

7KH ,QIOXHQFH RI 3UREOHP %DVHG /HDUQLQJ  
(GXFDWLRQ RQ 6XUJLFDO 7UDLQHHV V 3RVW \*U

-HQQLIHU \$ 6PLWK

3\* & ( 0HGLFDO (GXFDWLRQ (GJH +LOO 8QLYHUVLW\ /LYHUSRRO 8.

&RUUHVSRODQWKRHQHQQLIHU 6PLWK \$VVLVWDQW 7KHDWUH 3UDFWLWLRQHU 3LWYLOOH 5RDG /LYH  
MHQQLIHU #GRFWRUV RUJ XN

5HF GDWDH \$FF GDWH 63XSE GDWDH

&RS\ULJKW ( 6PLWK -\$ 7KLV LV DQ RSHQ DFFHVV DUWLFOH GLVWULEXWHG XQGHU WKH WHUPV RI W  
GLVWULEXWLRQ DQG UHSURGXFWRQ LQ DQ\ PHGLXP SURYLGHG WKH RULJLQDO DXWKRU DQG VRXUFH D

\$EUVUDFW

@ R€W P@WÀDQ\*À&@E,CR@USRÀ ÀJ b0@S" `P)ðÀÀ r' €R0@ TXH# b0@ JH D

SURJUHVV ZLWKRXW JXLGDQFH LW PD\ EH PRUH DSSURSULDWH IRU WKH WXWRU V  
UHPDLQ VLOHQW 7KDW VDLG +PHOR 6LOYHU DOVR DGGV WKDW WKH WXWRU VKR  
KHOS WR fJHW VWXGHQWV WR PDNH WKHLU WKLQNLQJ YLVLEOH DQG WR NHHS  
VWXGHQWV LQYROYHG LQ WKH JURXS SURFHVV g ZKLFK , EHOLHYH LV D YLWDO S  
WR WKHLU UROH

:KDW KDV EHHQ OHDUQW IURP 3%/"

,Q P\ RSLQLRQ WKH SULPDU\ VWUHQJWK RI 3%/ LV WKDW LW LV JURXS EDVHG  
VWXGHQW OHDG HGXFDWLRQ 7KH VWXGHQWV DUH DOORZHG WR HVWDEOLVK ZKDW  
DOUHDG\ NQRZ DQG SURFHGG IURP WKHUH WKH LPSRUWDQFH RI ZKLFK ZDV  
KLJKOLJKWHG WR XV E\ \$XVXEHO > @ 1RW RQO\ GRHV WKLV HPSRZHU VWXGHQWV  
WR WDNH FKDUJH RI WKHLU RZQ HGXFDWLRQ EXW DOORZV WKHP WR IHHO WKH\ KI  
D UROH LQ WKHLU FXUULFXOXP GHVLJQ ZKLFK ZLOO IXUWKHU PRWLYDWH WKHP V  
OHDUQ > @ \$OVR E\ VKDULQJ UHVSQRVLELOLW\ IRU WKHLU OHDUQLQJ DQG  
GHYHORSRQJ XQGHUVWDQGLQJ DV SDUW RI D FRPPXQLW\ ZKDW WKH\ FRYHU  
ZLOO EH PRUH PHPRUDEOH > @

7KLV IRUP RI FDVH EDVHG VWXG\ LV XQLYHUVDOO\ DGDSWDEOH WR DQ\ VXEMHFW  
PDWWHU WKXV PHDQLQJ WKDW D EUHDGWK RI FXUULFXOXP FDQ EH DGGUHVHVG  
7KH PHGLFDO XQGHUJUDGXDWLW\ FXUULFXOXP LV VR EURDG UDQJLQJ WKDW DV ZH  
NQRZ WKDW VWXGHQWV DUH PRUH OLNHO\ WR UHWDLQ ZKDW LV UHOHYDQW WR V  
> @ E\ GHOLYHULQJ WKH FXUULFXOXP REMHFWLYHV HQFDVHG LQ D FOLQLFDO  
VFHQDULR LW PDNHV WKH VXEMHFW PDWWHU PRUH WDJJLEO\ UHOHYDQW \$V  
PHWKRQJ RI GHOLYHULQJ D FXUULFXOXP , WKLQN 3%/ LV YHU\ HIIHFWLYH DQG  
LQWURGXFLLQJ QHZ WRSLFV LQWR WKH FXUULFXOXP ZRXOG DOVR EH VLPSOH  
+RZHYHU WKH EUHDGWK RI NQRZOHGJH VWXGHQWV FDQ GHYHORS IURP 3%/  
PHWKRQJ PHDQV WKDW FXUULFXOXP GHVLJQ PXVW EH VWULFW WR HQVXUH WKH  
HVVHQWLDO VXEMHFW DUH FRYHUHG DW GHSWK DQG WKH OHVV FRUH SDUWV D  
WKH IRFXV RI DQ HQWLUH VHVLRQ 7KLV RXWFRPH LV WKH UHVSQRVLELOLW\ RI  
FRXUVH GHVLJQHUV DQG JURXS WXWRU ZKR PXVW EH GLVFLSOLQH DQG  
FUHDWLYH HQRXJK WR HQVXUH HDFK cVFHQDULRd FRYHUV DQ HVVHQWLDO HOHP  
RI WKH FXUULFXOXP 7KH SDSHU IURP 0DOLN DQG 0DOLN > @ ZKLFK  
DGGUHVHVV FXUULFXOXP GHVLJQ DV D ZKROH FRQFHSW FDQ EH H[WUDSRODWHG  
VSHFLILFDOO\ WR WKH 3%/ SURFHVV )RU H[DPSOH WUDLQLQJ WKH IDFLOLWDRU

SUREOHP VROYHU ZKR PLJKW RQO\ VHMDWKE EVRFRXXWLVHQGHVBJZHYHW WWWRWV  
LPSHUDWLYH DV OHDG LQ SRVW JUDG XDWVHQVQDOXQGHUJLFDGNKDRZDHBGKFDWLRQ  
WKDW ZH HQFRXUDJH DOO VWXGHQWV ZHDFNFRQVYHWV DQGH KDNLHO PVH WKKFHG VK DNRH DOG  
IURP 3%/ WR WKH SUREOHP VROYLQJ H[VXUFRVWLVWLVKXHVXDJFHFZDOWUHDLFKHIFOLQDGB  
FDVH DV D GRFWRU )RU H[DPSON WKHSDVRSKEDFNWHIIONFWQFR@UGHVQWLEHIVHFKWHL  
GLIILFXOW\ VWXGHQWVd IDFH WUDQVO.DVLDGQJD WKKHFXU UNLQFRZOX#GDH HOSLDDQFW S VWRV  
H[DPLQDWLRQV WR FOLQLFDO VFHQDULRV VKRXDGCEHWKSKHOGDQVQWVLRQXFDWLR  
SRVWJUDGXDWH WUDLQHU , WKLQN LW LV LPSRUWDQW WR JLVVW UHFRJQLHY  
SUREOHP LQ KDQG DQG VXSSRUW WKH OHDG HDUJLVGXDWLQJWK3%HDUO\UVWJLVVW  
WKHLU FDUHHU 7LPH SUHVXUHV SODELQGHQGHG MXDWRUJXWVUHDPDI ZHOOJEN  
WKHPVHOYHV WR GLDJQRVH DQG WUDLQVWZKHQIDFHWKJLWKFDPSONFDDWGHG  
VFHQDULRV FDQ FORXG LQH[SHULHQFHGGGRFVGRUWVZLXGJLPHQWIRGVBDNHQGHV  
VLWXDWLRQ DSSHU RYHUZKHOPHJ 7KHORLQOHGJH WKKHSDVRSKEDFNWHIIONFWQFR@UGHVQWLEHIVHFKWHL  
HQFRXUDJH WKH MXQLRU WR WDNH WKKHSDVRSKEDFNWHIIONFWQFR@UGHVQWLEHIVHFKWHL  
EUHDNLQJ WKH FDVH GRZQ WR LWV VDOGLHQWDELDOWVIFDQOHQWVGGGUPVLDUJHDFK  
PDQDJHDEOH FKXQN 7KLV IRUP RI OHDG GHVUWKLS DQG JXLGDDFH PD\ ZHOODLG  
WKH GRFWRU WR EH PRUH IRFXVHG DQG GHVUWKLS ZKLOVW HQDEOLQJ WKHP WR  
WUDQVIHU SULQFLSOHV WKH\ KDYH OHDUQW LQ WKH FODVVURRP WR WKH ZDUG

.QRZLQJ D VHOI GLUHFHWG DSSURDFK WR OHDUQLQJ LV D SULQFLSOH  
FRPSRQHQW RI WKH 3%/ FXUULFXOXP D SHULQJH DQWKR LWHQ IPDQVHDDQJULF  
XQGHUSSHUFLDWHG WRRO DW D SRVWVYDGHUWFKWUFRPSOHWHG WKKHSDVRSKEDFNWHIIONFWQFR@UGHVQWLEHIVHFKWHL  
:RUN %DVHG \$VVHVPHQWV :%\$V , QOHGLDSDUHQGHVWLRQKHU -XOH DQG G  
IUHTXHQW RFFDVLQJ ZKHUH :%\$V FDQSHRJDSPRHHULQXQGLDPLQDQGRVWRU LQ  
WR ZKDW ZDV DSSOLHG GXULQJ XQLYHUVLV\ VWXG\ ZLWK SDUWLFXODU UHIHUHQ  
WR DVVHVVLQJ NQRZOHGJH RU VNLOOV5HHHQHQHJHJ WKH WUDLQHH WR LGHQW  
DQG ILOO DQ\ GHILFLWV LQ WKHVH DQG VXEVTXHQW UHDVVHVPHQW 7KH XVH  
'LUHFV 2EVHUVDWLRQ 2I 3URFHGXUDO 6NLQOV 236' PLQL &(' DQG 'DVH  
%DVHG 'LVFXVLRQV &%' OHQGV WKHPVHOYHV WR WKLV FRQFHSW RI  
DVVHVPHQW DQG UHDVVHVPHQW 7KH %DVHG VYDPEOTQ 5FRFHSW RI  
SURFHGXUH RU H[DPLQDWLRQ SURFHVV EHQJREYHUHG RQREOYHFXWLYH  
RFFDVLQJ DQG D GLUHFV FRPSDULRV EHQJREYHUHG RQREOYHFXWLYH  
IRU D VWXGHQW WR EULQJ D FDVH WR D%UHQHQRUHQGLVFXVLRQ DQG RYH3H  
HQFRXUDJHG WR GR WKHLU EDFNJURXQG UHQGLQSHUHQWVWKKHSDVRSKEDFNWHIIONFWQFR@UGHVQWLEHIVHFKWHL  
WKH PHHWLQJ &%' SHVQRYE°0 %TMYTM% SHxm+PHOR

, IHHO RQH RI P\ PDLQ UROHV LQ VXSSRUWLQJ VXUJHRQV LQ WUDLQLQJ  
FXUUHQWO\ LV WKDW RI D VXSHUYLVRU DQG D PHQWRU DQG DV GLVFXVHG E\  
3DLFH > @ , WU\ WR WHDFK E\ H[DPSON DQG DLP WR LQVSLUH WUDLQHHV 7KLV  
LQ LWVHOI LV DOVR D IRUP RI OHDGHUVKLS DV , WDNH RSSRUWXQLWLHV WR W  
PRUH MXQLRU FROOHDJXHV LQ WKHDWUH ZKHQ VDIH DQG DSSURSULDWH EXW WD  
SDUWLFXODU FDUH WR RIIHU IHGDFN 7KLV DOORZV PHQWDO GLJHVWLRQ RI W  
H[SHULHQFH RIWHQ VHSUDUDWH IURP WKH LQWHQVH WKHDWUH HQYLURQPHQW W  
LPSRUWDQFH RI ZKLFK ZDV GLVFXVHG E\ 3HDUVRQ DQG 6PLWK > @ DQG D  
PRWLYDWHG VHOI GLUHFHWG OHDUQHU ZRXOG XVH WKLV UHIOHFWLRQ IRU OHDUQ  
LW LV FRPSDUDEOH WR WKH HQIRUFHG SHULRG IRU OHDUQLQJ EHWZHHQ 3%/  
VHVLRQV 7KLV IRUP RI OHDGHUVKLS LV VLPLODU WR FRDFKLQJ DV GHVFULEHG  
OF.LPP DQG 6ZDQZLFN > @ DV LW DLPV WR KHOS WKH WUDLQHH LPSURYH  
ZLWK D SHULRG IRU UHIOHFWLRQ DQG OHDUQLQJ EHWZHHQ FDVHV 7KLV LV  
FRPSDUDEOH WR WKH UROH WKDW D 3%/ WXWRU SOD\ DV LW DOORZV WKH WXW  
JXLGH WKH VWXGHQW ZKLOVW DVNLQJ WKH VWXGHQW WR FRPSOHWH WKH  
EDFNJURXQG ZRUN WKHPVHOYHV UDWKHU WKDQ EHLQJ GLGDFWLF LQ WKH  
OHDUQLQJ SURFHV

**&RQFOXVLRQ**

3%/ DOORZV SHRSOH WR WDNH FKDUJH RI WKHLU OHDUQLQJ REMHFVLYHV ZKLO  
VWLOO KDWLQJ D WLJKWO\ ERXQG FXUULFXOXP EDVHG DSSURDFK ,W HQFRXUDJH  
WKH GHYHORSPHQW RI LQGHSHQGHW VHOI GLUHFHWG OHDUQLQJ VNLOOV ZKLFK  
WUDQVIHUDEOH WKURXJKRXW WKH WUDLQHHVd RQJRLQJ GHYHORSPHQW DV D  
GRFWRU ,W DOVR KDV EHHQ SURYHQ WR EH RI EHQHILW LQ WHDFKLQJ SURIHVVLR  
DQG VRFLDO VNLOOV DERYH WKDW RI D PRUH WUDGLWLRQDO FRXUVH &DUH PXV

SUREOHP EDVHG XQGHUJUDGXDWH PHGLFDO FXUULFXOXP ([DPSOHV DQG  
([SHULHQFHV IURP /LQNRSLQJ 6ZHGHQ 0HGLFDO 7HDFKHU  
'RFK) 6HJHUV 0 9DQ GHQ %RVVFKH 3 \*LMEHOV ' (IIHFWV RI  
SUREOHP EDVHG OHDUQLQJ D PHWD DQDO\VLV /HDUQLQJ DQG ,QVWUXFWLRQ  
a  
.RK\*& .KRR +( :RQJ 0/ .RK ' 7KH HIIHFWV RI SUREOHP  
EDVHG OHDUQLQJ GXULQJ PHGLFDO VFKRRO RQ SK\VLFLDQ FRPSHWHQF\ D  
V\WHPDWLF UHYLHZ &0\$-  
%OXPEHUJ 3 'HYHDX (- 8VLQJ D SUDFWLFDO SURJUDP HYDOXDWRQ  
PRGHO WR FKDUW WKH RXWFRPHV RI DQ HGXFDWRQDO LQLWLDWLYH 3UREOHP %DVHG