. Med hjälp av förändring kan man undersöka gamla samt omforma och utvärdera effekten av nya ämnesområdesdidaktiska ”undervisningsmanus”. Man kan ange regler, normer och rättesnören för hur man optimerar kursernas utformning så att deltagarna förbättrar förmågan att undervisa i respektive ämnen/ämnesområden.

Sedan följer en beskrivande text kring ett allmänt hållet tema över *hur* man gör under rubriken *Metod*.

Vi kartlägger de högskolepedagogiska kursernas utvecklingspotential, ger förslag på åtgärder för att anpassa kunskapsinnehållet till arbetsmetoderna och studera lärarnas förståelse av kopplingen mellan kunskapsinnehåll och undervisningsmetod.

Exemplen visar att aktörer och handlingar, undersökningens kontext och metodens ”instrumentalism” ligger i linje med det föreslagna forskningsprojektets syfte.

Metod (för att analysera data)

Den sökande bör ange analysmetoden för det insamlade materialet. Hur ska man gå till väga för att få svar på forskningsfrågorna, analysera den insamlade empirin för att besvara frågeställningarna, tolka observationer, intervjuer och dokument? Följande ansöknings-text beskriver forskarens analysmetod.

Vi tar fasta på *ex post facto*-metodens (Cohen, Manion & Morrison, 2011, s. 303-311) förmåga att utifrån en ofta småskalig förändringsambition i etablerade praktiker möjliggöra vetenskapliga studier av orsakerna till och resultatet av en viss intervention.

Den sökandes kompetens att genomföra ett viktigt moment i ett forskningsprojekt framträder ur sambandet mellan problemformulering, syfte, metod för datainsamling och metod för att analysera data.

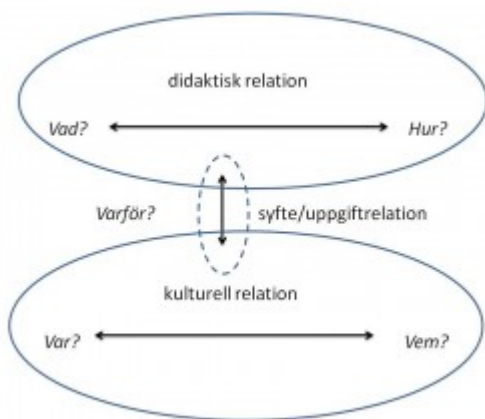
4. Liten sammanfattning

Projektets samlade vetenskaplighet ligger enligt ansökningsmallens rubriker under rubriken *Ämnesområdesöversikt*. Syftesbeskrivningar förekommer under *Populärvetenskaplig beskrivning*. Det sökta kunskapsinnehållet framgår av *Problem syfte och mål*. Beskrivningar av den sökandes redskap och handlingar finns under *Metod att samla data*, medan exempel på vetenskaplig meta-reflektion finns under *Metod att analysera data*.

Ansökningstextens mottagande, tolkning och bedömning omfattar den sökandes kompetens och personlighet. Situationen, lärosätets status och problemets aktualitet påverkar också bedömningen av projektets kvalitet (bredd, djup, relevans, validitet). Här bildar först skrivprocessen, sedan ansökningstexten och slutligen tolkningen underlag *och* kriterium för beslut. Vid ansökningstillfället anlägger den sökande ett diskursivt perspektiv på myndigheternas textbaserade information för att på så sätt optimera resultatet. Men myndighetstextens rubriker uttrycker ett *monlogiskt* vad-perspektiv och ger ett fåtal instruktioner om konkreta steg för planering, genomförande och utvärdering. Alternativet är ett *diskursivt* hur-perspektiv med operationaliserbara rubriker som problem, historisk analys, nulägesbeskrivning, instrument, genomförande, analys och rapportering.

5. Komplementär modell

En för den här studiens syfte och det empiriska materialets egenskaper anpassad modell inkluderar analytiska redskap i form av frågeorden (Burke 1966); vad, hur, varför, vem, var? Figur 1 kopplar resultatet av skriftlig kommunikation till en analys av hur lärare kombinerar ett visst kunskapsyfte med en specifik undervisningsmetod.



Figur 1. Syfte, kunskap och metod

Figur 1 innehåller tre relationer och fem frågeord. Dessa bildar en avrundad helhet genom att varför-syftets uppgiftsrelation förbinder didaktiska och kulturella nivåer. Modellen särskiljer én nivå för kunskapsbildning (människa-metod-kunskap-människa) och en parallell nivå för situerade kommunikativa praktiker (människa-objekt). Varför-relationen mellan nivåerna aktualiserar parternas behov av medveten och målinriktad kollektiv verksamhet. En för den här studiens syften viktig aspekt omfattar den didaktiska relationen mellan vad och hur. Den tredje relationen beskriver ett kontextuellt samspel mellan vem och var.

5.1 Kunskapsbildning, lärande och förståelse i ett vetenskapligt projekt

Ett diskursivt vad-perspektiv på inhämtning, delning och spridning av kunskap omfattar s.k. taxonomier (Biggs & Collins 1982; Bloom 1956), intelligenstag (Thurstone 1927) och pragmatiska nivåer (Jarlén 1993) för t ex. bekantskap, förståelse, tillämpning, analys, syntes samt utvärdering. Jag använder Perkins et al. (1994) indelning eftersom författarens kunskapsnivåer stämmer väl med Kolbs (1984) teoretiska vad-dimensioner; dels för abstrakt begreppsbyggnad och reflekterande observation men också för praktiska hur-

dimensioner för aktivt experimenterande och konkret erfarenhet. Tabell 1 visar kopplingen mellan frågeord, vetenskapliggörande redskap och kunskapsformer. Tabellen inkluderar beskrivningar som fokuserar på vad-innehåll (Agency) (ovanför den streckade linjen) och hur-handlingar (Act).

Tabell 1. *Frågeord, rubriker och kunskapsmål*

Burke (1966)	Vetenskapsrådet (2012)	Perkins et al., (1994)
Agency (vad?)	Kunskapsobjekt	<i>Strävan att förstå</i>
Act (hur?)	Metod (bedriva forskn.)	Strategi och planering
Act (hur?)	Metod (genomf. proj.)	Meta-kognition
Purpose (varför?)	Problem, syfte, mål	Orsaksförklaring (rationell)
Agent (vem?)	Sökande och projektdelt.	Nyfikenhet och försiktighet
Scene (var?)	Områdesöversikt	Risktagande, äventyr

Tabell 1 visar att myndigheten undviker att efterfråga information som beskriver samband mellan de lika obligatoriska som besvärliga vad- och hur-frågorna som dyker upp när man genomför projekt eller undervisar. Mest allvarligt är att parterna missar möjligheten till ”strävan att förstå” kunskapsobjektet (kursiv).

5.2 Utbildning, undervisning och fostran i skolan

Nästa tabell visar hur *högskolelärare* undervisar så att *studenter* lär, dvs. lärarens undervisningskompetens och studenternas lärande i förhållande till Perkins et al. (1994) kunskapsnivåer. Tabell 2 visar positiva samband mellan undervisning och lärande i ett högskolepedagogiskt projekt. Liksom i Tabell 1 återfinns man vad-innehåll (Agency) ovanför den streckade linjen och hur-handlingar (Act) under densamma.

Tabell 2. *Didaktik och kunskapsmål*

Undervisning	Kunskap
Debattera och argumentera	<i>Strävan att förstå</i>
<i>Föreläsning</i>	<i>Strategi och planering</i>
Grupparbete	Orsaksförklaring (rationell)
Uppsatsskrivning	Meta-kognition
Självstudier/övningsuppgifter	Försiktighet/Nyfikenhet
Muntlig redovisning	Risktagande, äventyr

Det råder parallellism mellan lärarens val av hur-undervisning och studenternas förväntade vad-kunskap, särskilt när det gäller att debattera, grupparbete och uppsatsskrivning, men även studenternas hur beteende vid självstudier och muntlig redovisning. Undantaget är föreläsningar för att utveckla ”strategisk planering”. Se som kontrast Friesens (2011) åsikt om föreläsningens ställning som överlägsen metod för kunskapsförmedling. Resultatet av föreläsningar torde vara memoreringskunskap snarare än handlingsberedskap.

6. Sammanfattning

Parternas hantering av ansökningstextens rubriker visar att de(n) sökande har begränsad möjlighet att ingå i en diskursiv praktik med myndigheterna. Den sökande tolkar först myndigheternas rubriker och instruktioner, sätter sedan innehållet i förhållande till syftet för att slutligen beskriva en framtida praktik. Parterna tolkar var för sig rubrikernas bakomliggande logik, avsikt och poäng. Idealet vore att de kunde upprätthålla en inre monolog med sig själva och föra ett yttre samtal med varandra för att på så sätt bidra till en utvecklande diskursiv praktik. Myndighetens svar på kunskapsinnehåll (vad) och metod (hur) faller utanför ansökningstexternas rubriker, tvärt emot den vetenskapliga praktikens krav. En klar, precis och saklig diskursiv praktik (Hadwin & Oshige 2011) skulle möjliggöra klargöranden kring hanteringen av eftersträvd kunskap och praktiserad metod.

Vad- och hurproblematiken grinar parterna i ansiktet oavsett om verksamheten avser att forma en diskursiv praktik kring ansökningsrutiner (sökande-myndighet) eller att planera, genomföra och utvärdera lektioner (lärare-student). Praktiken med att skriva ansökningar och utforma lektioner visar hur viktigt det är att formulärets rubriker respektive lärarens undervisning operationaliserar sambandet mellan eftersträvd vad-kunskap och hur-metod.

Engels (1969, s. 82) behandlar den här typen av luckor i etablerade praktiker för kunskapsbildning vid återgivningen av Marx' kommentarer till Feuerbachs åttonde tes. Den innehåller en specificering av skillnaden mellan och konsekvenserna av betraktande objektifiering/reflekterande observation (vad) och handlingsinriktad praktik/aktivt experimenterande (hur). ”Det samhällsliga livet är till sitt väsen *praktiskt*. Alla mysterier, som förleder teorin till mysticismen, får sin rationella lösning i den mänskliga praktiken och i förståendet av denna praktik.” Diskursiva rutiner för att specificera eftersträvd kunskap och vald metod ger en fungerande verksamhet.

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5. Students experiences of PBL in the nursing program at Blekinge Institute of Technology (BTH). A Cross-Sectional Descriptive Study

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Abstract – This paper investigates issues related to the teaching method Problem- Based Learning at the School of Health Science at Blekinge Institute of Technology. The School of Health Science (HAL) at Blekinge Institute of Technology (BTH) has been using PBL for approximately ten years. In many respects, it has been challenging for teachers to adapt to the new learning perspectives. For the most part, PBL has been perceived as more fun and stimulating by both students and teachers than traditional learning methods, particularly *in theory*. However, since it is not a strict and clear teaching method, it has *in practice* also been criticized, particularly as it has a tendency to create stress for the parties involved – i.e. teachers and students – and because of the difficulty to achieve the learning objectives. Given the discrepancy between theory and practice, as well as the fact that PBL is still a fairly new pedagogical and didactical concept, there is a need for deeper understanding of the method and its potential. The aim of this study was to describe and compare students' experiences of PBL at the nursing program at BTH. Furthermore the aim was to explore if whether, there is a glitch between PBL practice and PBL policy at HAL. A descriptive and analytical quantitative method were both used. A total of 44 persons aged 19-39 years, who participated in the nursing program at The School of Health Science at Blekinge Institute of Technology, were included in the study.

Keywords - *Problem-based learning, nursing, education*

1. Introduction

Active learning methods with problem-base learning (PBL) as an example of these have become increasingly popular in the academy world and it has been incorporated particularly into many clinical nursing programs and courses the last years (Clark, 2007). The method has been established as an independent didactic concept in higher education since 2005 (Pettersen, 2005). In Sweden PBL was introduced for the first time in 1986 at Linköping University, in the medical education and the number of PBL courses continue to increase (Edgren, 2011). PBL has been perceived as more fun and stimulating for both students and teachers (Albanese and Mitchell, 1993; Norman and Schmidt, 1992) engaging students into deep learning as the students themselves must actively seek knowledge (Vernon and Blake, 1993). However, since PBL is not a strict and clear teaching method, it has been criticized because it may create stress for the involved parties, teachers and students, because of the difficulty to achieve the learning objectives. It requires a lot of the teachers' time since the groups are small compared to the traditional teaching (Berkson, 1993). Adding to this is the circumstance that PBL relatively new in health care education while it has been used for many years in medicine, business and science education (Clark, Nguyen, Bray & Levine, 2008). Alessio (2004) showed that students perceived traditional teacher-centered learning more favourably than student-centered PBL. On the other hand other studies showed

that this type of learning is realistic, fun and interesting for the students in nursing programs/courses. And the students' engagement is often high and their knowledge tends to increase (Haidet et al 2002; Cooke & Moyle, 2002; Levine et al, 2004). The School of Health Science at Blekinge Institute of Technology has been using PBL for approximately ten years and this has meant a challenge for the teachers as new learning perspectives are involved. The teachers needed to develop the pedagogy making it clinically and theoretically savvy, for it to correspond to the conditions required for students. In 2009 a policy document was created as a tool for the teachers. The School of Health Science has also consulted a PBL pedagogue from another university, to guide the teachers and to implement this particular pedagogical method. With all respect the transition process has brought a degree of uncertainty and insecurity with regard to teaching the role with regard to the role or function of teaching. Therefore it is important to investigate the students' evaluation and experiences of PBL at the School of Health Science.

2. Background

In Sweden, PBL has been used since the 80's (Silén, 2004). Problem-based learning (PBL) is a student-centered pedagogy in which students learn about a subject in complex, multifaceted, and realistic context. The goals of PBL are to help the students develop flexible knowledge, effective problem-solving skills, self-directed learning, effective collaboration skills and essential motivation (Hmelo-Silver, 2004). Working in groups, students identify what they already know, what they need to know, and how and where to access new information that may lead to resolution of the problem. The role of the teacher (known as the tutor in PBL) is that of facilitator of learning providing appropriate scaffolding and support of the process, modeling of the process, and monitoring the learning (Schmidt, Rotgans, & Yew, 2011). Barret (2010) points out that the tutor/base-group supervisor has the responsibility to build the students confidence to handle problems encourage the students, while also stretching their understanding (ibid). The use of problem-based learning in health science education has grown in the past years (Michaelsen & Richards, 2005).

2.1 The Nursing Program at Blekinge Institute of Technology

The Nursing Program at Blekinge Institute of Technology (BTH) offers the scientific knowledge on which general healthcare is based. The program also provides knowledge of the anatomy, physiological functions, development and behavior of healthy and unwell people. The program demonstrates the link between a person's state of health and the physical, mental, social and cultural environment, and also provides knowledge about the values and ethics in the profession and the general principles for care and welfare. The students will have the opportunity to practice, integrating and implementing new research results and learning to reflect on their own personal approach in relation to research and development (BTH, 2012). Person-centered care is characterized by the patient being seen, understood and treated based on individual needs, values and expectations. The nurse and his/her team should be able to deal with the patient and relatives using evidence-based knowledge, empathy and an ethical approach (McCormack, 2004).

There are 75 nursing students every term and the education leads up to a first-cycle qualification of a Nurse degree. The education also leads up to Bachelor of Science in Nursing. The teachers at HAL department strive to develop teaching methods that correspond to the requirements for students to have clinical and theoretical knowledge. Written policies and the educational models are the basis for HAL; this educational basic view permeates all teaching, with the policy flowing into goals that are clearly rooted in our educational ethos. The policy document highlights that there are no set educational truths or answers, and that education is largely about influence. It is therefore essential that the educators/teachers

have thought out the educational/pedagogical policy. This educational policy also gives a sense of security in the teaching profession and clarity in the relation to the students, at the same time the students know what they can demand of the teachers at the School of Health Science (pedagogic policy document, HAL, 2011).

2.2 Problem-based learning the at School of Health Science (HAL)

The Nursing program at the School of Health Science has used PBL as a teaching model, method and ideology for ten years, the method, providing opportunities to develop problem-solving ability in groups (PBL policy at HAL, 2010). PBL improves the work as a nurse to quickly enter and act professionally. The students are assigned to a base group each term and a teacher/lecture acts as a tutor. The students are expected actively participate in group meetings, participate in discussion and thus be responsible for their own learning. Besides group meetings the students have lectures, seminars, workshops, training methodology etc. (BTH, 2012). In connection with each term the nursing students have the opportunity to answer an anonymous questionnaire about their views and experiences on PBL at HAL. The questionnaire revealed that the students had different opinions regarding support from their base-group tutors; some of them felt that they receive sufficient support and others expressed that they did not receive sufficient support. It was also found that some of the students felt that the tutors had knowledge of the subjects, while others did not. In regard to the question of how close the PBL conform to an ideal form/method of teaching, the answers from the students varied greatly, from “no opinion at all” to “to the full”. The nursing students have also the opportunity to meet the teachers twice per term in meetings called “basrådsmöten”, in this meeting that the nursing students wanted the teachers were more consistent and work towards the same goals in their teaching. This is the reason why the School of Health Science today has a PBL pedagogue from another university, with the role to guide and support the teachers, to try to achieve a common understanding of PBL and develop PBL as a teaching method and ideology at the School of Health Science.

With all respect, it seems that the teachers have different opinions on how the teaching should be planned and implemented the students at HAL sometimes feel that they do not get the same information and the guidance in the problem-based groups. It has also emerged from the students that the teachers even have different views of what PBL is and how the method/ideology should be used. It is important for both the teachers and the students at The School of Health Science to feel safe and secure in the implementation of PBL in the nursing program.

2.3 Students' experiences of PBL

Problem-based learning has been verified to be effective and successful in health science education and the students showed a high level of engagement and motivation, (Seidel & Richards, 2001; Dunaway, 2005). Cooke and Moyle (2002) showed that the students felt that their learning had actually improved and that PBL is fun, stimulating, interesting and motivating. It appeared in the study that the students hoped that PBL could be introduced much earlier (ibid). In contrast, Alessio (2004) showed that the students perceived traditional teacher-centered learning more favorably than PBL, and recommended research about different ways in which PBL can be introduced and gradually implemented into health sciences programs. The latest research, Nilsson, Fredholm and Silen (2010) indicate that PBL students focused on a more intellectual dimension of nursing and clearly related nursing to a professional role and the PBL students increased their own learning development. Further research is needed to understand how PBL affects the students

understanding of nursing (ibid). The aim of this paper was to describe and compare students' experiences of PBL at the nursing program at BTH. Furthermore the aim was to explore if there is a glitch between PBL practice and PBL policy at HAL.

3. Method

3.1 Sample & setting

The sample for this study included nursing programs students (n = 44). The inclusion criteria for the sample were students studying at term two, four and six at the School of Health Science in south of Sweden, Karlskrona. The participants were randomly selected from the students list from the students' administrator who works at the School of Health Science. After that the students were invited to participate in the study through group tutors. The recruitment took place over eight weeks during the spring of 2012. The School of Health Science, located in Karlskrona, south-east Sweden, has around 75 students every term.

3.2 Data collection and data analysis

The data collection was conducted in mars 2012. The students were informed about the study by their group tutor and were asked to fill out a questionnaire covering first variables such as age, gender, term and a question about how many hours a week they devoted to their studies counting education/classes and tutorials. The second phase in the questionnaire consisted of seven questions about their experiences of PBL. Descriptive statistics describe the findings in a concise and understandable way, using tables, graphs and numerical measures. Statistical tests are used to compare and analyze data using different test methods (Ejlertsson, 2003). Descriptive statistics were used to report response rates to the various issues regarding the students experiences of PBL included in the questionnaire. According to Ejlertsson (2009) Spearman's rs correlation coefficient describes if the variables depend on each other, based on ranks for variable values instead of the exact values and it does not require linearity. The correlation coefficient always lies between - 1 and 1. The null hypothesis is that the correlation is zero, i.e. no connection/correlation (ibid). In this study Spearman's r correlation was used to examine the relationship between the students' age and the students' attitude towards PBL, and it was also used to examine the relationship between question 1 ("I think that PBL is a good pedagogic model in the nursing program") and question 5 ("I think I get enough help from the group tutors to study independently"), 6 ("I think I get enough support of the group tutors at the practical moments in the nursing program") and 7 ("I knew what PBL was when I applied to the nursing program"). The Spearman's correlation was also used to examine the relationship between the number of hours per week devoted to studies, education/tutorial and question 5 and question 6. All data were processed and analyzed using SPSS for Windows statistical software version 20 (SPSS Inc. 2012).

3.3 Ethics

This project was conducted in compliance with the established ethical guidelines of the Declaration of Helsinki. Although under the Swedish Ethical Review Act (SFS 2003:460) this project does not require ethical clearance, we nevertheless sought and received ethical guidance and advisory opinions from the Ethical Advisory Board in south-east Sweden. All participants received information about the project and were informed of their right to withdraw at any time. To ensure compliance with the Data Protection Act (Swedish Personal Data Protection Act 1998:204), data was stored securely and anonymised and only the project team had access to the data.

4. Results

4.1 Students' experiences of PBL

The results in this study are based on a comparison between students' experiences and what the PBL policy document says. A total of 44 students from term 2, 4 and 6 participated in the study. The majority of the sample were women (64%), the mean age was 24 years and age distribution was similar in all terms. The number of hours that the students spent on education and tutorials per week did not differ significantly between the terms (2, 4 and 6), the mean was 23.73 hours and the range between 7-48 hours. The results show that the students experienced PBL as a good pedagogical method in the nursing program despite a major part of the students (n = 29) 65.9% did not know what PBL was before they started the nursing program at BTH. Further the result shows that many of the students experienced that the introduction to PBL was not sufficient and 43.2% (n=19) reported that they would like to have several PBL introductions during the education. Experience of satisfying help from tutors turned out to be something that most of the students agreed about and in the sample 31.8% (n = 14) of the respondents were reported to be totally satisfied with the help. When it comes to the support in the practical moments the students were just quite satisfied with the help from the teachers.

4.2 PBL practice and policy at HAL

The pedagogical policy document for School of Health Science (2011) says that all students have equal value, and equality between men and women must be respected and promoted. This means that the learning do not prevent anybody, regardless of gender, ethnicity, religion or other belief, sexual orientation or disability, from participating in the nursing program. The pedagogical policy document (2011) at HAL does not report any specific hours of scheduled time of learning in the nursing program. It says that learning should be based on students' needs, but the basic principle in the theoretical sections of the program should at least be three days a week scheduled with various forms of educational activities, such as base group discussions, lectures and practical training. The PBL policy document (2010) highlights that by using PBL in a training program and integrating the different topics with each other, the encouragement and training of the holistic knowledge vision will increase. In practice this can sometimes be difficult for the students. The PBL policy document (2010) says that PBL is introduced at the beginning of the first term and this introduction has been further developed since 2011, as the earlier introductions not perceived as sufficient by either students or teachers. The result shows that in practice the students would like to have the introduction several times. The PBL policy document (2010) says that the skills training prepares students in practical training for clinical training and for future professional function. Platform trainings must be as authentic as possible. Trainings skill can take place with or without the supervisor. Instructional videos, computer software, docks and other facilities are used to reach educational goals. At HAL dummies are used in skills training, the use of dummies reduces the risk of infection, injuries and complications. It seems that there is no glitch between the PBL policy document and practice when it comes to this. Several times the PBL policy document (2010) points out several times the base-group tutors' role in PBL teaching. According to the policy document, each student must know exactly what is expected of him/her for the method to be as efficient as possible. The group tutors must be familiar with PBL and with their role which is to support and guide the students in the group. And also to motivate the students' own learning and build on from the students need. The group tutors are also important for the students' opportunities to further development. A prerequisite for a good learning climate is that there is an interaction between the group

tutors and the group. In this study it appears that half of the students (n = 19) experienced that they received enough help and support from the base-group supervisors, but 14 of them experienced that they were not getting the help they needed.

4.3 Students' experiences of PBL and PBL practice and policy at HAL

Statistical significant correlation exists between question 1 and question 5 (p= 0.04) but there is no statistical significant correlation between question 1 and question 6 and 7 (Table 10). This means that there is no relationship between students' opinion if PBL as to whether PBL is a good pedagogic model and the students' knowledge about PBL that the students had when they started the nursing program and the support from the tutors. However, there is some connection between the experience of finding PBL to be a good pedagogic model in the nursing program and feeling that they get enough help from the group tutors to study independently (Table 1).

Table 1. Corellation between PLB and students' experiences

PBL as a pedagogic model	Question 5 Spermans rho, r_s	Question 6 Spermans rho, r_s	Question 7 Spermans rho, r_s
Question 1 (I think that PBL is a good pedagogic model in the nursing program)	$r_s = 1.000$ (p= 0.04)	NS	NS

Question 5= I think I get enough help from the group tutors to study independently

Question 6= I think I get enough support of the group tutors at the practical moments in the nursing program

Question 7= I knew what PBL was when I started the nursing program

NS = Non significant

5. Conclusions

To the best of our knowledge, this study gives a small description of students' experiences and the glitch between practice and policy of PBL in the nursing program at HAL. The PBL policy says that with PBL as a learning method the students learn to take responsibility for their own knowledge and it increases their opportunities for learning and ability to seek knowledge as professionals. This is supported by Nardi and Kremer (2003) who found in nursing classes that most of the students reported comfort when attempting to solve ambiguous problems in healthcare. According to Neville (2009) PBL also has a positive impact on social and cognitive domains. By working in small groups, students get better communication and interpersonal skills. The students devote on average 23 hours per week to studies and education. This is

surprisingly low considering that the nursing program at HAL is a full time education (40 hours per week). Since 2011 the introduction to PBL, in term one, has been changed and a PBL coach has also been tied to HAL to help the teachers to develop PBL in the nursing program. Despite this many of the students did not find the introduction to PBL satisfying. In addition the results show that many of the students want to have repeated introductions to PBL during the education. Cooke and Moyle (2002) show that many of the students felt that their learning had been greatly enhanced by using PBL, so much that they hoped that PBL could be introduced much earlier and several times in the education (ibid). The results point out that many of the students agree in moderate to the questions on whether they get enough help from group tutors both in practical and theoretical needs. The PBL document lifts this and states the interaction between students and tutors as very important. Also Nilsson Fredholm and Silén (2010) report group interaction as essential for discovering how the group members, students and tutors, contribute in different ways to the learning process and for learning how different perspectives can improve and increase the individual students knowledge (ibid). The result indicates a possible glitch between the policy document and practice. It seems to be important to find a balance between what the students can understand on their own and what can be accomplished with a good tutorial. If the tutorial is adapted to the students' needs, the students' academic performance can be "proximal".

This study represents a glimpse of the students' experience of PBL in the nursing program at the School of Health Science appears. Our study results support PBL as a useful instructional pedagogic for teaching in the nursing program. It also gives team building and communication skills to solve complex clinical and theoretical problems as a professional. However in our opinion the PBL policy document needs to be more detailed to be able to optimize the support to teachers at HAL. Further research is also needed to explore the effects of problem-based learning in the nursing program for preparing the nursing students to work in a complex multi-team environment.

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6. Attitudes, obstacles and promoters to research among medical doctors: A pilot study

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Abstract - The number of researchers among medical doctors has declined. How to recruit researchers has become a problem internationally. It is an obvious risk that a strained financial situation will result in fewer resources to education and research. There is a lack of understanding of how to break this negative trend. Knowledge about what is promoting and what is hindering students to clinical research and education is lacking. This pilot study investigates issues related to research among one group of younger medical doctors taking a university course in research methodology and another group taking a professional development course in basic scientific education.

The aim of this study was to analyze factors that either promotes or constitutes an obstacle in medical doctors' choice between two levels of education. The first level was a shorter course in basic scientific education, (FoUST), resulting in a certificate. The alternative given was a course in research methodology, (FoU), resulting in 30 credits at Lund University. This study will focus on attitudes towards research and results will be implemented in future courses, in an attempt to make them more relevant for both students and clinicians, regarding content and pedagogy.

Method: An established questionnaire, formerly used to study attitudes among medical students at Karolinska Institutet, was used. The questionnaire was expanded with questions concerning attitudes to local research. Participants in this survey were gathered from the Centre of Competence, Blekinge Hospital in Karlskrona (N=18). All doctors attending the courses given during autumn 2011 were included.

Result: The median age of the population was 33 years. The majority, 4/6 (67%), in the FoUST-group expressed that research should be conducted at Blekinge Hospital. The majority in the FoUST- group, 5/7 (71%), also thought that their working conditions will admit research. A quarter, 2/7 (24%), thought that research involvement could be needed in the future in order to keep intellectual stimulation. In the FoU-group, 11/11 (100%), expressed that research should be conducted at Blekinge Hospital, but only a quarter 3/11 (27%) thought that the working conditions gave opportunities to combine ordinary work with research. Research, as intellectual stimulation, was reported as important by the majority 8/11 (70%).

Conclusion: The attitude to local research at the Blekinge Hospital is positive among students. The groups differ according to whether research is needed to get intellectual stimulation. A course, which to a higher extent integrates research and clinical work, is needed. Future research needs to highlight alternative ways where education and clinical work will become more integrated. A deeper analysis, of differences in working conditions and estimated possibilities to conduct research, is needed among medical doctors at the Blekinge Hospital, Karlskrona, Sweden.

Keywords – attitudes, scientific education, research, medical doctors

1. Introduction

Internationally, the number of researchers among medical doctors has declined (1). In Canada, economical rewarding systems have been introduced and in the United States of America proposals to facilitate for young researchers have been forwarded (2, 3). Australia has tried to recruit young students to postgraduate education, as with research combined with working as trainee to get clinical skills (4). Researchers have shown a lack of understanding among students for the necessity to integrate new findings into the clinical work (5, 6, 7, 8, 9, 10). A lack of awareness of what kind of research activity teachers and mentors are involved in has also been demonstrated (5, 6, 9).

Evidence-based medicine (EBM) and proven experience should be the guiding principle in doctors' lifelong learning (11). The Bologna process has meant that formal scientific elements have been increased in both the theoretical and the practical everyday life (7). As a result of this, The Swedish National Board of Health and Welfare, (SoS), have issued new regulations and guidelines on doctors' specialist training (12). This is a framework system in which the local health authority then has the task to design the education. This means that there are differences, already, between how our medical faculties design their curricula. With a strained financial situation, there is a risk of shrinking resources assigned to the theoretical scientific basis of training and scientific work under supervision. The Swedish Society for Surgery has acted to formulate goals for the specialist service (13).

In 1989, extended training in research, for general practitioners, was introduced in the southern healthcare region of Sweden (14). This FoU course has a long tradition and has been offered for more than 20 years in Blekinge county council and is a preparation course for researchers (FoU) awarding 30 credits. For most of the students the value is a greater understanding for research but for some it is the beginning of the education to become a researcher. The course is tailored according to the Bologna process. The courses have been evaluated and are nowadays offered to several categories of staff in the health care organization, and are expected to do some good for the clinics (15). The course is offered in several locations in the southern healthcare region, of which Blekinge Hospital is one. Locally, there are course managements dealing with the administration of the course while examination responsibility rests with the Department of Community Medicine, Lund University.

The new regulations and general advice regarding medical specialist training, from SoS, means that training physicians must be able to verify scientific skills to apply for accreditation as a specialist (12). In the Blekinge county council, a short course has been established (FoUST). This course met the requirement that all ST doctors should have a scientific method course, a 20 days course in basic scientific skills no credits. The FoUST, given at BLS, has been arranged by the principal agency and is now executed for the second time at the Centre of Competence at Blekinge hospital. The basic training in the scientific approach is the main reason for giving the course but the recruitment of future scientists must also be considered. County councils have, by law, a responsibility, not only for the clinical work but also for clinical research

(16). This is the framework within which the health care provider has the task to put it into practical use by creating curriculum for the specialist training. The FoUST course has been developed for those who, at least initially, do not have any real interest in research, but attend the course as an obligatory part of their medical education.

These two courses are not coordinated and there are no possibilities to change from one to the other. The FoUST course cannot be credited as part of the FoU course. The scientific advisory board at Blekinge county council has noted this and given the responsible course directors the task to investigate the possibilities to coordinate and if possible integrate the two courses. The task implies looking through the curriculum, the objectives of the course and the pedagogic strategy for the FoU course. The aim is to certify that the course meets the requirements set up by academia as a foundation for continued research studies as well as the demands from the health care provider, i.e. the formal requirements to pass the ST education. As Anderberg and Forsell showed in their examination paper in the basic pedagogy course 2011, the FoU course needs to be thoroughly revised and modernized (17). It is equally important that the course is recognized as relevant for the students as part of their professional development (18, 19, 20). The context in which this work is being processed will be a university education which supports the development of competence of professionals in their life-long education and learning (21, 22).

The question of how universities and university education can support the societal and individual need for lifelong learning and continuous education in medicine is becoming increasingly important (26, 27, 28). An important subject is the need for formal or informal revalidation of professional knowledge in the ever changing research front of medicine and corresponding need for the physician to incorporate new research results into clinical practice (29). In the case of medical education there is a “shift towards lifelong learning which emphasizes the need for physicians in practice to be comfortable with continuing education long after they pass their certification exams as well as with corresponding assessments of knowledge, skills, and attitudes throughout their careers” (27). The incentive to change the education in this direction is of much concern and debate and a lot of research is undertaken but with relatively few solutions to how it should be done (27).

In order to reverse the negative trend of fewer and fewer doctors researching, there is an obvious need of knowledge both about the motives that attract doctors to graduate, and about what prevents them from doing this. The scientific approach is an undeniable element of the whole also for clinicians. Skills in EBM, as well as how these skills should be applied in the everyday clinical use, are key factors in helping students developing their scientific and clinical expertise (23, 24).

The aims of the present study were to investigate factors assumed to influence the choice between a career as researcher or clinician among medical doctors. The study analyzes the motives of doctors for selecting the short course (FoUST), that leads to a certificate of academic skills, or for choosing the longer, 30 credits, research methodology course (FoU). The study will focus on attitudes to research and to put this into the context of lifelong learning.

2. Method

2.1 Sample

Information on attitudes was obtained by using the questionnaire that formerly has been used in a Swedish study of medical students and resident physicians associated with Karolinska Institutet, Sweden (25). This questionnaire, supplemented with questions concerning attitudes to research locally, (Appendix 1), has

been used to study the attitudes of the physicians and trainee physicians, who are now attending the 30 credit course in research methodology (FoU), or conducting a course in science proficiency (FoUST), at the Center of Competence, Hospital of Blekinge.

Participants in the present survey were recruited among students at the Center of Competence, Blekinge Hospital. A total of 18 physicians studying either the basic science (FoUST) course 7/7 (100%), or 30 credits research methodologies (FoU), 11/11 (100%), accepted participation.

2.2 Procedure

Potential participants were orally invited to participate in the study. The questionnaire was distributed at a seminar to participants in the group studying scientific skills (FoUST). Participants in the course (FoU) were given the questionnaire during a lesson. The questionnaire was answered in connection with their regular meeting and was completed in thirty minutes.

All data in this study is drawn from the survey.

2.3 Measures

Age, sex, planned specialty and estimated student debt data was collected from the questionnaire.

The work situation was answered through the question: Do you think it may be possible for you to do research as your work situation looks like today? The response alternatives were 'Yes' and 'No'.

Attitudes to research were addressed by the questions:

- What would you most like to do in five years?
- Has your interest in research increased or decreased during basic training? The response alternatives were 'Yes' and 'No' and with options for open answers.
- Has your interest in research increased or decreased during your clinical service ? The response alternatives were 'Yes' and 'No' and with options for open answers.
- Do you think that a credits course could improve your ability to take up new scientific capabilities and thus be better as a clinician? The response alternatives were 'Yes' and 'No'.

Future research was addressed by the questions:

- Are there any reasons that made you a researcher or to suggest that you are going to invest in research in the future? Please rank the three most important reasons from 1-3 where 1 = most important. The response alternatives were intellectual stimulation, career, knowledge, free working hours, variation in work, easier to combine with family life, travelling, developing health care, low stress, other factors.
- Why did you not got involved in research ? Please rank the three most important reasons from 1-3 where 1 = most important. The response alternatives were economy and wages, low status, increased workload, divisive, difficult to combine with family life, want to work in practice, want to decide over my time, lack of interest for research, and other reasons.

Financial incentives were addressed by the questions:

Do you think the ability to deduct your student loan if you choose a research career (> 30% of the time) could affect / have affected your decision to invest in research in the future? The response alternatives were 'Yes' and 'No'.

Do you think guaranteed wages during a possible research career (> 30% of the time) like wages clinicians have could influence / have influenced your decision to invest in research in the future? The response alternatives were 'Yes' and 'No'.

EBM was addressed by the questions:

How do you obtain new scientific knowledge / trying to solve difficult clinical cases? The response alternatives available for the ranking were care programs, experienced colleague, textbooks, internet, Medline, medical journal. Possibilities of free-form responses were given.

How many scientific papers (not medical journal) do you read per year? Free-form responses were given.

2.4 Statistics

Descriptive statistics were used to characterize the data from the investigation of attitudes. As data was not considered normally distributed, the Spearman's chi-square test was used in order to control for differences between the groups. To compare the age-distribution in the groups, an independent t-test was used. All analyses were carried out using the SPSS program, version 17.0. The probability values (p-value) revealed statistically significant results. The level of significance was set at 0.05. Missing data is indicated by (N) in all analyses.

3. Results

The medium age of the participating students was 33 years (min. 29, max, 39). Of the respondents, N=18, 88% (N=15) were ST physicians. The minority were women 6/18 compared with men 12/18. The majority had a Swedish medical exam 16/18 (89%).

The male group evaluated that they were capable of critical reading of scientific articles 5/8 (62%). The comparing figures for the female group were 3/6 (50%). By participating in either of the courses, the expectation to be able to critically scrutinize articles increased in both groups totally 10/13 (77%). When finding solutions to professional problems, the majority of the course participants indicated that the first choice was to ask more experienced colleagues, followed by using the internet or professional literature. Female doctors 6/6 (100%) thought they would be able to participate in the 30 credits FoU course. The corresponding figures among the male doctors were 9/11 (82%). The female doctors 3/6 (50%) thought that the work load in daily work allowed research. The corresponding figures among the male doctors were 5/11 (46%). The whole group of female doctors 6/6 (100%) and 8/10 (80%) of the male doctors think that research ought to be carried out at the Blekinge Hospital.

On the question "how important is it that research is carried out at Blekinge Hospital (0-100)", the estimated medium value was 67 with std 23 (N=16).

Intellectual stimulation was the most important argument for a future as a researcher among physicians in the 30 credit course. Varied work followed by intellectual stimulation was the main argument in the FoUST. Economy was the most important argument for not choosing a future as a researcher among physicians in the 30 credit course. A fragmented work situation was the main argument in the FoUST together with feelings of work overload.

The size of the study debt was 160.268 SKr among students in the FoUST-group) compared to 265.545 in the FoU-group. Both groups had one student without study debt.

The outcome of students who consider a secured salary growth important for an eventual research career does not show any certified difference between the two groups. In the FoUST group, 2/7 (29%) thought that a certified salary growth is important, 4/7 (57%) that it is not important, while 1/7 (14%) did not answer the question. In the FOU group, 5/11 (45%) consider the salary growth as important while 6/11 (55%) did not find it important. The outfall of students who consider a secured salary growth important for an eventual research career does not show any certified difference between the two groups. In the FoUST group, 2/7 (29%) thought that a certified salary growth is important, 4/7 (57%) that it is not important, while 1/7 (14%) did not answer the question. In the FOU group, 5/11 (45%) consider the salary growth as important while 6/11 (55%) did not find it important.

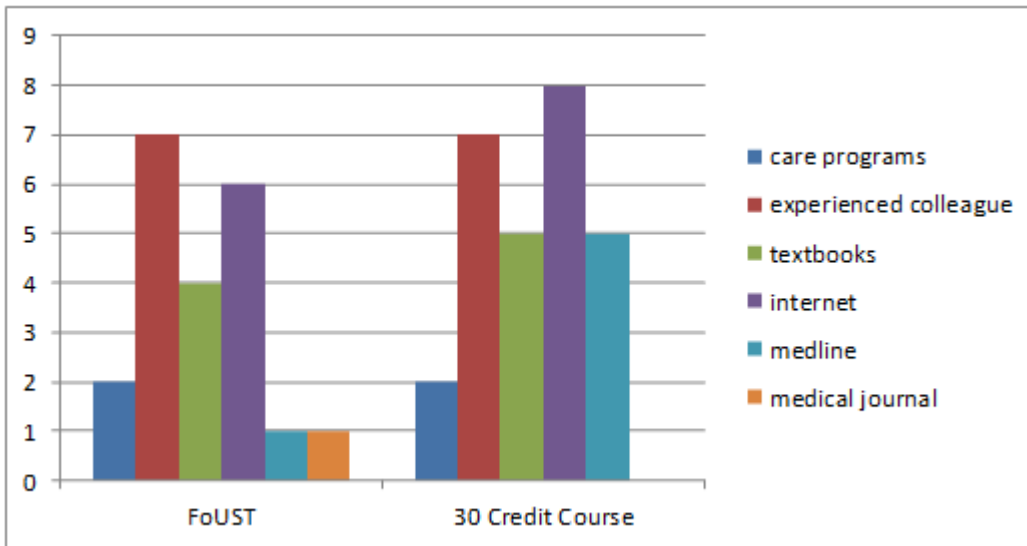
In the FoUST group, 2/7 (29%) considered that tax reduction based on study dept would stimulate the interest for research in a positive way while 4/7 (57%) did not believe that it would stimulate their interest for research. In the FOU group, 5/11 (45%) thought that tax reduction would stimulate the interest for research, while 6/11 (55%) did not think it would make any difference.

In both groups, 8/18 (44%) believe that the work load would admit research. In the FoUST group, 5/7 (71%) believed that the work load would admit research. Comments from those who did not believe so are: "Need to have more time allocated", "(research) would negatively influence on clinical practice". In the FOU group, 3/11 (27%) believed that the work load would admit research. The comments that explain why 8/11 (73%) did not believe that the work load would admit research were: "Negative influence on clinical duty", "hire more doctors", "more time, more resources as research nurse, secretary to keep the registers, "too high work load, too few doctors", "lack of tutors".

The majority had a low interest in research during medical training. Example of comments: "Experienced few good role models during medical training". "People with total focus on details". "Much lonely work", "Desk work". "Chose the medical profession to carry out clinical work".

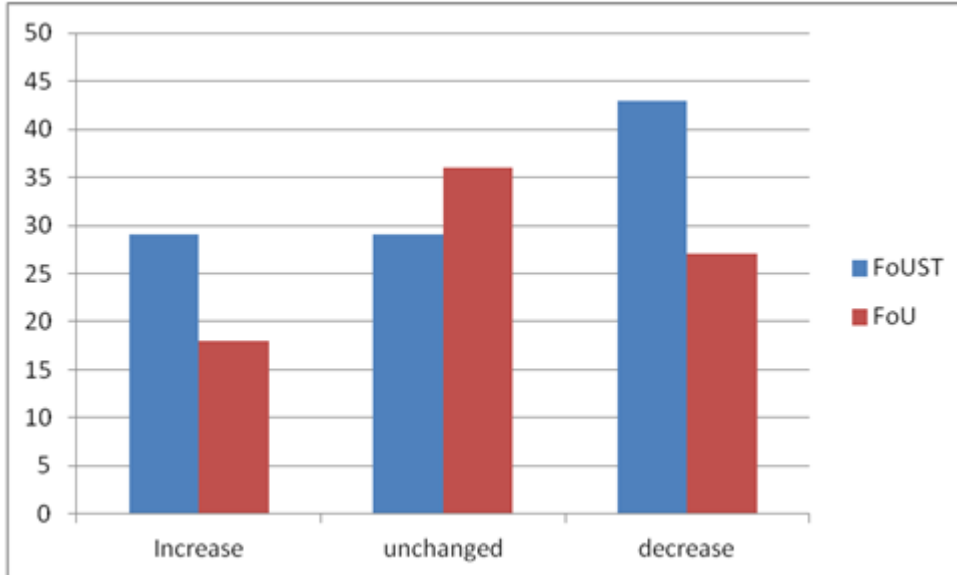
When solving problems, the majority of the Foust course consult older more experienced colleagues in the first place, closely followed by searching on the internet or textbooks. In the 30 credit course, internet was used as the first choice followed by asking a more experienced colleague. A big difference between the groups is the use of Medline. Fig 1.

Fig 1. Use of resources in problem solving among students in the FoUST and 30



The majority of physicians in both groups could not report an increasing interest for research during their clinical duty.

Fig 2 Development of interest for research during clinical duty



(1 in the FOU group did not answer)

Example of comments:

“Few role models. One already uses a lot of time to fill in quality registers etc”.

“You have not time for everything. I have other professional interests”.

“There is already too much I ought to read and get into”.

“Too many details. I like the broader picture”.

“On a smaller hospital...., it is vital to get economical resources again and again”.

“The distance to the university prevents me”.

“I work in the countryside. We are too few doctors for the population we serve”.

“It would be more tempting with an alternative to the clinic”.

4. Discussion

The aim of this pilot study is to investigate self-reported factors and attitudes pro or con scientific research among the medical doctors at the Blekinge Hospital. In the longer term, the expectation is to be able to offer education which meets the demands of the medical doctors (and the organization), both in regard to contents and possibilities. The theoretical foundation is lifelong learning in higher education. At the Blekinge Hospital, there is an ongoing work to revise curriculum and number of preparation course for researchers (FoU). Blekinge Institute of Technology is participating in this work the School of Health Science.

An analysis of the answers shows that medical students realize the need for research and think that it is vital that research is carried out on the local level. Despite this, the majority of doctors undergoing training do not show any interest for an academic career and it is even regarded as an obstacle for becoming skilled clinicians. However, developing into a skilled clinician requires, besides clinical training, both a critical review of articles to follow the research front and to work according to evidence-based medicine.

Results from previous studies suggest the need to connect clinical research with basic training for doctors (5, 6, 13). The process leading up to the research needs to be clarified and opportunities to develop scientific skills in the form of project work in early education has been introduced after the general regulations and guidelines that the SoS gave out in 2008. This is likely to lead to changes in attitude to research and scientific work in the future.

Another important question is whether it is possible to assist clinical researchers in universities to present their findings faster and reconnect to basic education. Perhaps this would be facilitated by linking basic education to physicians closer to clinical research in our universities. In China, this need is also described as well as the need for dedicated mentors to support the research process among students (24).

A major difference between the study groups related to intellectual stimulation. For physicians in 30 credits course, 70% indicates that stimulation of the intellect is the ground for future research commitment compared with 24% among those who read Foust. One possible explanation may be that the training is so tight that there is no need for more intellectual stimulation. An analysis of the results nevertheless reveals that in the acquisition of knowledge in the first instance the consulting with older, more experienced colleagues or looking on the internet is used, while the use of Medline and articles on the subject are only marginally exploited. The risk is obvious that the requirements of EBM as the duty of every clinically active physician in the long term may be compromised if trust in the older literature is chosen over reliance on new findings.

The main finding of this study is precisely the need to create a course that integrates the two parts of research and clinical practice. The study supports the need to have a sufficient theoretical base to provide skills that allows one to move on to graduate research studies, but also to connect adequately to the clinical work to be relevant for those who do not have any ambitions to do research. They will then be “competent research consumers”.

A future major challenge for educators is to develop a methodology for skills development in the lifelong learning where a theoretical superstructure also attracts individuals with a long professional activity.

This study provides a topographic image of the need for a course in scientific approach or for a research preparation course. We are aware of the need to follow up these results with a more in-depth study in specific areas such as how teaching could be more closely linked to the clinical work. A qualitative interview study with some of the students could be a host complement.

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